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A social game design to solve young peoples’ loneliness problem

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ABSTRACT

This project’s topic is helping solve young people’s loneliness problem. According to my research, young people are more likely to feel lonely than old people. Because young people need to work or study in other cities or countries, they have always been apart from their families and friends. Although loneliness is not a mental illness, it does have negative effects on young people’s mental health. Therefore, I designed a warm and healing social game to help to solve young people’s loneliness problems. After the user research, I defined the major functions of this social game. The functions of this social game can facilitate the connection and communication between family members and friends. To be specific, users can chat and play the game in different themes’ rooms. The emoji provided help users to express their mood and emotion easily. The daily posts can let users know about their loved ones’ current lives. Through these methods, this social game can help young people break down barriers of distance and time with loved ones and help them get support and emotional connection. This social game helps young people feel connected to their families and friends, even across time and space. As a result, it contributes to reduce users’ loneliness and increase happiness.

KEY WORDS:

Loneliness, social game design, communication.
INTRODUCTION

It is a common phenomenon that young people work or study far away from their families and friends. People always feel lonely when they are separated from their loved ones. So I design a warm and healing mobile game to facilitate the emotional connection between family members and friends. This mobile game will combine the fun of the game and the functionality of the application. And the technologies used in this game are face recognition technology and communication technology, etc. The aim of technologies used in this game is to break down barriers of time and space for users. I use the user experience design strategies to design this mobile game. After the user research, I define the major functions of this mobile game. At first, create characters and emojis for users. Users can communicate and express their emotion easily by using emojis. Then create rooms which are virtual space for users to be together. Users can have interactions in these rooms. Users can also share their daily posts in this social game, therefore they can know about their loved ones’ daily lives. Finally, users can play tacit games with their friends, it's an interesting way to enhance users' emotional connections.

By these functions, this mobile game can help young people break down barriers of distance and time with their loved ones and help them get support and emotional connection. Then reduce loneliness and increase happiness for family members and friends.

CONTEXT

In 2010, the Mental Health Foundation found that people aged 18 to 34 were more likely to feel lonely than those over 55 (Eleanor Morgan, 2017)\(^1\). And in China, there are nearly 20 million young people across the country live alone, work or study far away from their families and always feel lonely (CNTV, 2017)\(^2\). Although loneliness is not a mental illness, it is a catalyst for depression and anxiety. Conversely, depression and anxiety increase the chances of feeling lonely and negatively affect our mental health. From the research, self-harm is the most common form of self-destruction among young people in their early 20s in the UK -- and for those who express emotional pain by hurting their own bodies, it is mostly because they cannot stand feeling alone (Natalie Gil, 2018)\(^3\).
Nowadays the internet technologies develop quickly. So it provides possibilities for this social game to use advanced facial recognition technology and communication technology, etc. Then users can communicate with each other in this social game across the time and space.

This social game is designed aim for relieving young people’s loneliness. Providing a fun way for users to get companies and communications from their families and friends. It can decrease depression and anxiety for young people and provide positive effects for young people’s mental health. As a result, even though young people live apart from their loved ones, they can still get emotional connections from their loved ones through this social game.

**METHODS**

The methods I used to design this social game is user experience design methodology. User experience design conduct user research methods in order to create the best user experience for all users without bias. It is a process of user-centered design aiming to improve the experience of users for products and services (Will T)\(^4\). This methodology includes user research, competitive analysis, design features, user stories, visual design, prototype motions, test and review, etc.

**Project Timeframe**

At first, I made a project timeframe to organize the project’s design process. This project timeframe helps me to arrange the time usage efficiently.

The following diagram is the project timeframe.
User Research

For user research, I use the User Interview method. User Interview is a powerful tool to know about users' needs and wants. Firstly, I list some questions about the loneliness problem. And then talk to users face to face, to know about users’ minds and thoughts about the loneliness problem.

My target users are young people aged in 18-34, study or work in different cities or countries, live away from their families and friends. So I talked with 20 young people who fit the profile of my target users. And then I got some results about users’ problems and needs after the user interviews.

As for users’ problems about loneliness, when users feel lonely, they usually escape from the loneliness. It's hard to find a positive way to alleviate it. For some users, although they miss their families or friends, they do not contact families or friends because they are not good at communication. Users don't know their loved ones’ daily lives which they care about.

Then according to users’ needs, when users feel lonely, they need to get comfort by a positive and relaxing way. To break the barriers, they need a good way for users to communicate easily with their families. Although live away from families, users need methods to know their loved ones' daily lives.
All the information from user interviews guided the creation of the primary persona. And this persona helps to clarify the users’ needs and my design goals. The following picture is the created persona’s information for this social game design.

**ABOUT**
Stella is an international student of RIT. Since she is far away from hometown sometimes, she feels lonely. But Stella is a little introverted; instead of communicating with families or friends, she prefers to escape loneliness feeling.

**MOTIVATIONS**
- Stella loves to play casual games and watch movies when she is alone.
- Compared to chat with families, she prefers to chat with close friends.
- It’s hard for Stella to communicate with families far away from her; she wants to know her families’ moods.

