

Project 2b Report

HobbyMate

#g4-huynh-vimalathan-roberson-zhou

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Academic Integrity Statement

We, Ken Zhou, Minh Huynh, Anushan Vimalathan, Connor Robertson, declare that all of our work is our own and not taken from any other sources. Additionally, the result of the questionnaire and interview are 100% truth with no fabrications.

Project Concept

Our project, HobbyMate, is an application that allows people to learn new skills and hobbies, as well as rent or buy equipment they can use to learn these new skills or hobbies.

Our reason for creating this app is that due to the ongoing pandemic, many people are in lockdown, and do not have many things to do. People may want to use this time to learn a new hobby or skill. However, this is difficult to do during lockdown as people will not have access to instructors or equipment. We believe that it would be convenient for people to have a single app which allows people to easily learn any skill or hobby, and get the equipment they need to learn them. We think that this app would also be effective when the pandemic is over, as people could continue to learn new skills or hobbies, or refine their current skills or hobbies.

Our group settled on this idea after brainstorming because we have all had more free time due to covid. We have also heard this sentiment from our friends, and on public forums, where people have expressed that they do not have anything to do while always being at home.

The stakeholders for this project would include:

- Primary Stakeholders
 - The people who want to learn a new skill or hobby
 - The people who teach skills or hobbies
- Secondary Stakeholders
 - Companies providing equipment
 - Delivery men
 - People sanitizing rental equipment
- Tertiary Stakeholders
 - Competing hobby shops could be negatively affected by the success of this project as we could take their potential customers
 - Our equipment providers
 - In person skill or hobby related classes, such as drawing classes, may be negatively affected if our project is successful as we could be more popular
- Facilitating Stakeholders
 - Software engineers
 - Interface designers

Some assumptions we are making is that people have more free time due to the pandemic, people have access to a mobile device, people want to learn a new skill or hobby, and that people need a service to learn a skill or hobby.

Field Study Report

To better understand the stakeholders, we conduct a field study using 2 research instruments: an online questionnaire and a virtual interview. We received 21 responses on our survey and interviewed 3 individuals.

The field report was carried out to observe public free time spending habits on their hobbies and how the current pandemic situation may have affected them. This study will guide us in designing HobbyMate application design as well as which functionality to prioritize.

Questionnaire Results

We asked the participants to rank how much their free time was affected by the pandemic on a scale from 1 to 5 (Figure 1).

How has the pandemic affected your free time?
22 responses

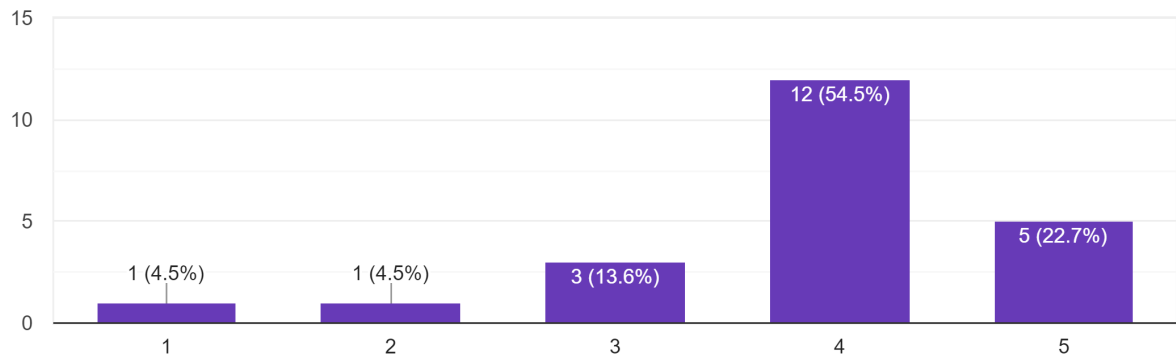


Figure 1. Effect of pandemic on respondents' free time (x-axis scale from 1 - less time to 5 - more time)

On our scale, we labeled 1 being less time, and 5 being more time. From the results, we have noticed that 12 out of 22 of participants have slightly more time, and 5 out of 22 participants have a lot more time. 3 people have not had their free time affected by the pandemic, and 2 people have had less time due to the pandemic. The results for this question are close to what we expected, as we assumed that people would have more free time.

Next we asked the participants if they have any hobbies. (Figure 2)

Do you have any hobbies?

