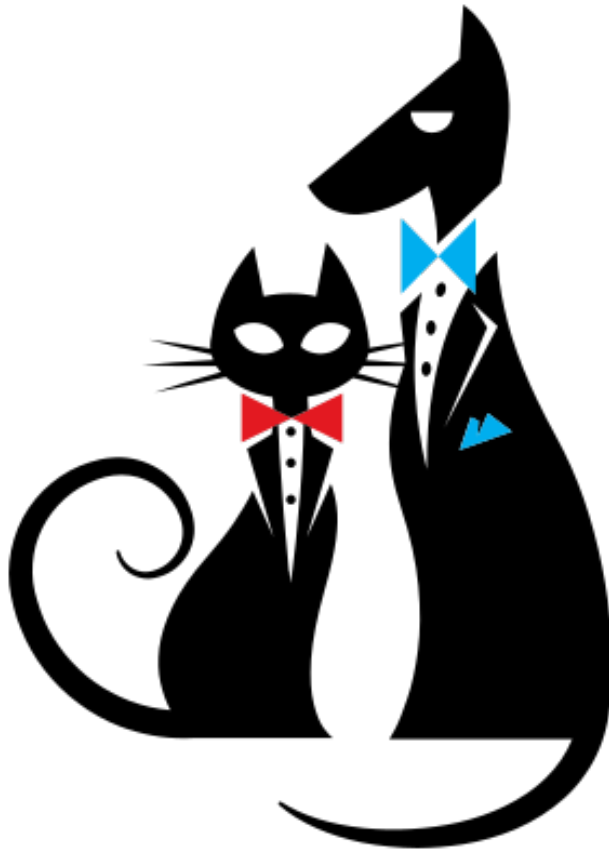


MUSCHAT

Business Plan



*You are never
alone...*

*There is a
huge world
around you...*

*We aim to
bring your
muse around
you...*

*Come and
enjoy the
community.*

Contents

1. Product	1
1.1 Introduction and Background.....	1
1.2 Product Overview.....	1
1.3 Product Features.....	1
User Register and Filter.....	1
Interest Tag, Personality Test and Matching Algorithm	2
The Virtual Community and Communication System.....	2
Utilities for Strengthening Social Bonds: Forum, Minigames and Diary	3
2. Marketing	3
2.1 Secondary research.....	3
2.2 Primary research.....	4
Questionnaire	4
Interview.....	5
2.3 Market context/existing solutions:	6
2.4 Consumer group:	7
3. Strategy.....	8
3.1 Legal Status & Structure of Business.....	8
3.2 Our team.....	8
3.3 Resources	8
3.4 Approach to Financing	8
3.5 Plans for Sales and Marketing.....	9
3.6 Operational Plan.....	9
3.7 Financial Projections	10
3.8 Potential risks and Solutions	10
3.9 Future Opportunities	10
References	11
Appendix A	11
Appendix B	12

1. Product

1.1 Introduction and Background

With the development of the Internet, people started trying to satisfy the social needs online by moving more and more social actions to the Internet. **MusChat** is a product that fits the process. **It is a virtual society that moves real social activities and relationships online as much as possible.** For our application, social bonds would be strengthened by the matching algorithms which relate to the users' personality, interests and social needs. The similar social bonds would be twisted into communities. Literally, the background nowadays also shows such social networking would be the trend of the current time period.

With the stress of the pandemic, the demands of building such virtual social networks have become more intense than ever since the realistic social modes have been strictly affected. Gradually, more and more people are surrounded by negative emotions. Why are the online social networks we have right now not able to solve the problem? This could be because most of the social applications have not realised the importance of building virtual communities. Humans are social creatures and the rule is also valid for online social. And among all kinds of social groups, university students are the one that has most social needs and most affected by the pandemic. For most of them, university life is a period when they first leave home and their new social circles are yet to be formed. At the same time, lockdown has stopped the activities of clubs and the community nature of the university is further weakened. As a result, the mental well-being of the students is potentially threatened during the pandemic period (Savage et al., 2020).

1.2 Product Overview

Since the pandemic has affected people's social life and forced a transformation of ways of socialization, one of the first alternatives that young people such as university students may choose for social is social apps. And according to our survey, people who use dating apps a lot nowadays are not only satisfied with one-on-one dating. What they want more is social group and empathy. **MusChat aims to provide high-quality dating services based on virtual communities for university students.** We summarize our solutions as the following: Firstly, we strictly filter the user group to guarantee the platform quality. Secondly, we would build virtual societies with virtual maps and link each user with matching algorithms. Finally, we would use interest tags and big data to gather users together as interest communities.

1.3 Product Features

User Register and Filter

As mentioned, our application would give priority to university and college students, which means we want to target the most demanding user group and guarantee the user quality as much as possible. MusChat operates an easy trick here to effectively filter the users - our application would request educational emails for registration (Figure1 B), phone numbers would assist with operations such as login after being bound. Users' identifications would be verified by sending a digital code to their university emails. Figure 1 below shows sign in (Figure1 A), sign up (Figure1 B) and changing forgotten password (Figure1 C).

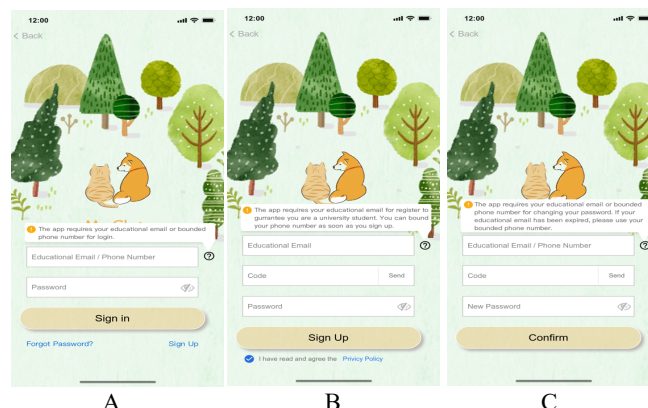


Figure 1: Sign in (A), sign up (B) and change forgotten password (C) pages.

Interest Tag, Personality Test and Matching Algorithm

MusChat aims to strengthen the social bonds with matching algorithms and interest tags. In this way, we intend to improve our customer satisfaction and customer stickiness. The new users would process a series of information collection (Figure2 A1, A2), interest tags selection (Figure2 B) and personality test (Figure 3). The information would help us apply our algorithms. We keep the process as short and fun as possible for a better user experience. Figure 2 below on the left shows the collection of information and interests.

A personality test based on Myers-Briggs Type Indicator (The Myers & Briggs Foundation) would then be processed by the new user and the result would be used for matching people with complementary personalities. Figure 3 below on the right shows the structure of the test.

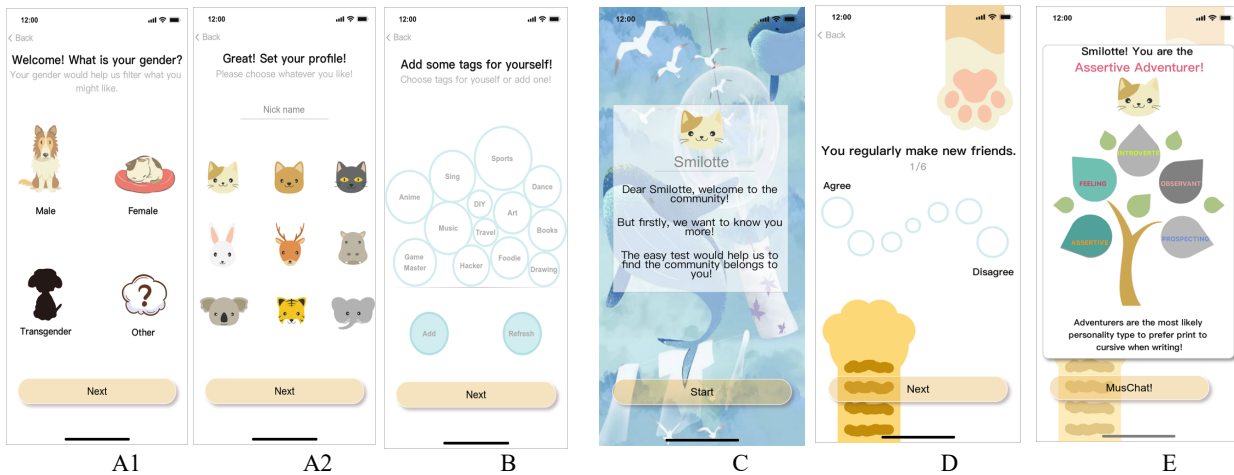


Figure 2: Information collection (A1, 2) and interest tags (B). Figure 3: The test start (C), tests (D) and result (E) pages.