**Stella Lee**

“Although I'm lonely, I feel stressful to express my feelings to my families.”

**GOALS**
- Stella wants to get positive comfort when she is alone.
- She wants to have more communication with her families.
- She wants to know the moods of her families and close friends.

**FRUSTRATIONS**
- Stella is a little introverted, so she is not good at communication.
- It’s hard for her to find a positive way to alleviate loneliness.
- Due to the lack of communication with her family, it’s hard for her to know about how her families are feeling recently.

Figure 2

**Competitive Analysis**

Competitive analysis can help me to know about the technology used in current market and the trend products. According to my competitive analysis, I get some thoughts about the relationship between loneliness type and internet products. For example, tinder corresponds to physiological loneliness, games correspond to boring loneliness, posts apps such as Instagram and Facebook correspond to identity loneliness, chatting apps correspond to telling and communication loneliness. I hope my social game
design can help to relieve the boring loneliness, identity loneliness, telling and communication loneliness. Therefore my social game design will combine the game, chatting app, and posts app.

On the other hand, there are two apps inspired me a lot. And the target users of these two apps are young people as well. The first app is Zepeto (Snow Corporation)\(^5\), the major function of Zepeto are users can create 3D character and take selfies with friends. It inspired me that I can create characters and rooms for users, make it possible for users to be together and have communications. And the second one is Travel Frog (Wikipedia)\(^6\). And the major function of this mobile game is the frog travels around the world and sends postcards to users. The most attractive point of this mobile game is its warm style illustrations. It inspired me that young people love illustration's visual style.

**Technology**

Nowadays, internet technology makes social media become more and more popular. Especially for young people, according to the Pew Research Center, nearly 90 percent of people between the ages of 18 and 29 used at least one form of social media (Maya Dollarhide, 2019)\(^7\). Social media refers to websites and applications that are designed to allow people to share content quickly, efficiently, and in real-time. It enables users to communicate and interact across time and space. The ability to share photos, opinions, events, etc. in real-time has transformed the way users live (Matthew Hudson, 2019)\(^8\).

Another major technology used in the social game design is face recognition technology. A facial recognition system is a technology capable of identifying or verifying a person from a digital image or a video frame from a video source. There are multiple methods in which facial recognition systems work, but in general, they work by comparing selected facial features from given image with faces within a database. And this technology is explored by Helen Chan and Charles Bisson since 1964 (Wikipedia)\(^9\). In this project, the social game will use the facial recognition technology to generate users' characters and emojis.

Emojis are ideograms and smileys used in electronic messages and web pages. Emoji exist in various genres, including facial expressions, common objects, places and types of weather, and animals. Originating on Japanese mobile phones in 1997, emoji became increasingly popular worldwide in the
2010s after being added to several mobile operating systems. They are now considered to be a large part of popular culture (Wikipedia)\(^\text{10}\).

By using the facial recognition technology to generate users’ emojis, there’s a perfect example. In 2017, Facebook published that they created a machine learning system that creates the best possible match of user’s real face to one in a custom emoji generator (Devin Coldewey, 2017)\(^\text{11}\). Therefore, there’s no problem that in this social game, the system can use users’ photos to create users’ characters and emojis.

**Visual Study**

Since I plan to design a warm social game, this social game’s visual style should be warm and healing. Therefore, I choose red and yellow as my theme colors. The following image shows my social game design’s color palette.

![Color Palette](image3.png)

The typeface I used in social game design is *Gilroy Family Fonts*. This typeface has rounded corner and smooth lines, which makes it looks lively and neat. It’s perfect to be used in my social game design. The following is *Gilroy Family Fonts*.

![Gilroy Fonts](image4.png)
The name of this social game is *Gather*. It means users in this social game can be together, get companies and supports from loved ones. The following is the logo design for this social game.

![Logo Design](image)

Figure 5

For the logo design, I use the letter “G” and heart shape to express the product’s concept. The letter “G” represents the name *Gather*, and the heart shape express the love between the user and his loved ones.

**Character Design**

In this social game project, I need to design the characters to express my design concept. In order to express the user stories, I need a major role and several supporting roles. Since in my design concept, this social game can generate the character according to the user’s photo. So I design the major character according to real person’s picture. The following is the major character design.

![Character Design](image)

Figure 6

In this social game, I need to design the user’s face emoji to express user’s emotion and action emoji to show user’s status. Then following is the emoji design.
In user’s stories, user has interaction with friends and families. So I need to design supporting characters as user’s families and friends.

**Room Design**

In this social game, the room is the space for users to have interactions. And there are different themes' rooms for users to choose. For example, users can have fun with families in family room. I designed three major themes' rooms: family room, friends room, and office room.
RESULTS

User Cases

Based on previous studies, I define the design features of this social game and use user cases to explain these design features. The first user case is to create characters for users. Users can get their characters easily, just take a selfie. Then users can get emojis according to their characters, and they can communicate and express their emotion and status easily by using emojis.

