

## **Background and methodology (test plan)**

### **Scope**

The usability test will cover the friend searching, showing videos and modifying the volume and screen size, changing styles(e.g. background color, fonts) of the website, submitting feedback, executing operations(submit, reply, delete) in community forum page.

### **Purpose**

We wish to evaluate the Web Game Inhouse website with respect to usability goals as well as to identify potential usability issues that should be corrected. All the functions to be tested should meet the easy-to-learn requirement. Also, different users may prefer different website styles when they are watching a video as well as modifying the volume and the screen size of the video. We wish to investigate these potential issues specifically.

### **Format**

Testing will take place between November 16th and December 3rd, 2020. The usability tests will be a communication with participants that will take place over Microsoft Teams.

### **Participants**

Participants will be made up of 5 undergraduate students in McMaster University.

### **Equipment**

Participants should have a computer with a common web browser. We will be asking participants to record their screen on Microsoft Teams and to provide us with a think aloud as they perform tasks recorded with their microphone or a document.

### **Roles**

The participants will carry out the instructions provided, and our team's role will be to analyze and report the data collected as well as improving the style and function implementation.

## **Sessions**

Usability test sessions will be conducted as follows:

1. Participants will fill out a pre-test survey.
2. Participant will be asked to record their screen and microphone while thinking aloud and performing each of these task scenarios:
  - Scenario 1: Submit feedback and report issue on the website
  - Scenario 2: Execute different operations to community forum posts, including submit, reply and delete.
  - Scenario 3: Start a game and adjust game screen size/volume, search friend list and invite friends.
  - Scenario 4: Customize website's style in setting page, e.g. font type, font size, background color.
3. Participants will end recording and fill out a post-test survey.
4. Participants will send their video file via Microsoft Teams chat and let us know they have completed the test.
5. Short interview via chat will be conducted with the participant.

We estimate that the test should take no more than 30 minutes for the participant to complete.

## **Observations and metrics**

After receiving the video from the participant, specific qualitative observations will be made via notetaking as to the participant's performance and experience with the tasks. The following metrics will be kept of specifically:

- Performance in seconds for each task
- Number of errors made per task
- An error will be considered to be made when a user attempts the wrong user action.

Both metrics will be measured via observations made via note taking, a stopwatch will be used in the case of performance time and errors will be kept track of by ticking off boxes.

## **Instruments**

We will use a pre-test and post-test survey, see the attached surveys in the appendix.

After the test is complete, and we receive the recording or document from the user, we will ask the following post-test interview questions in a scripted interview.

- What were your favourite parts of the interface?
- Are there any features that could be added to the website, or are there any features that are not needed on the website?
- Is there anything the application could have been done to improve this user interface?

## Appendix

### Pre-test survey

\*必填

What's your name?

您的回答

How often do you play games (Console games)? \*

- ☐ Everyday
- ☐ Less than 5 days in a week
- ☐ Less than 3 days in a week
- ☐ Once a week
- ☐ Never

What websites (or add) do you play game premade?

您的回答

# Post-test survey

\*必填

What's your name

您的回答

What were your favourite parts of the interface? \*

您的回答

Are there any features that could be added to the website, or are there any features that are not needed on the website? \*

您的回答

Is there anything the application could have been done to improve this user interface? \*

您的回答

## **Usability test results:**

### **Pre-test survey**

There are 10 people participated in pre-test survey. Three of them never play games; two of them play games once a week; three of them play less than three days in a week; two of them play games almost every day. For the websites they used to play games on, steam and discord are the application appear most often in the survey, battlenet.com and miniclip.com both appear once.

### **Test video record**

We received 9 video records of usability test.

Among all the video record of tests, three participants found that they could not reach the community site because the clickable hyperlink in navigation bar to community page, it was blocked by other menu buttons since participants' web browser screen size is not big enough to display navigation bar in single line.

Besides community accessibility problem, the participants successfully enter the community website gives some other feedbacks about community page:

1. The forum enter box: After users enter the title and paragraph and click submit, the text being submitted should disappear in the enter box whereas it doesn't disappear.
2. The font style: The font style inside the forum is different from font style in other places, which gives two participants uncomfortable feeling.
3. The scroll photo frame: One participant found the scrolling frame is meaningless.