Matching algorithm has been widely used in dating apps, but its usefulness in social networks is strongly underestimated. With big data, like-minded people in different locations could be easily gathered together online and by continuing to strengthen their social bounds (similar interests and complementary personalities), we assume a virtual community would be born naturally.

The Virtual Community and Communication System

One of our core systems of the application is building virtual communities. Our imagining virtual community is a combination of virtual maps (Figure 4) and communication systems (Figure 5 and Figure 6 on next page). A virtual map is presented as the communities the users are currently in. The other residents would be the users who match with the current user with a high score and the clubs the current user might be interested in (Figure 4 A). More information for the matching users and clubs could be viewed when the current user clicks on his or her profile pictures (Figure 4 B & C). Out of respect for user privacy, only a reasonable range of information can be viewed.

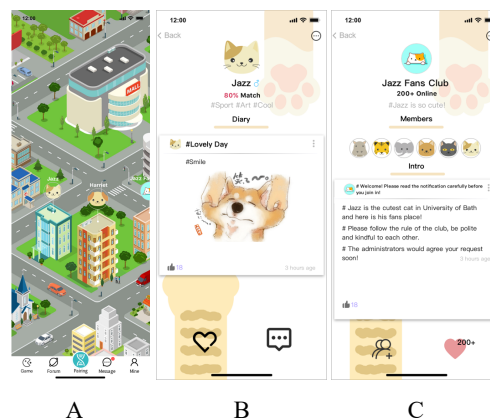


Figure 4: The presents of virtual community (A) and the resident's profile (B, C).

The communication system is another core system. What we focused on is preventing text harassment and providing a good conversation environment. Our chat system is based on respect and gives the users more choices to protect themselves. When a user wants to invite a stranger for a chat, the invited one would receive the first message from the user and it would be his/her choice to continue receiving the messages from the user (Figure 5). The design is for preventing the users from suffering from continued text harassment from strangers. Figure 5 below on the left shows such process.

The group chat is designed into channels (Figure 6 D) and the channels are created by the club members with a specific topic. Each channel would be a chat room with voice chat (Figure 6 E) (we assume the voice chat is a necessary way of expression in the society networks) and text chat at the same time. The club member could decide if he or she wants to join the voice chat in the room.

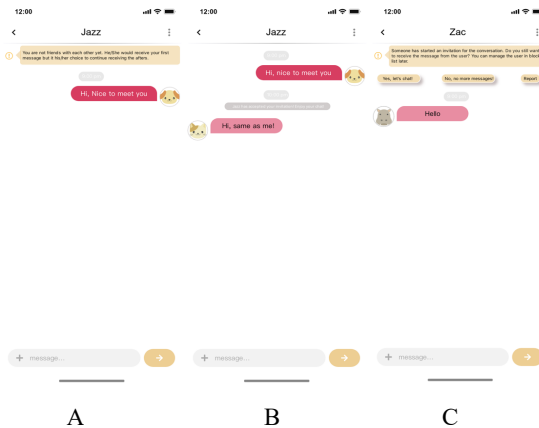


Figure 5: The pages for sending a chat invitation (A, B) and first time receive a message from a stranger (C).

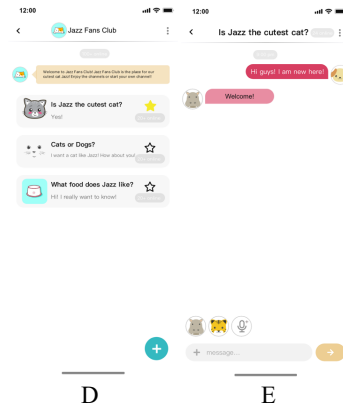


Figure 6: The pages for clubs (D) and channel chatroom (E).

Utilities for Strengthening Social Bonds: Forum, Minigames and Diary

For the growth of such virtual communities, we realize that the social bonds would need to be continuous enhancement for higher user stickiness. In this case, we provide our forum system (Figure 7 A1, A2), minigames (Figure 7 B) and diary systems (Figure 7 C) as in Figure 7. The forum system would be a place for all users to exchange ideas and the minigame provides user private rooms for interactions. The diary would be a moments system. These utilities are designed to assist our core systems.

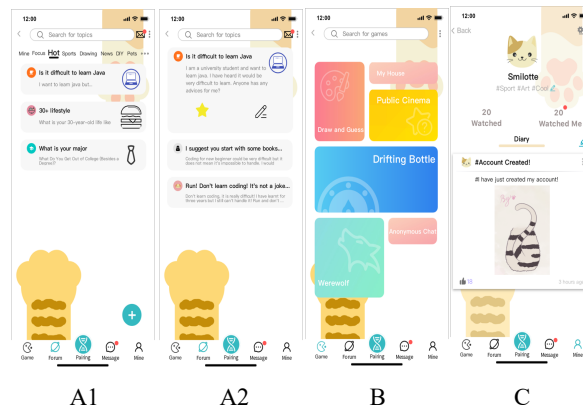


Figure 7: The pages for forum (A1, A2), minigames (B) and diary(C)

2. Marketing

2.1 Secondary research

Mental health problems for university students regarding social factors. Even before the pandemic, mental health of university students is already a topic that is frequently discussed. Factors that potentially influence their psychological health include having to adjust to a new environment, insufficient support from university, financial difficulty and being a member of a minority group, all of which possibly lead to negative emotions or even mental disorder such as anxiety, depression and eating

disorder (Macaskill, 2013; Said, Kypri, & Bowman, 2013). The last factor of being the minority provides an idea for the grouping of university students: international and local students.

More social hardship for international students during the pandemic. Chen et al. (2020) stated that international students have more challenges when facing the pandemic because of long distance from their friends and families. The pandemic makes it worse for them in terms of a sense of security. As a result, they are prone to feel more isolated and lonelier in cultures that they are not familiar with. Therefore, they may have more or different social needs than local students. This led to the decision to include the two groups of students in questionnaires and interviews and analyse the results separately.

More usage of social apps during the pandemic & expressiveness and sense of community to deal with loneliness. Lockdown has forced the decrease of face-to-face social activities and people need to find a way to compensate for it. Social apps are a direct and accessible method to counter the feelings of loneliness and anxiety. Indeed, usage of social networking and messaging apps have increased during the lockdown (Fumagalli, Dolmatzian, & Shrum, 2021). An important feature of social apps is being expressive. Study has shown that for university students, being more expressive is associated with more social support and better mental health while long-term suppression of one's emotions has the opposite effect (Mohamed Ahmed, 2020). Moreover, a sense of community can have a significant impact when combating boredom and loneliness. An interesting phenomenon that occurred in Italy during the lockdown is that people stood in front of their windows and sang (Corvo & De Caro, 2020). As they shared their feelings with each other using singing, they realized that they are cohesive as a community, so every individual was not alone in this situation. Thus, communities can become a source for courage and security because they are places in which people can express themselves. Similarly, a social app can have virtual communities to decrease loneliness.

2.2 Primary research

Questionnaire

1) Method

Our questionnaire belongs to the quantitative method with university students as the main target group. We have designed slightly different questionnaires for different groups of British students and international students. The aim is to investigate whether the social needs are slightly different between them, since most British students have their family and friends around. International students might have fewer local friends; in addition, due to language barrier, different cultural background, they may have greater pressure that needs to be relieved compared with British students. Therefore, to confirm this issue above, we will analyse the results of the survey based on three dimensions: overall results (combine both local and international students result), British student results and international student results.

2) Data Analysis

The questionnaire received a total of 50 (53.2%) responses from international students and 44 (46.8%) responses from British students, which reflected the needs of international students and British students in a balanced manner. Our respondents' gender are fairly evenly distributed in 50 males and 41 females with 3 prefer not to say. Among them, 81.9% of the responses came from students aged 18-25. This age group of students will be the main target user group for this product.

On the question "when will you feel like you want to chat with someone online", 90.4% students showed they had such periods. Among them, 74.5% chose "lonely or boring", 42.6% chose "no shared interest friends", 36.2% chose "under pressure", 28.7% chose "no listeners". For both international and native students, the most choice was "lonely and boring" (74.5%), but the second reason from native students was "no friends with same interests" (41.7%). For international students, 40.5% of them chose both "high pressure" and "no friends with same interests", which indicated that international students faced more pressure than native students to some extent. Thus, MusChat provides interest-matching for users.