22 responses

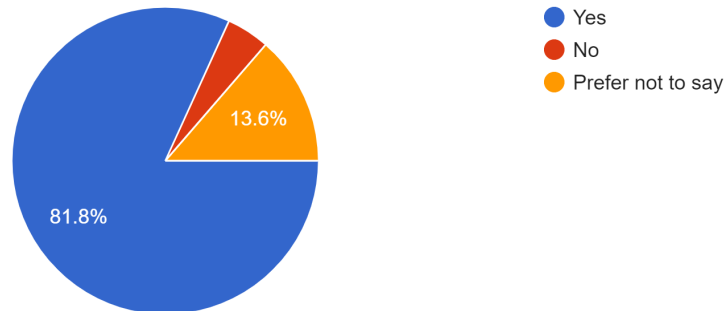


Figure 2. Asking if the respondents have any hobbies

We learned from the results that 18 of the 22 people who took the survey have a form of hobby, 3 people prefer not to state if they have a hobby, and only 1 stated that they do not have a hobby.

For the participants who answered Yes, we asked them to list their hobbies (Figure 3)

If yes, what are your hobbies?

17 responses

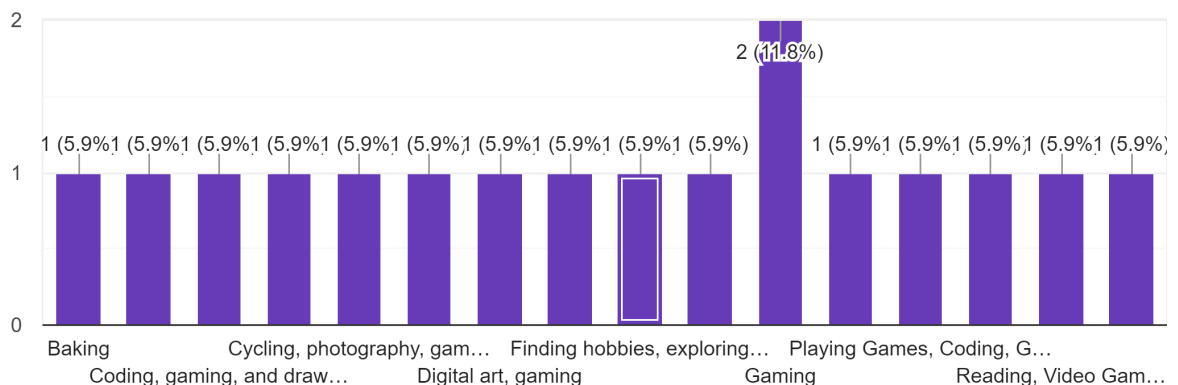


Figure 3. Finding out what are the respondents' hobbies

We manually evaluated this questionnaire since it was an open ended question. From the results, we notice that 15 of the 17 participants that partake in gaming. A few common hobbies we noticed these participants have are reading (6 people of 17), drawing (5 people of 17) and programming (5 people of 17). There are also unique hobbies that some individuals have such as Baking, Cycling, and Gardening.

We also asked the participants how invested they are in their hobbies on a scale from 1 to 5. (Figure 4)

How invested are you in your hobbies?

22 responses

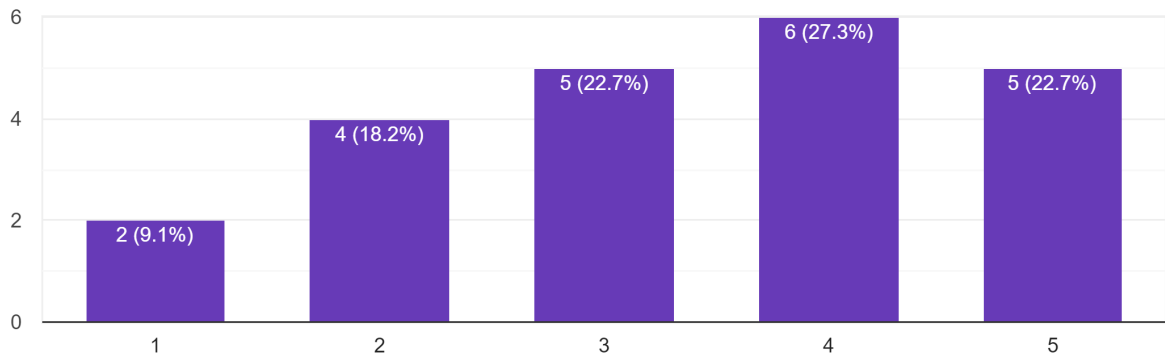


Figure 4. Finding out how willing are the respondents to invest in their hobbies

In this question, we labeled 1 on the scale as casual, and 5 as serious. We noticed that the results are quite evenly distributed across the options. 6 of the participants are casual, and 11 are serious about their hobbies. 5 participants say that they are in the middle between casual and serious. This is an interesting result, as our project would have to be able to cater to both casual and serious audiences.