For those who tested the "start game page":

4. The searching box: Three participants found the search box was covered by the video frame, even if they change the size of the video frame.
5. The inter-medium page: Two participants considered the page after submitting a report in "report issue" is not necessary.

### **Post-test survey + interview question**

After scenarios were completed, the participants filled out the post-test survey. We have the results including below:

Favorite parts of the interface:

1. Three people gives positive evaluation to the forum section in the community page.
2. Navigation bar and index page get acknowledged as a clean design.
3. Four people feel setting page is easy to use, for changing styles the users can simply click on the pre-set buttons.
4. Three participants like the video play feature.

Features suggested to be added (some are included in the "test record" section):

1. Contact information can be a footer instead of a selection in the navigation bar
2. A chat feature could be added to the game room
3. It is better to make return and navigation buttons more consistent with theme of

styling throughout site

4. Two of them says the website is prefect, nothing to be added.

**Metrics summarization table**

	Time consumed in average(sec)	Errors/bugs	Accessibility issue
scenario 1(feedback)	30 approx.	0	0
scenario 2(community forum)	95 approx.	0	3
scenario 3(game + friend list)	70 approx.	0	2
scenario 4(setting)	25 approx.	0	0
Total	220 approx. 3.5-4 minutes	0	5

## **Analysis of test results**

Issues: (organized by priority from high to low)

1. (Catastrophic problem):

We didn't pay attention to the screen size change would make a big difference to navigation bar, which made some test participants couldn't access the community page unless they adjust window size%. This mistake was made because 2 members in the group are both using a larger screen compared with test participants and we didn't notice this design fault when designing the interface. This is a real failure which could have been easily found and avoided if we adjust screen size or change the css style lay out. Similar issue exists with start game page (video screen covered friend list section). We add buttons to adjust video screen size, so it is not as severe as navigation bar issue, but still, it needs to be revised to give user a better subjective satisfaction.

2. (Critical problem):

The consistency of user interface design can be improved; the community section font style and size should change to be same with other sections, background picture and color theme in game section can be changed to make the website more consistent in general,

3. (Major problem):

Forum section need a better design, mainly css style part. Due to time issue, we didn't adjust this section to a good looking before deadline, and this made forum feature poorly received compared with other features. The feature itself is a good idea and people like it, just lack some good design.

4. (Minor problem):

Design logic (how stuffs should work in a better way that it is supposed to be): some parts' design isn't reasonable, e.g., in forum submit post section, content in text input should be removed after it is submitted; feedback feature doesn't necessarily need an extra page to let user know the feedback is received, can be done through a short message pop nearby.

Well-received/Positive findings:

- Setting page works well since users are provided with preset buttons and can try to see how those works by simply clicking on them to switch back and forth.
- Friend list function is said to be impressive, it is not completely finished yet, but it will be an important feature for an online community interaction application
- Forum feature worked well with basic functions achieved

## **Recommendations and conclusion**

How does feedback influence these changes we decide to make?

Usability testing's goal is learning user's needs, behaviors and motivations. By asking what participants are thinking as they use interface in survey/interview and observing user's behaviors during the video record, we can tell what's the efficiency and issues of different parts of application. The changes are made in order to increase task performance and subjective satisfaction of users.

Based on the feedback collected, we would like to make changes to application, listed below:

- Fix navigation bar issue: make navigation bar scale proportionally with screen size and all links in the navigation bar should be visible and accessible.
- Adjust game page style lay-out: game screen shouldn't cover friend list frame and friend list should be displayed fully to users
- Add chat function/feature to users: users should be able to use text input and/or voice input to interact with other players in game, to achieve a higher level of interaction between users when they are using application
- Remove "contact us" page: this page can be removed, instead, content can be set as a footer in the bottom of website, so users have less options to choose and interface will be cleaner
- Change the navigation bar content sequence: the 1<sup>st</sup> option should be start game, 2<sup>nd</sup> option can be community page, 3<sup>rd</sup> option is setting page and 4<sup>th</sup> option is report issue page. This change is made based on importance/priority and function logical order of application.
- Adjust forum section style: different posts should have borders to visualize the different content, and make it more visible to user, font size and style need to be consistent with other places.