Besides, 9 students chose "no social needs", among which 5 of them had a lot of friends, and 2 of them have boyfriends/girlfriends. The rest 2 preferred to be alone. Based on the reasons above, the minority group was partial to personal situations or characteristics.

Even though they would like to use it, their motivation was mostly curiosity (38.1%), followed by “making friends” (28.6%) and “looking for people with the same interests” (19%). Unlike international students, British students who never used this kind of app prefer to find people with the same interests (54.5%), make friends (45.5%) or solve loneliness (45.5%).

High ratio on abandoning this kind of apps remained an issue. Among students who used or tried to use dating apps are made clear that about three-fifths has given up using the app for the following reasons:

71.4% of the students who stopped using the app could not find friends with the same interests anymore; 60.7% of them considered the users’ qualities were varying; 46.4% of them considered the matching mechanism unreasonable; 17.9% of them thought the anonymous degree was too low and 7.1% of them were sick of the pornographic contents. Based on data above, the MusChat will help users find friends with the same interests, using educational email addresses to ensure the reliable target users.

As for those who chose to continue using apps, 68.8% of them thought the apps had a comfortable UI; 68.8% of them could find lovers; 50% of them were attracted by high degree of anonymity and mini games. With regard to anonymity, 48.6% of them chose to fill in their information truthfully, while the rest 51.4% of them didn’t. The factors is considered in MusChat for improving users’ satisfaction.

On the choices of pairing mechanisms, both groups of students hope to focus on interests, supplemented by character matching. Therefore, MusChat will not be restricted to interests matching but add character tests for matching assistance.

When talking about expected requirements about MusChat, the data once again proved that interests matching (77%) and character matching (71.6%) were the top 2 priorities. The interest communities (48.6%) will set the function with second priority, because it contributes to promoting user stickiness, and it will be added to MusChat as a unique selling point.

3) Results

All in all, the questionnaire results can prove that MusChat has a market on the basis of avoiding gender and student group differences. Excluding a small number of people who think that they do not need to chat someone online, boredom, unable to find like-minded people and concern about the user quality become the most important problems that need to be solved by MusChat. Therefore, MusChat will consider adding interesting mini-games to increase user stickiness and solve boring issues at the same time. Moreover, the virtual communities can also be considered as a solution of stickiness which has been described in details in the product section. Adopting double matching of personality and interest can help users find more suitable chat partners. The educational email will be used as verification to control the user group to the college students who had similar backgrounds. Anonymity has also been mentioned several times and will be applied to MusChat.

Interview

1) Method

Our interview is conducted in the form of an online meeting and aims to dig deeper into the results of the questionnaire. We interviewed British students and international students separately to determine if there is a big difference between them. We mainly asked the interviewee whether they use social applications and why they use them, the reasons for giving up using or keeping them, whether they will have greater expectations for social applications under the current lockdown situation, and finally asked if they would be interested in our app. If the respondent said that they do not use social applications, we asked for further explanation. A script was made for each interview. After completing all the interviews, we summarized and analysed all scripts in a group discussion, and finally got the result.

2) Data Analysis

A total of 10 people were interviewed (6 international students and 4 British students, aged 20 to 26). Three of them have never used social apps, two have used Tinder, two have used Soul, one has used Tape, one has used Qingtengzhilian, and one has used Flipping. Among the seven people who have used social software, four have given up, and one only opens it occasionally. We will divide this section into three parts according to interviewees’ experiences.

a) Participants who never used dating apps before

There are three participants have never used such applications. Two of them are international students. The international participants explained their main reason as they prefer to be alone. For the British participant, he explained that his social needs have been satisfied by his daily life. In response to the epidemic situation, two participants agreed with the idea that the demand for dating applications would increase. However, we have gotten negative replies when asking them if online chat would change their original habits. For MusChat, all of them indicated that they would try to use it. At the same time, they put forward expectations for MusChat which refers to having good user qualities, thematic chat rooms and filtering specific social groups.

b) Participants who continue using dating apps

Two out of ten participants were still using the applications. One is an international student and the other is British. They indicated that they enjoyed making new friends online and decided to keep using the applications. Both of them mentioned the ease of use of the applications (Tinder and Tape). Regarding the lockdown now, they believed that the demand of online chats would rise and remain high for a long time. They showed enthusiasm for MusChat and especially for the anonymous functions.

c) Participants who gave up using dating apps

There are three international students and two British students. They have different initial motivations for using social applications, such as boring, stressful, or making friends. But the main reasons for their abandonment are the low quality of the user group and the unreasonable matching mechanism. Three of them mentioned that they think the anonymous function is nice and effective. About MusChat, three expressed interest, and one expressed that they are more accustomed to sharing their lives with friends. Another participant was hesitant in answering the question and did not give a clear answer.

3) Results

To conclude, the participants' general attitude toward MusChat is acceptance. Based on these ten interview records, most people have interest in MusChat (8 out of 10), which has brought potential users to our application. According to respondents' feedback on social applications that they have used or are using, finding like-minded people and high-quality user groups for users will attract and retain users to a large extent. The setting of thematic chat rooms provides a discussion platform for people who have the same interests, and this is the key service provided by our application. The anonymous function, which is also a key function, also aroused interviewees' interest as expected. The anonymity function brings higher security to users, reduces the possibility of being deceived, and ensures that users will not use the application for other purposes. For people who are still hesitating or only cruise about MusChat, we may need to find some aspects to give users a surprise, ensure the user experience is very comfortable and safe to remove the hesitation and build the reputation of the app. We will consider using range control of user groups and an all-round report system to reduce the occurrence of fraud.

According to the survey and interview results, the functions mentioned below will be added to MusChat in descending order of priority, in order to perfect the functions: interests matching; character matching; the interest communities; making friends in the same city; anonymous; mini-interactive games; voice function; group chat function; study abroad information; post function.

2.3 Market context/existing solutions:

Our app is quite different from the existing dating apps since it focuses on creating virtual social communities with pairing algorithms (interests, personalities) instead of traditional matching methods of some competing apps, like pairing based on gender, age, photos and other basic information.

There are a lot of dating apps in the market for users to meet each other. However, the user quality is quite concerning. Everyone could register on this app without threshold and they only have to enter their phone number or email. They do not have to tell the app their real name or upload their real photo. Even their birthday can be faked. Although these apps are anonymous, no threshold means people can do anything they prefer (including harassment on others) with little cost. This is contrary to the original intention of anonymous apps, and it is not healthy to the communities.

As an app for college students, we introduced filters - people should use an education email address for registration. This method could restrict user scope and maximize the users' experience because education email addresses are usually only for students, and those who are banned for breaking the rules are less likely to continue influencing the communities. Some apps do not have a comfortable UI (bad color contrast or messy screen etc.) and others have users who send offending messages without being censored. One question in the questionnaire picked out some apps that have done a relatively good job on keeping a large user base by asking which social apps they have used. Competitors are referred below from the mobile store ranking list or mentioned in questionnaire or interview.

a) Direct competitors (anonymous social apps)

One of the apps the users mentioned in the questionnaire is Soul, which is an anonymous app whose main purpose is to let people find others who have the same interests. Unlike dating apps such as tinder and badoo, Soul is for all ages, but it has separate modes: adults' and teenagers' modes. The protection of teenagers is related to the law. It provides matching, posting, voice chat and group chat functions. People do not have to upload their photos but virtual avatars instead. This approach successfully reduces the sense of isolation because users do not have to judge people with their appearance. They could talk about their interests more naturally and not only for dating. However, some of its functions are redundant, and users will feel tired of the user interface. It is the lack of stable communities that make the app not have enough user adhesiveness, either. **Unlike Soul and other anonymous apps, MusChat definitely targets college students, so there is no need for users to worry about being matched to too many strange users. Also, it focuses on the main functions: matching users, forum and mini games, so users will not be tired of fancy UI with a lot of redundant buttons.**

b) Indirect competitors (social media & dating apps)

Social media:

Some social media platforms provide opportunities for like-minded people to get together and talk: interest groups in Facebook and various forum sites such as Reddit and Quora. Nevertheless, they do not have a direct one-to-one voice chat or (real time) chat system. **The advantage of MusChat is to narrow the social scope in order to give a better experience to our target users just like Bumble, an app designed for female users which got good results.** Since these popular social media have an enormous, variable and stable user population as well as a set of completely recommending algorithms, it is a challenge to attract people to use our apps, with our own features for target users.