Since we are experiencing the pandemic and lockdown, we questioned the respondents on how the pandemic may have impacted their hobbies, and if they wanted to learn any new hobbies due to the pandemic. (Figure 5 - 6)

How has the pandemic affected your hobbies?

22 responses

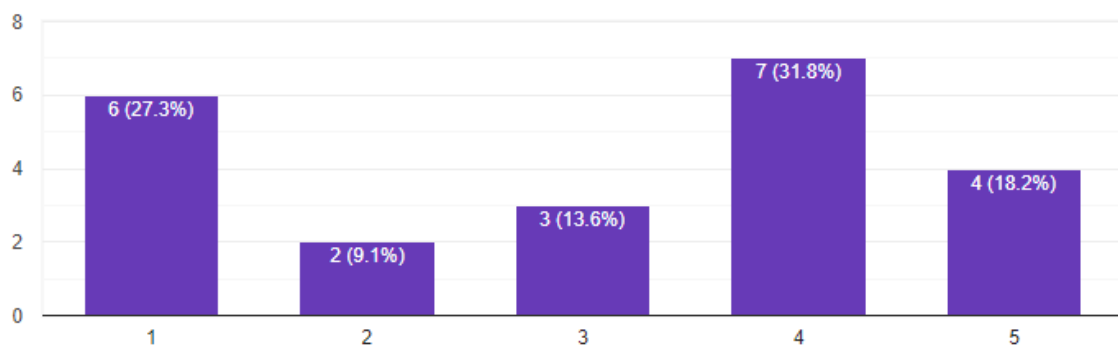


Figure 5. Finding out if the respondent's hobbies are being affected due to pandemic (x-axis scale from 1 - no effect to 5 - great effect)

Did the pandemic make you want to learn any new hobbies?

22 responses

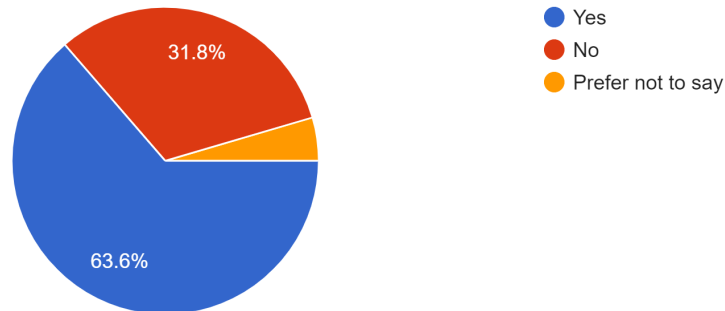


Figure 6. Finding out if the respondents want to try new hobbies during the pandemic

When we asked how the pandemic affected people's hobbies, we set the scale from 1 to 5, with 1 being no effect, and 5 being greatly affected. In figure 5, we noticed that 6 out of 22 participants say that the pandemic has had no effect on their hobbies. For the rest of the 16 participants, the pandemic has at least had some effect on their hobbies.

In figure 6, we learned that the pandemic has made participants want to learn new hobbies. 63.6% of the participants wanted to learn a new hobby due to the pandemic. However a sizable amount of 31.8% of participants did not want to learn a new hobby due to the pandemic. This was a surprising result as we thought a larger portion of participants would have wanted to learn a new hobby.

We were also interested in how the participants learned their hobbies (Figure 7)

How did you learn the hobbies?

22 responses

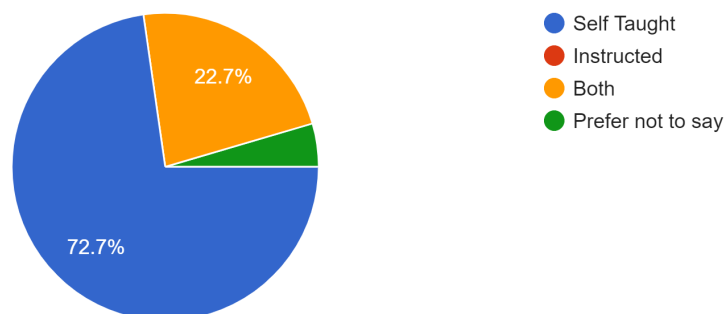


Figure 7. Finding out how the respondents learn their hobbies

From the results for this questionnaire, we learned that the 21 out of 22 participants that have decided to give their say stated that they teach themselves and 1 participant preferred not to answer the question. Among the participants who are self taught, 5 of them have stated that they have also learned through being instructed.