**USER CASE 1 - Create the character**

"As a new user, I want to create my character in Gather. And it’s interesting to see my own character’s emoji."

- It’s simple to get a character - just take a selfie.
- View character’s interesting emoji.
- Use emoji to express user’s mood and status.
The second user case is to add a new room. This room is the virtual space for users to have interactions with families or friends. Users can pick a room from different themes’ room. For example, the user can pick a family theme room and enter in family room automatically.
The third user case is to invite friends join in the room. After creating the room, invite friends join in the room, then the user can have companies and interactions with friends. And it's also interesting to view friends’ characters.
The fourth user case is to chat with friends in the room. After friends joining in the room, users can have interaction with friends. The first interaction way is chatting, and in Gather there are two chatting modes:
gaming mode and traditional mode. The gaming mode is users’ dialogues appear beside the characters, which is chatting mode in game system. The traditional mode is ordinary chat dialog boxes, which is the way users are used to.

**USER CASE 4 - Chat with friends**

“After inviting friends join in the room, I want to chat with friends.”

- Tap chat button to go to traditional chatting page
- Chat with friends
- The friends join in the room
- Tap odd button to open hidied buttons
- Tap chatting button
- The message appears above user’s character
- Pop-up message box

- Two formats of chatting modes
  - gaming mode
  - traditional mode

**Figure 16**

**Figure 17**
The fifth user case is to share daily posts. This is another interaction way for users in Gather, by this way, users can share their daily lives and know about friends’ daily lives, which contributes to enhance the connection between users and their friends. And in Gather, every post has the user’s character’s action emojis, which makes posts more vivid and interesting.

USER CASE 5 - Share posts

“To enhance the connection with my friends, I want to share my posts and view my friends’ posts.”

- Use posts to share user’s current life and know about friends’ lives.
- Every post has user’s character’s action emoji to express user’s life vividly.

Figure 18

Figure 19
The final user case is to play the tacit game with friends. This is a casual and funny game for users to test their rapport. Two users answer same questions (10 questions one round) at the same time, if their answers are same they will earn scores, if their answers are different they will lose score. And according to their score, the user can earn stars to open more themes’ rooms. It is the gaming system of Gather. This game is another interactive way for users to enhance emotional communication.

**USER CASE 6 - Play the tacit game with friends**

“To enhance the connection with my friends, I want to play the tacit game with my friends”
User Lifecycle Diagram

Based on above user cases, I organize the whole process of how users use this social game. The following is the user lifecycle diagram.
This diagram is helpful to understand the function structure of Gather and how users interact with Gather. And according to this diagram, I clear up the list of user flows to complete the Gather’s functions. This is the user flows list:

1. New user without account and first time to open the app.
2. Returning user with account open this app and interact with his partners in this room.
3. A user with account receives an invitation from another user to be his friend.
4. A new user without account receives an invitation from another user to be his friend.
5. A new user creates ID and his character.
6. The user creates a room with a certain theme.
7. The user invites his friends join in the room.
8. The user sends a request to add in a new friend.
9. The user chat with one of his friends in the room.
10. The user shares his new post and watch one friend’s post video in the room.
11. The user invites one friend in room to play the game (tacit agreement test game) with him.
EVALUATION & DISCUSSION

The purpose of this project design is to relieve young people's loneliness. Creating characters for users and providing space for users to have interactions (chat, share posts, play the tacit game). In these ways, this social game can enhance users’ emotional communication and connection.

The user cases presented before to explain this social game’s basic functions. At the final part, I designed the prototype animations according to these user cases. Then conducting the user tests to get feedback about this social game design and to see if this social game design meets user's expectations. After the user testing, I got some feedback, users like the character and emoji design, they hope this social game can provide more emoji. The tacit game is fun, but they hope to play more games with families and friends.

For the future iterations, the social game can provide more emoji for the character design, the character and emoji design even can be 3D or other style. Explore more gaming play in this social game, explore more interactive methods for users. I believe this social game offers positive impacts for young people, although they live apart their loved ones, they can view their loved ones’ current status and posts in Gather. And maybe users have communication issues, they can use emoji to express their mood and emotion. This social game can enhance users’ emotional communication.

CONCLUSIONS

The problem statement of this project is that young people work or study far away from their families and friends. They feel lonely when they are separated from their loved ones. My solution is to design a warm and healing mobile game to bring comfort and encouragement to lonely young people. The functions of this social game can facilitate the emotional connection between family members and friends. Users can chat and play the game in different themes’ rooms. The emoji provided help users to express their mood and emotion. The daily posts can let users know about their loved ones’ current lives.

After researching this project, I learn that loneliness is one of the most common problems in young people, it causes negative impacts on young people’s mental health, it is a catalyst for depression and anxiety. When young people feel lonely, they need communication and emotional support from their families and friends. This is the best way for young people to relieve loneliness. Therefore, my social
game design provides space and methods for users to have communication with families and friends. It is a good product design to help relieve young people’s loneliness problem.