Dating app:

Tinder is another less anonymous app that is popular judging from the questionnaire which aims to help people find their dates, so the purpose is more specified. Competitors such as Badoo and Tinder, are focused on dating functions. People could register with their email address or phone number. They require users to upload their photos and could match users with similar hobby tags. However, both of them need photos of users as appearance, which could bring trouble to those who prefer not to upload their real photos. The data from our survey also confirmed this. As for Tinder, it requires users to register with a phone number (whenever they choose to sign up with google account or Facebook), and it may generate risks on user privacy. Besides, according to the negative comments from Google Play, Tinder has a deficiency on matching functions, which makes it frequently calculate results users do not really want. **On the other hand, MusChat will basically need an education email address, so they can be at ease on their privacy because they do not have to put too much information into this app.**

2.4 Consumer group:

Since young people have more usage of apps (the end of millennial and generation Z), the group of potential users we aim to target is people who are 18-25.

a) Potential early adopter (the motivation to use the app in the first place):

As the questionnaire shows, curiosity is one of the reasons that attracts one to use an anonymous social app. Therefore, potential early adopters of the app can be young people who have a fair usage of dating/social apps and who are willing to try out a new one.

b) Longer-term customers (how to keep a steady user base):

As the interview shows, most respondents who have used social applications will eventually use them because they lose their freshness and cannot match the people they want. So if you want to maintain a stable number of users, you need to start from the following points: 1. Continue to provide users with new content. 2. Optimize matching mechanism to improve matching accuracy. 3. Ensure the high quality of the user community.

We have set up a forum function that allows users to create topics on their own and form teams or expand topics. Simultaneously, new mini-interactive games will be added from time to time to improve users' familiarity quickly. We will periodically publish new personality test questions in the form of bubbles. There are five days in a cycle and one question per day. This will help gradually improve the integrity of the user's personality to match a more suitable person. Our application will only be open to student groups and verify schools and students' identity to ensure good user quality.

3. Strategy

3.1 Legal Status & Structure of Business

MusChat would be a limited company limited by shares. Such structure would help us fund at the beginning since we can use shares as security. We would set our company at Bath since Bath would have lower cost consumption compared to London for renting the resources we need. At the same time, Bath is a city with excellent educational resources, which would benefit our development.

3.2 Our team

The product is contributed by all the members so everyone owns the application equally. There are five members in the hair-guardians team. Tianyu has a social and cognitive psychology background and can help with user research and some design features that affect user experience, market research and identify possible psychological needs during the pandemic. Xiaoyan has helped structure several parts of the product and contributed some works for the prototype. With the experiences of building application frameworks, the main contribution is helping design the logic for the prototype and the product overview. Ye Zhu has some experience of prototype development and has certain data analysis capabilities. She also helped with testing the final product. Zhiyuan has created part of the interview template in order to have different coping strategies on various interviewees. Zhiyuan also has given an explicit description of interviewees, based on the research data. Zhengzheng has abundant experience on composing SRS and PRD, and has studied the operation mode of social apps. He was responsible for the documentation of MusChat.

3.3 Resources

React Native will be used as our development tool, it provides an open-source framework and offers us a cross-platform development on IOS and Android. It also is compatible with third-party plugins and easy for maintenance which reduced maintenance pressure for us. More importantly, it is free which can also reduce our financial risk in the following operation.

For our backend server and hosting, we will use Back4app's starter pack to seek for a stable and efficient server. The starter pack costs one-time payments of £21.46 to publish our app on Google Play store, £84.98 on Apple store and £20.17 monthly for hosting. We attach great importance to our app's designing so that we will put efforts on our designing and development phase. In this case, to reduce our financial pressure and risk, we use free prototype tools and development tools. When our App is certain, we will seek a stable and qualified server to give the best server performance.

3.4 Approach to Financing

A traditional financing approach could be related to either loan or fundraising. As a nascent seed project with only early revenue models, fundraising would be our first choice. We would like to apply the X Round Financing as our capital injection model. In phase one, with the idea and basic funding (from our own), we would process the seed funding round (Angel Investment) as soon as possible for injecting new funds with our demo and business plans. The seed funding round would be our first time to raise funds from society and the potential investors would be founders and venture capitals etc. This

round of funding could potentially help us fund up to £ 10000 or even more, which would be enough for our start up. **In phase two**, by proving our market prospects and strategy plans, we aim to try the **series A funding** for our further development and the investors in this case would mainly be the venture capital firms such as Sequoia Capital etc. **In phase three**, the other series of funding would continue to give us opportunities to create better products and expand our market blueprint.

3.5 Plans for Sales and Marketing

1st sales phase: Since the target user group is university/college students, we aim to keep the cost to a minimum so that users would be more willing to try out the app. In this phase, the app probably will not have built a solid reputation or a large user base. Therefore, no fee will be collected from downloading to using MusChat. Otherwise, the users will most likely lose interest and choose an alternative.

2nd sales phase: As the popularity and user base increase, the app can make a transition into the second phase which starts to focus on making some profits while keeping the quality of the functions and adding in some new features.

Three main sources of profits: The first is membership fee that gives users access to leveled up functions such as being able to create more thematic chat rooms and more times of changing one's name. Another potential income is collecting fees from posting advertisements in the virtual community module. Posting information that concerns students' interests such as school and government announcements will be free. The last source is game token top up. Since the app has minigames, users can collect tokens every day and they can top up their account to use while playing.

Marketing: main values & methods: We defined our main values in two aspects: user experience and technology. For UX, it is creating a clean and safe environment in which users can share their thoughts and emotions. We also aim to have big data innovation as a technological appeal. The marketing strategies will be focused since the target users are in similar types of organizations that provide higher education, and they are in cohesive groups of fairly large numbers. Thus, the app will rely on publicity at universities and colleges as well as word of mouth. We can contact student unions at various schools and ask them to put posters around the campuses as well as mentioning this app at orientation events. Once some students start to use the app and are satisfied with its quality, they would recommend it to their friends who may invite others to join this virtual community. The number of users may increase exponentially because of the linked small groups which compose a larger and growing social network.

3.6 Operational Plan

Division:

Reception service:

Public relations department is responsible for publicity, announcement or daily interaction with users or visitors on different social media (such as twitter and Facebook). Customer service department is responsible for providing online support for users (in working time), which includes solving standard questions, collecting suggestions, passing on bug reports and so on. Community manager is responsible for being keenly aware of user trends and giving advanced information to the team because not all users prefer to give direct feedback to the customer service. Since this position could be closer to users, it will be complementary to the former department.

Backstage:

Development department is responsible for implementation of new functions, including front-end, back-end and related algorithms. Operation & Maintenance department is responsible for functional tests to maximally ensure user experience. It also needs to ensure the servers are running and repair the loophole. Market department is responsible for market research, including trace on user feedback/demand, industry trends, then generating better plans for next steps.

Future steps:

At the beginning, the team will have a teleworker, in order to relieve the burden from rent. Members' income will consist of user contributions. After achieving our revenue forecast and having a certain size on our user group, we will consider expanding our scale, and upgrading or optimizing our system. At

the same time, we will set about finding more opportunities on business expansion. We will continuously focus on user experience (such as implementing more interesting/convenient functions, helping them go from closed/inferiority) because it is our core competitiveness.

3.7 Financial Projections

In the initial phase, we will raise an angel investment of at least £10,000 as the start-up capital in terms of capital. The funds will be used for the development, hosting and release of the first version of Muschat. Muschat will be available on the Google Play Store, Apple store and other Android-based app stores for students to download. The download and use of Muschat are free. **In the first and second quarter of the first year**, Due to the need to accumulate a large number of users in the early stage, we will open only the charging item of recharge game currency, and the development team of Muschat will completely determine the information released in the virtual community. Muschat will be in a completely low-income or no-income state (game currency recharge will be the only income). **In the third quarter**, after having a certain user base, the virtual community section's paid release function, and we will adopt a limited time discount to attract users to pay. Muschat will start to have more income at this time, but it is still at a loss. **In the fourth quarter**, the membership system will be officially added, and specific function upgrades can be added or modified based on user feedback. At this point, all the charging functions of Muschat will be fully enabled. The operating status of Muschat in the first year is expected to be a loss in exchange for a user base. **Starting from the second year**, with the opening of all charging functions and the user group's stability, Muschat's revenue will increase, and expenditure will be reduced and maintained at a stable cost. Since then, with time, Muschat will turn from a loss state to a profit. It is expected to reach break-even **in the middle of the second year** and start to make a profit from **the third year**. (The details of the charges could be seen in Table 1 in Appendix A)



Figure 8: Three years plan for MusChat

3.8 Potential risks and Solutions

a) Community environment: Risks may be on user information security. For example: personal information leakage. **Solution:** Establish a perfect privacy protecting mechanism and remind users not to tell private information to strangers optionally. **b) Information quality:** Reputation influence. Example: rumor, spreading other users' privacy, bad speech, junk information. Example: unhealthy ads or messages. **Solution:** Establish an effective censorship, including automatic and manual process. **c) User's quality:** Personal harassment; Bad influence on public order and good customs; Stirring up extreme emotions. **Solution:** Add community rules and introduce a warning mechanism. Those who break the rules will be punished/banned. **d) Software defects:** Loophole/bugs. **Solution:** For loopholes and bugs, having exhaustive tests on every module during the development, especially those which will have devastating strike on users' privacy.