Due to the lockdown, everything is moving toward virtual interactions. Thus, we questioned the respondent about their exposure to a virtual environment to get a better understanding about the technical requirements for HobbyMate. (Figure 8 - 11)

Are you familiar with social media?

22 responses

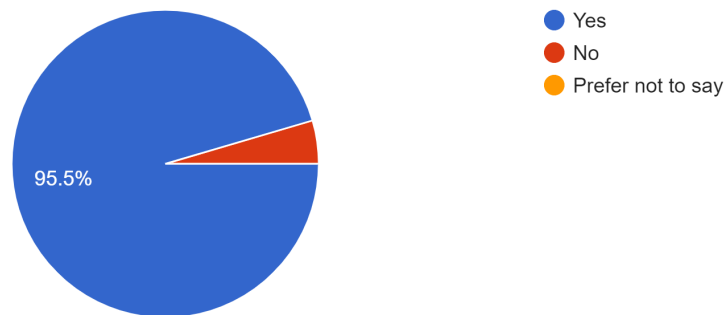


Figure 8. Finding out if the respondents are familiar with social media

Have you ever participated in online meetings?

22 responses

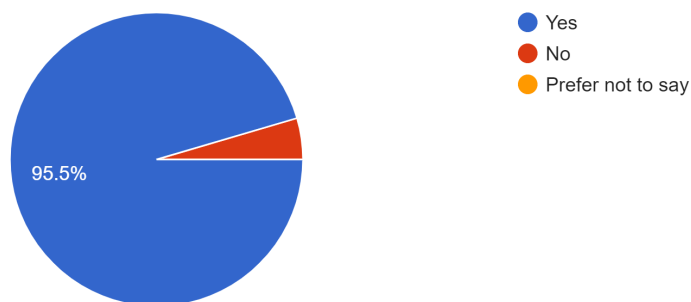


Figure 9. Finding out if the respondents experience online meetings

Have you ever made a purchase online?

22 responses

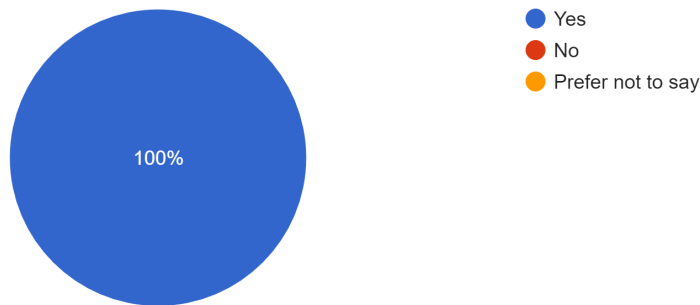


Figure 10. Finding out if the respondents ever did online purchases

Do you have access to stable internet?

22 responses

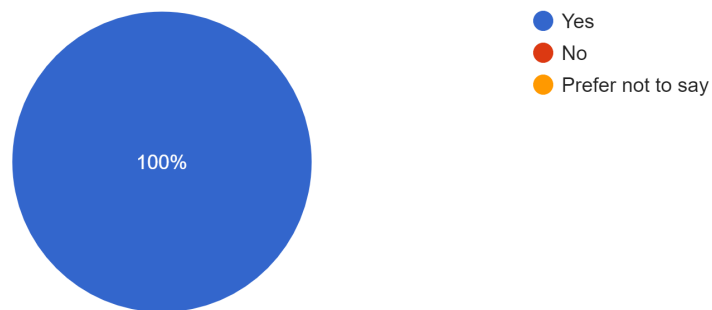


Figure 11. Finding out if the respondents have access to stable internet

From our questionnaire it seems that everyone surveyed had made an online purchase (figure 10). This is relevant to our project as we plan to have online purchases to buy or rent equipment. Furthermore, 21 of 22 people have used social media (figure 8) and have participated in online meetings (figure 9). From this we can see that the users would be familiar with the online environment for learning in our app. All respondents had access to a stable internet connection as well (figure 11), which would allow them to stream video tutorials.