3.9 Future Opportunities

With the support of existing functions, MusChat will meet students' social needs to a large extent. Due to the current pandemic, offline dating is greatly restricted, which is also the reason for market demand growth. In the future, when the global epidemic is under control, people will return to their original way of life. How to maintain the popularity and user volume of MusChat in the future is the main challenge. MusChat will think about how to integrate it into the daily life of college students in the future. It will also consider expanding the target user group to people other than students. Still, there will be independent databases for different users and even the development of multiple apps for different people.

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Appendix A

	Year 1 Q1 (200)	Year 1 Q2 (500)	Year 1 Q3 (800)	Year 1 Q4 (1100)	Year 1 (1100)	Year 2 (2300)	Year 3 (2800)
Membership	/	/	/	24,17.8	24,17.8	162,65.2	229,69.1
Virtual Community	/	/	3,562.5	3,562.5	7,215	14,250	14,250
Game Coins	100	250	400	550	1,300	3,700	5,225
Revenue	100	250	3,962.5	6,530.3	10,932.8	34,215.2	42444.1
Server	2,500	2,500	2,500	2,500	10,000	10,000	10,000

Office	3,750	3,750	3,750	3,750	15,000	15,000	15,000
Additional payout	500	500	500	500	2,000	2,000	2,000
Cost	6,750	6,750	6,750	6,750	27,000	27,000	27,000
Total	-6,650	-6,500	-2,787.5	-219.7	-16,067.2	7215.2	15444.1

Notes:

It is assumed that the user base of 200 people is obtained in the first quarter, and the number of users will increase by an average of 300 per quarter in the subsequent quarters, and it will stabilize at the end of the second year. (Assumed and used for income calculation)

Assuming that on average every quarter, 20% of people will buy members at a quarterly price, and 50% of people will buy game currency once. Assume that on average, every month, the virtual sections in the virtual community are purchased for 15 days.

Assume the lease and maintenance of the server is 10,000 pounds per year, the office lease and other related expenses are 15,000 pounds, and there are 2,000 pounds for other unpredictable additional expenditures (Advertising promotion, sponsor student activities as promotion).

1. Membership We will provide paid membership functions like other competing products and provide upgraded versions of some functions for paying users. we will allow ordinary users to create two themed chat rooms per month. They can post five times in the virtual community per month. And the frequency of common users' name changes is limited to twice a year. For member users, their creation of chat rooms will be upgraded to five times a month, and their number of postings will be upgraded to ten times. At the same time, he was allowed to change his nickname five times a year. Muschat is priced at 2.99 pounds for a single month package, 10.99 pounds for a seasonal package, and 29.99 pounds for an annual package.

2. Paid release of virtual communities Muschat will divide the virtual community's layout, set up sections of different sizes and positions, and add scrolling pages and headlines at the top. All users can browse, share and comment on the content for free. When an organization or individual wants to publish information in these sections, Muschat will charge a fee. The front-page headline is 50 pounds a day, the scroll page is 30 pounds a day, and other smaller sections will be charged from 5 to 10 pounds. There are a total of five scrolling pages, one front-page headline, and five small sections. For the release of some special information, Muschat will not charge fees (emergency events, important information from the school and other content related to most users' benefits).

3. Virtual game currency For the game function, virtual game coins will be set up to increase the fun and competitive nature of the interaction between players and mobilise the players' emotions. All players can receive 10 game coins every day, and member players can receive 20. At the same time, game coins also support additional purchases, and you can buy 100 game coins for 1 pound.

daily revenue of virtual community: $5 \times 30 + 50 + 5 \times 7.5 = 237.5$ (average of five small sections)

**All units are in pounds sterling.*

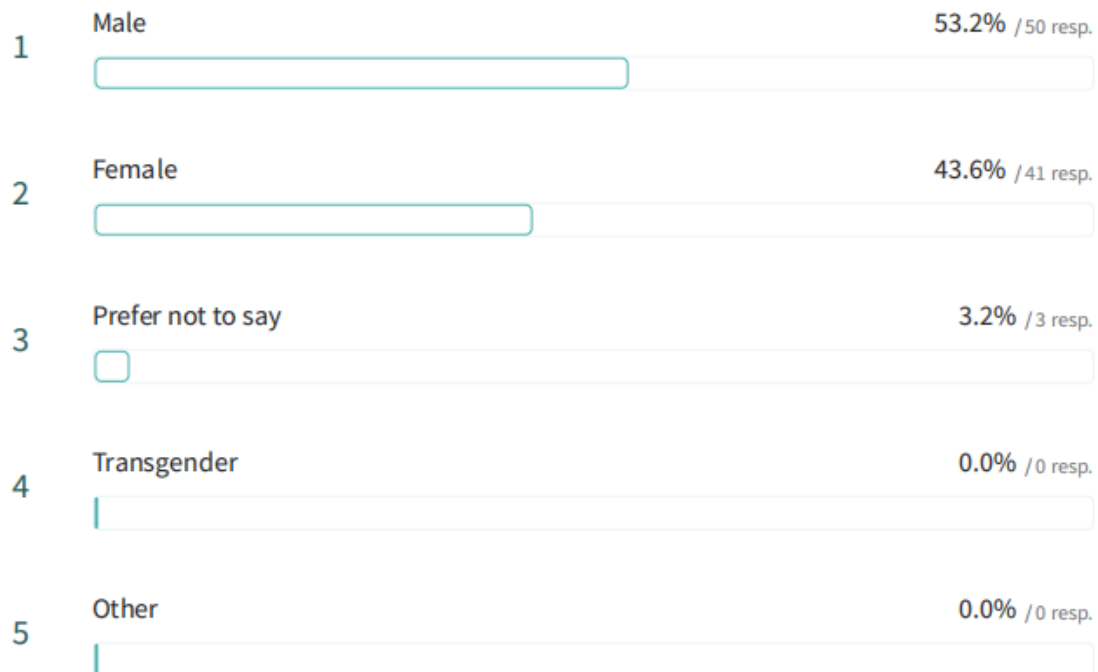
Table 1: Financial Projections for Three Years

Appendix B

Questionnaire details

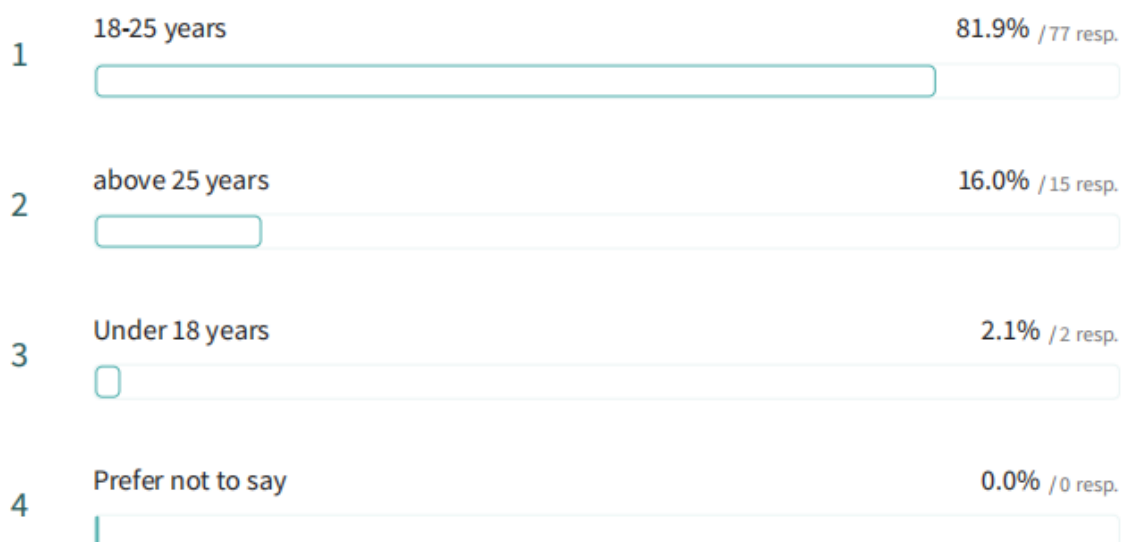
What is your gender?...