People have different ways to learn. Some might learn better in certain environments and some might not. We want to learn about the preference and type of learner from the respondents to make sure our app can provide the best learning experience for the users. (Figure 12 - 13)

How do you prefer to learn?

22 responses

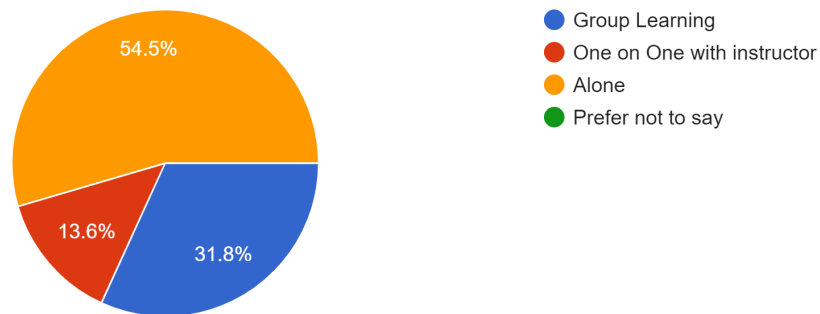


Figure 12. Finding out the learning preferences of the respondents

What type of learner are you?

22 responses

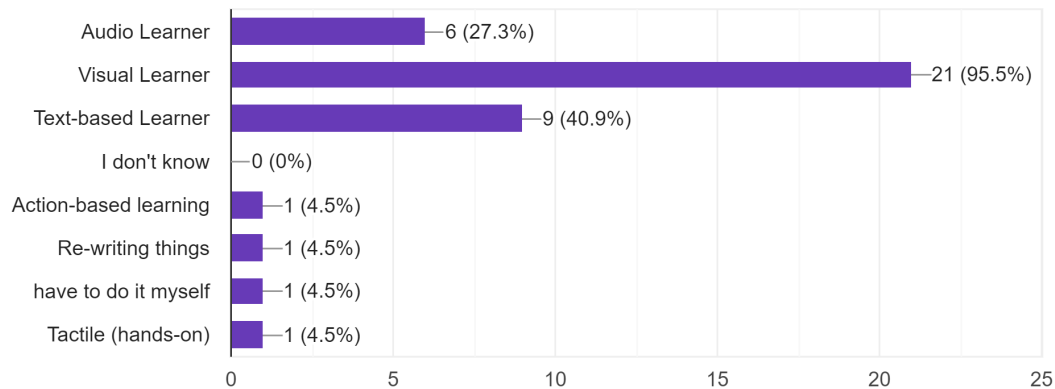


Figure 13. Finding out their preferred learning methods

Based on figure 12, the majority of the respondents (12/22) prefer to learn alone, while there are 3 people attending an one on one session with an instructor and 7 people who prefer learning with a group. We can conclude that our app design needs to focus on providing a good solo learning experience for the users while also offering them social interactions in learning as an optional feature.

Figure 13 shows us that the majority of the people are visual learners with the result of 21 over 22 respondents. There are also a decent part of the respondents who learn better with audio (9 over 22) and text-based learning (6 over 22). There is a small amount (1 over 22) for other learning types. Based on the result, we can conclude that the majority of the public learn better with visuals, which we can easily achieve with our app and visual type learning can easily

be integrated with other learning styles to provide the best overall learning experience for the users.

One of the original ideas for HobbyMate was to allow the user to rent or buy the equipment from trustworthy providers for their hobbies without any contact during the pandemic. For such reasons, we investigate how respondents feel about online delivery services. (Figure 14)

Are you comfortable with online delivery services considering the state of the pandemic?
22 responses

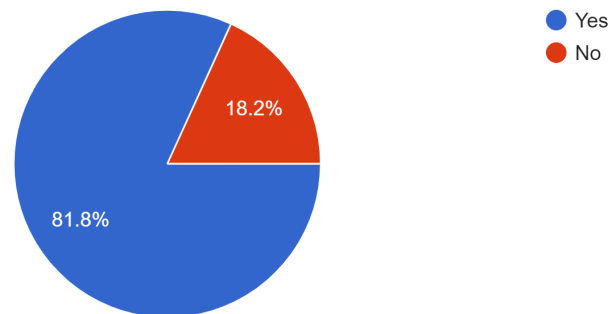


Figure 14. Checking if the respondents are comfortable with the quality of online delivery services

The results show that 18 out of 22 participants are comfortable with online delivery services, and 4 out of 22 participants are not comfortable with online delivery services. For HobbyMate, we would need our participants to be comfortable with online delivery services in order to rent or sell hobby related equipment to them. To achieve this, we need to thoroughly sanitize all of our equipment, and follow all covid safety instructions to make sure that our participants would be comfortable with delivery.