94 out of 94 answered



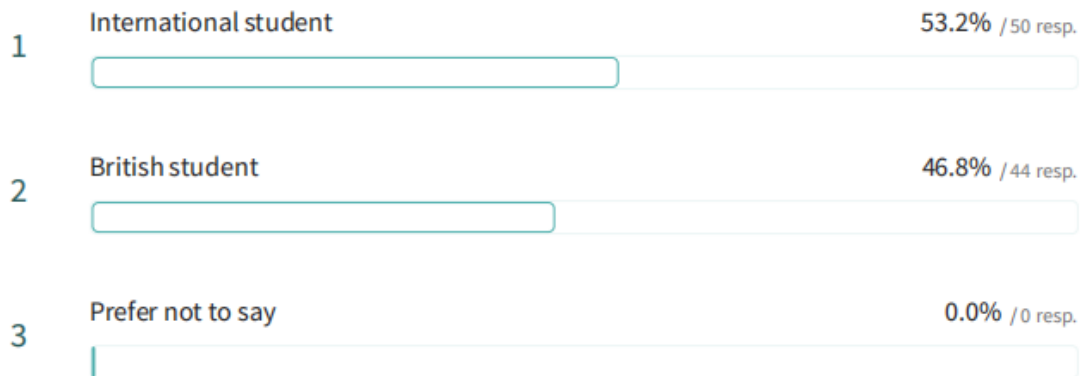
What is your age?

94 out of 94 answered



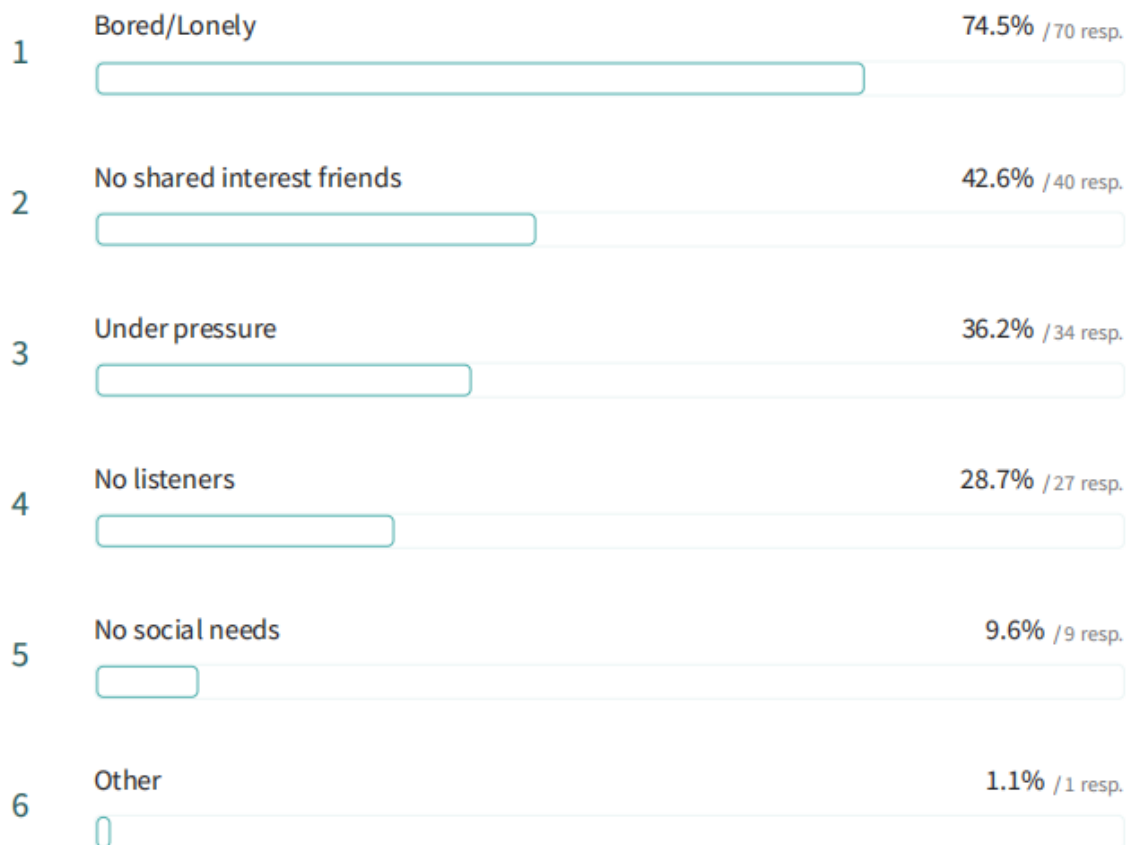
Are you a British or International student?

94 out of 94 answered



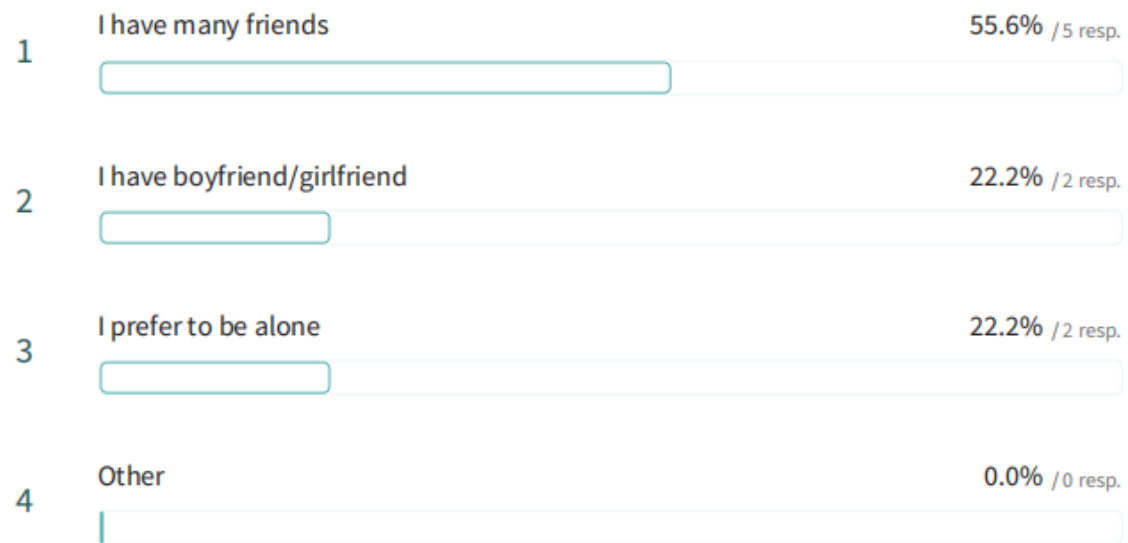
When will you feel like you want to chat with someone online?

94 out of 94 answered



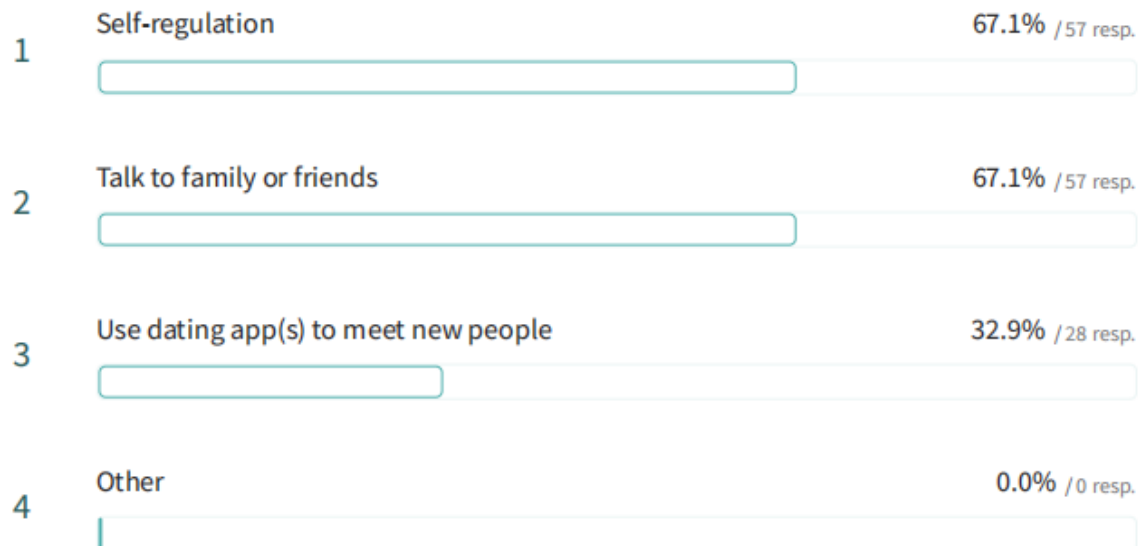
What is the main reason that you choose for "no social needs"?