Virtual Interview Results

We conducted 3 interviews to get a deeper understanding of people and their experiences with their hobbies before and during the pandemic.

In the first interview, the participant stated that his hobbies included playing video games and skateboarding. We asked the participant to elaborate on his experiences with skateboarding. He got his skateboard as a gift for Christmas, and got equipment from licensed retailers. He skateboards outside at night during the pandemic. He said that skateboard tricks are frustrating and seeing random people on social media be a lot better than himself is discouraging. During the pandemic, he tried learning a new hobby which was music theory. He

used internet resources such as videos, documents, and diagrams. His struggles included memorization, and difficult execution on his guitar.

In the second interview, the participant stated that his hobbies were playing games, programming, and gardening. He got into games and programming while he was young, and recently got into gardening due to stress in his second year at university. He has not bought any equipment, but uses household items such as spoons, pitchers, and spray bottles for gardening. His proudest moments in his hobbies were beating a boss named Midir in the video game Dark Souls, completing his vulcan project in programming, and saving a plant from dying. During lockdown, he feels that he has more free time to spend with himself, family, and on hobbies. He did not learn any new hobbies, but if he finds something that he likes, he will pursue it. He recently tried digital art and is having difficulty with drawing straight lines. He also tried to do blender animations but lost interest because it was too difficult.

In the third interview, the participant said that his hobbies were playing video games, watching tv, and working on personal projects such as programming, 3d modelling, and simulations. He has been playing video games and watching tv since he was young, but started working on personal projects about 2 years ago. He watches YouTube videos on interesting topics, and tries to do it himself. He does these projects because he finds that they are interesting and satisfying when it works. During covid, he tried to pick up new programming languages. He learned by doing, playing around with tools, and searching Google for issues. He does not watch YouTube videos because he cannot find solutions there. He gets frustrated when he gets stuck on something that should be easy.

Field Study Summary and Conclusion

From our research we learned that 17/22 people have more free time due to the pandemic. They can use this time to work on their hobbies or learn new hobbies. During the pandemic, 18/22 people tried to learn a new hobby. All 21 participants who responded are self taught to some degree, but 5 of them also get help from an instructor. For HobbyMate, we can provide tutorials that can be done at any time so people who are self taught can work on their own time. We can also allow the users to contact an instructor for their hobby if needed. All but 1 of the 22 participants are familiar with digital environments such as social media and online meetings. Our HobbyMate environment would be similar to these existing software, so the users would be familiar with it. We also learned that 12/22 people like learning alone, 7/22 in groups, and 3/22 like learning one-on-one with an instructor. In HobbyMate, we can allow users to learn hobbies alone, with an instructor, or connect with other people learning the same hobby in order to learn as a group. We also need to provide audio, video, text, and tactile based resources to allow different types of learners to understand their hobby. This can be accomplished by providing video instructions, giving text procedures, and providing equipment to users so they can get hands-on experience. From the interviews, we learned that difficult parts of a hobby are often demotivating and cause people to lose interest in that hobby. Our goal with HobbyMate would be to provide all of these resources to users to decrease the difficulty of learning their hobbies and keep the users motivated.

Task Analysis

0. Learning a new hobby

1. Find out what hobby to learn
2. Research the chosen hobby
 - 2.1. Read the description of the hobby
 - 2.2. Check the requirements for the hobby
3. Get tools/equipments needed
 - 3.1. Check if you already have tools and equipments needed
 - 3.2. Purchase tools/equipments
 - 3.3. Rent tools/equipments
4. Learn and Practice
 - 4.1 Set up a personal goal to achieve
 - 4.2. Search for instructions/tutorials
 - 4.3. Follow the instructions/tutorials
 - 4.4. Ask for help from other people

Plan 0: Do 1 - 2 - 3 - 4 in that order, repeat 4 as needed.

Plan 2: Do 2.1 and 2.2 in any order, if the hobby is not interesting or unable to meet the requirements then go back step 1.

Plan 3: Need to do 3.1 first, 3.2 and 3.3 are optional. Do 3.2 and 3.3 in any order if lacking equipment/tools.