9 out of 94 answered



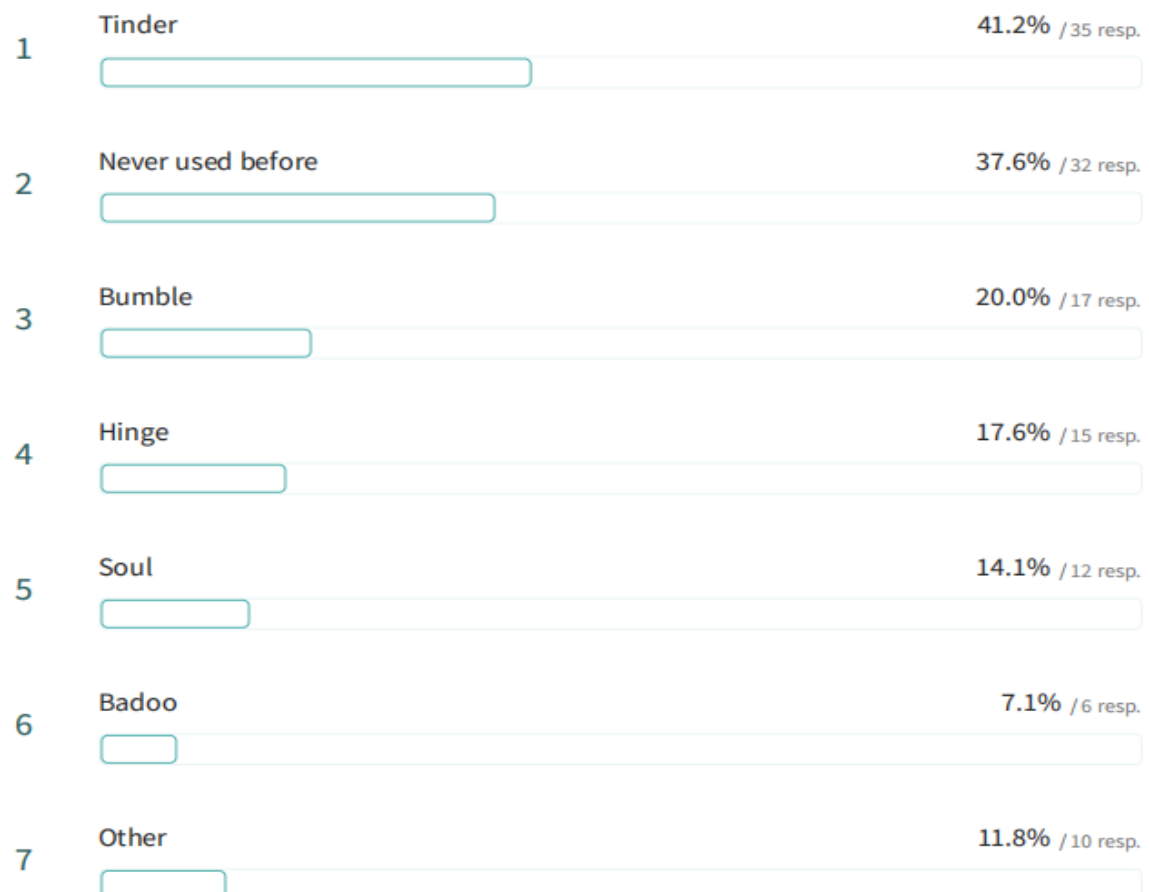
When encountering the above situation, which of the following methods would you consider?

85 out of 94 answered



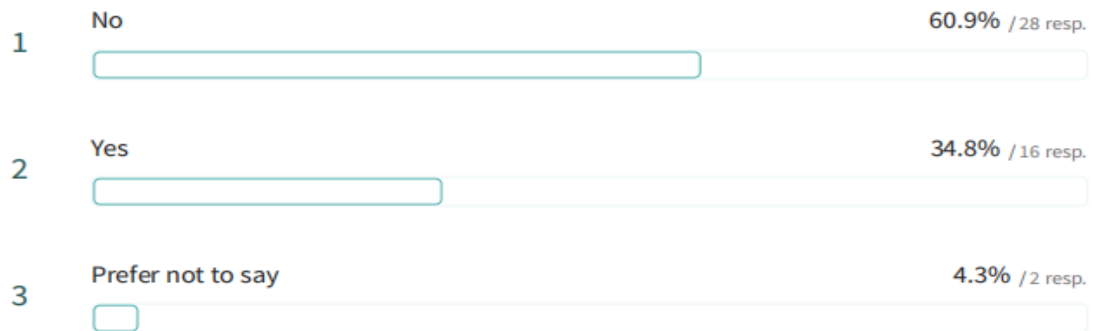
Which dating app(s) have you used?

85 out of 94 answered



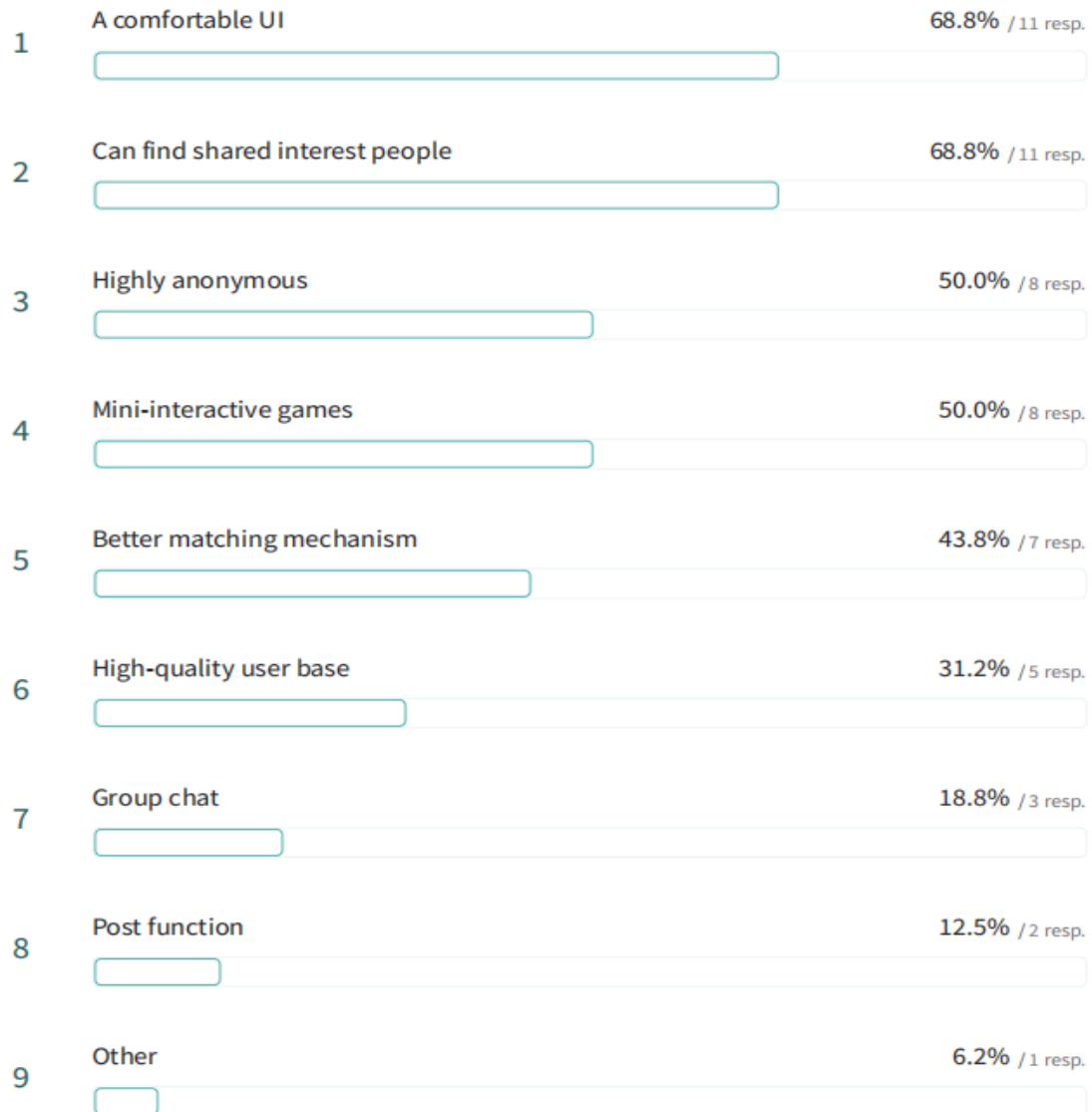
Are you still using the app(s)?