Plan 4: Do 4.1 - 4.2 - 4.3 in that order. 4.4 is optional if additional help is needed when doing 4.3. Repeat 4.2, 4.3, and 4.4 until the goal is achieved and repeat 4.1 if further learning is needed.

The following are ways in which HobbyMate can help with learning a hobby.

If the user has trouble finding a hobby in task 1, HobbyMate will suggest possible hobbies, as well as let the user browse a list of hobbies.

For task 3, the user may not be able to find a place to buy or rent equipment, so they can use our app to view equipment available for rental or purchase.

For task 4, if the user does not know how to learn or practice their hobby, the app can suggest a goal and practice routines for the user.

Persona

Name: Joe Mama

Gender: Male

Age: 21

Location: Toronto, Ontario

Marital status: Single

Education: Working towards an Undergraduate Bachelor's Degree in Journalism

Job: Part-time McDonald's

Joe Mama lives alone in his Condo that he is renting in downtown Toronto. He is a Second Year Journalism student at Ryerson taking online classes in the upcoming semester. He currently works part-time at McDonald's where he usually takes the overnight shift. Due to the pandemic he no longer meets up with his friends and therefore has more free time. Due to having more free time he has found himself browsing YouTube more which inspires him to pick up new hobbies about an assortment of different topics. He wants to find a hobby that he can get invested in, but he finds himself losing interest in everything he tries to learn.

Scenarios

1. Joe Mama is watching Youtube videos on his day off and notices an interesting speed drawing video on his home page. He clicks on the video and gets drawn into digital art. He decides he wants to give digital art a try. He goes onto amazon, ebay and kijiji to look for a cheap second hand drawing tablet to use. He finds a slightly damaged but cheap wacom tablet for about 30% off the standard price and decides it fits his tight budget and purchases it. The deal is set and he drives 20 minutes to the meet up destination and waits an hour for the seller to arrive. They make the transaction and Joe drives 20 minutes back to his condo to try it out. He realizes the tablet did not come with a disc with the driver installations so he searches for them online. After 10 minutes, he finds the drivers for the tablet he has and installs them. While installing his drivers, he decides to research free and safe drawing tablet softwares. He settles on Krita and installs it. He opens Krita and is overwhelmed by the number of buttons and tools Krita provides. He decides to just doodle around with the pen tool for about 30 minutes and then closes the software.
2. Joe Mama goes back to his parent's house to celebrate his birthday. His parents prepared a present for him and he opened it, uncovering a brand new guitar. He always wanted to learn how to play the guitar. Since the lockdown is happening right now, he has plenty of time to practice and learn how to play the guitar. He practices at least one hour a day and after one week of practicing, he is able to grasp the basics of playing guitar. He plays for another week but begins to lose interest and plays less and less by the day. At the end of the second week, he stops playing completely. He decides to return the item and asks his parents for the receipt for the guitar. He learns that the guitar was purchased during a large sale where all purchases are finalized.

Requirements

Stakeholder needs

- Needs to know how to download apps from the internet
 - HobbyMate will be a downloadable app so the user needs to download the app to get access.
- Have an interest in a hobby or intends to learn a hobby
 - HobbyMate's primary goal will be to assist users in learning hobbies. The app will be useless if the user is not interested in having any hobbies at all.

Environmental requirements

- Needs to allow the user to partake in their hobby
 - Some hobbies may need a specific environment such as practicing basketball at a basketball court. In the first interview, the participant stated that he skateboards outside at night as he can move more freely since less people are outside.
- Requires login from a single user
 - Because each user needs to be uniquely identified for communication and payments, they need an account to login to the system. 21/22 questionnaire participants are familiar with social media and all 22 have made an online purchase so they should be comfortable with this environment.
- Has access to the internet
 - Not a problem as everyone (22/22 based on the questionnaire) have access to stable internet

Functional requirements

- Provide resources and forums to help guide users and improve their performance with hobbies
 - From interview results, we notice that frustrations stem from getting stuck on a particular issue and not being able to find the appropriate resources to solve the issue
- Allow users to explore a variety of hobbies
 - People we have interviewed have mentioned that many of the hobbies they have were started at a young age and new hobbies they picked up started from watching something related to the hobby and gaining interest. For example, one interviewee mentioned that they picked up digital art and 3d animation because they were into watching animations and reading manga.
- Progress tracking
 - One of the interviewees mentioned that they get discouraged when they see someone with the same hobby that is better than them. To counteract this, progress tracking will allow users to see how they are improving over time to encourage them to continue pursuing their hobbies.

Technical requirements

- Free download and resources as well as premium subscription based resources
 - Based on our questionnaire, 12 out of 22 people prefer to learn alone, 7 out of 22 prefer to learn in groups and 3 out of 22 people prefer to learn one on one with an instructor. Providing access to resources you can work through alone as well as forum access for free allows the majority of users to learn for free. The subscription based resources allows users to learn from experts in the fields.
- Technology compatibility
 - Application will be compatible with apple and android mobile devices as well as PC. Interviewees have mentioned that they learned from youtube and by googling issues so having the application be on mobile and PC should not be an issue.
- Equipment storage
 - Equipment should be stored in a warehouse where equipment is sanitized before and after it leaves the warehouse. Since 4 out of 22 participants in our questionnaires are not comfortable with online delivery during the pandemic, we will publicize the storage and sanitization practices.

Usability requirements

- Search and filter
 - Ease in discovering and finding resources for specific hobbies and interests.
- Forum system
 - Allows users to find solutions to common issues for a particular hobby that cannot be solved through tutorials or guides by discussing it with the community of individuals who participate in that hobby.

Appendices

Contribution Report

✓: Took part in

	Ken Zhou	Minh Huynh	Anushan Vimalathanan	Connor Robertson
Project Concept	✓	✓	✓	✓
Field Study Report	✓	✓	✓	✓
Task Analysis	✓	✓	✓	✓
Persona	✓	✓	✓	✓
Scenarios	✓	✓	✓	✓
Requirements	✓	✓	✓	✓

Relevant Material

We did not make any changes to the questionnaire and interview procedure from part 2a.

Questionnaire: <https://forms.gle/vySCwGzZ9TGCwsiy5>

Interview Procedure

1. Confirm that the participant filled out the consent form
2. Introduce yourself and get interviewee to introduce themselves
 - Age, Gender, Occupation
 - From occupation, maybe try to ask them some questions about their job to build rapport
3. Ask about how they spend their free time before covid
 - maybe talk about how they got into what they do (evoke story)
 - maybe ask them what was their proudest moment?
 - ask about the most frustrating part about what they do
 - ask if they have any hobbies
 - maybe ask what was your best experience with your hobby
 - where did you get the equipment from
 - how did you start
4. Ask about how they spend their free time during covid
 - maybe ask about how they feel for the lockdown
 - find out if their free time was affected by the lockdown
 - ask if they tried to learn anything new during lockdown
 - if they learned something new, ask them how they learned it
 - maybe ask them about their challenges
5. Try to reflect on the interviewee's experiences
6. Wrap up and give thanks

Consent Form

CSCI 4620U: Human Computer Interaction Research Study Electronic Consent Form



Study on Community's Leisure Activities

I hereby consent to participate in a course-based research study conducted by Minh Huynh <huynh.minh@ontariotechu.net>, Anushan Vimalathan <anushan.vimalathan@ontariotechu.net>, Ken Zhou <ming.zhou1@ontariotechu.net>, Connor Robertson <connor.robertson@ontariotechu.net> for an assignment in CSCI 4620: Human Computer Interaction, at Ontario Tech University. The course is taught by Dr. Christopher Collins in the Faculty of Science (christopher.collins@ontariotechu.ca / 905.721.8668), and this study is being conducted under his supervision and with the approval of the Ontario Tech University Research Ethics Board (file 10-017).

I understand that:

- The purpose of this study is to learn how people use their free time before and during COVID-19.
- The procedures to be used are an online questionnaire and an approximately 20 minute virtual interview.
- **Due to the Covid-19 pandemic, all data collection will be remote (online or by phone).**
- I will receive no compensation for my participation.
- I am free to withdraw before or any time during the study with no consequence and without the need to give any explanation.
- All materials and results will be kept confidential, and, in particular, that my name and any identifying or identified information will not be associated with the data.
- All collected data will be destroyed at the end of the course, December 18, 2020.
- Collected data will not be used beyond the scope of the course project.

If you have any questions about your rights as a participant in this study, complaints, or adverse events, please contact the Research Ethics Office at (905) 721-8668 x3693 or at researchethics@ontariotechu.ca.

If you have any questions concerning the research study or experience any discomfort related to the study, please contact the course instructor Dr. Christopher Collins at 905-721-8668 x6581 or christopher.collins@ontariotechu.ca.

PARTICIPANT

Name: _____

Signature: _____ Date: _____