46 out of 94 answered



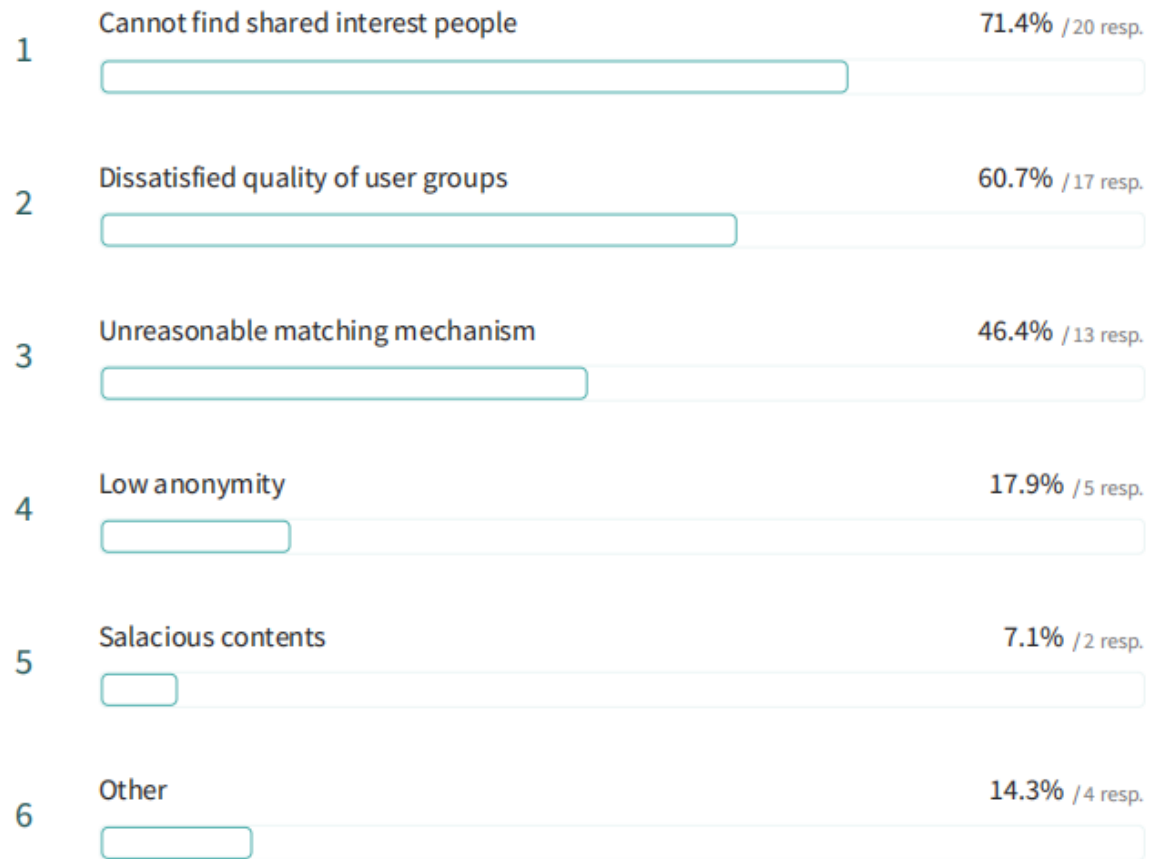
What are the reasons for continued usage of the dating app(s)?

16 out of 94 answered



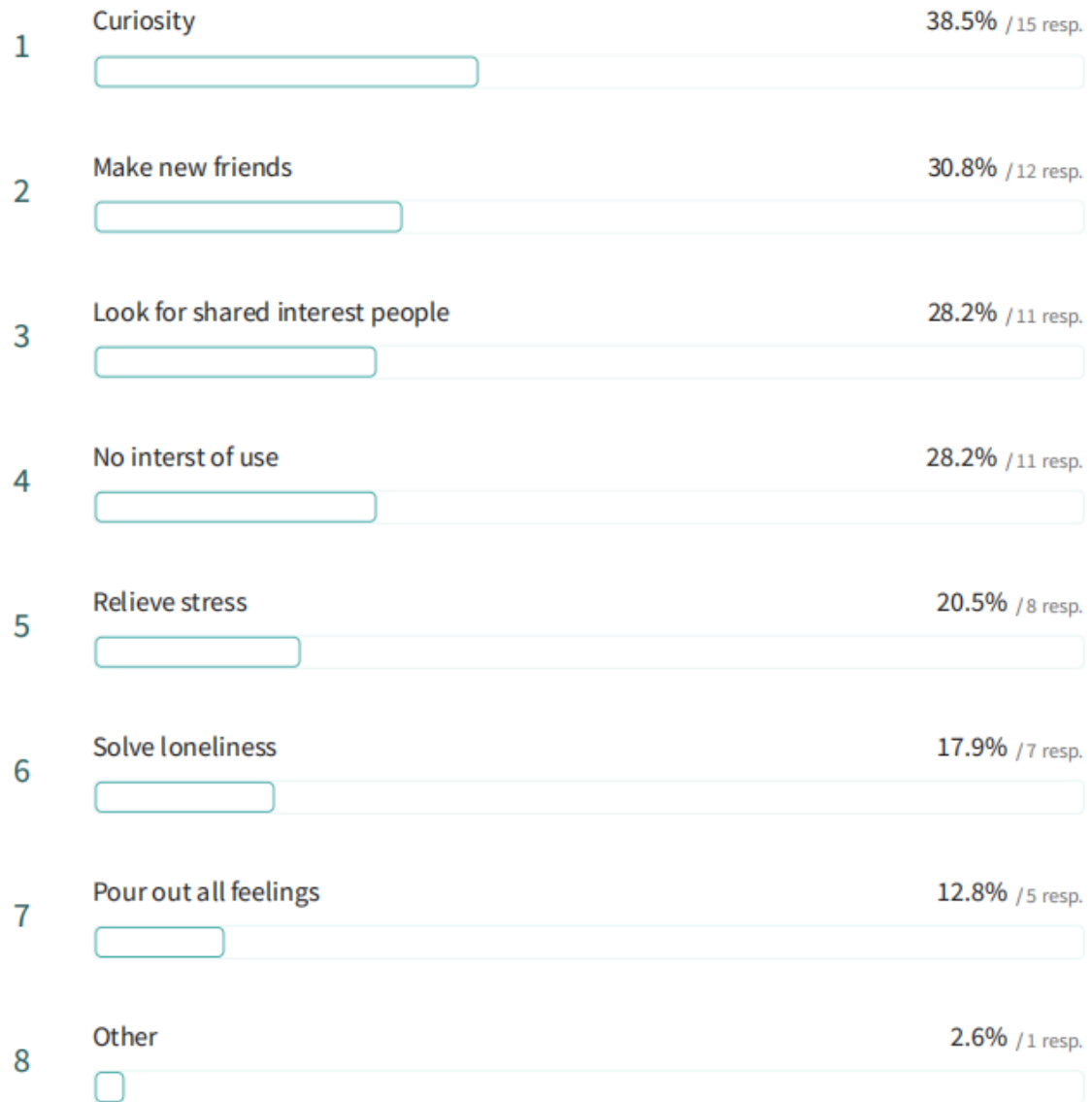
What are the reasons for not continued using the dating app(s)?

28 out of 94 answered



What might attracts you of using dating app(s)?

39 out of 94 answered



How long do you use the app(s) every week?

46 out of 94 answered

