

Minecraft User Guide

Usability Testing Report

Background

This Usability Testing Report focused on participants testing the *Minecraft User Guide* provided to them. All tasks (described below), aside from initial account creation, were completed in a software called Minecraft. Minecraft is a computer software game focused on exploration and creation that was published in 2011. Since 2011, the software has received 18 additional major updates, between once and twice a year, and continues to be actively supported by Mojang Studios and Microsoft. Half of the participants (two out of four) were able to complete all tasks described in the *Minecraft User Guide*. One participant completed many of the tasks described in the *Minecraft User Guide* but did not complete the final task in the allocated time. The last participant faced serious challenges, including struggling with basic controls and “dying” in game during the Usability Test, and only completed two out of the five tasks described.

Method

The provided *Minecraft User Guide* outlined a (semi sequential) series of six tasks for the user to complete:

- Setup (“Account Creation Licensing, and Installation”)
- Save File Creation (“Your First World”)
- Controls (“Navigating the World”)
- Collecting Resources (“Mining and Building”)
- Managing Resources (“Crafting and Inventory Management”)
- Understanding Lighting (“Lighting Up Your World”)

For this Usability Testing Report, the first step listed above (“Setup”) was skipped for all participants to avoid the participant from having to spend \$25.00 to purchase a license for Minecraft. Instead, the login information for an existing Minecraft account was provided to them (with the credentials reset after the testing) for them to use during the Usability Test. Due to all four participants being remote, Zoom was used to conduct the Usability Test. Participants were asked to download Zoom before the Usability Test started and were asked to have their camera and microphone on for the duration of the test, in addition to sharing their screen.

Participants

Eight potential participants, all close friends or family, were contacted during the week of July 17th, 2022, and asked if they would consider participating in a one-hour Usability Test to

assist with a school project. All potential participants had no experience with Minecraft. Participants were initially contacted via text message with additional information provided by email. Two potential participants declined due to international travel and two declined due to work and/or school commitments. The remaining four potential participants accepted, and all Usability Tests were conducted on either July 22nd, 2022, or July 23rd, 2022. Two participants were college-aged and two were middle-aged. All were comfortable using a desktop computer or laptop and using Zoom.

Process

Each participant was provided the login information for a Minecraft account as well as a copy of the *Minecraft User Guide* via PDF the day before the scheduled Usability Test. Participants were instructed not to look up any additional information about Minecraft, including other tutorials or guides for the game. The participants were instructed to have both Zoom and Minecraft downloaded prior to the Usability Test. At the scheduled time for the Usability Test, the participant joined a Zoom call, and the Usability Test began.

Each Usability Test began with a description of what was being tested (the *Minecraft User Guide*) and what feedback was desired. Some questions that were provided to participants for them to think about included:

- Are there any tasks in the User Guide that feel repetitive?
- Are there any tasks that feel out of order or would be easier if the order of the tasks changed?
- Is there anything not covered in the User Guide that would have been helpful for you to know before completing the tasks in the User Guide?

After providing the above questions for the Participant to think about while completing the tasks in the User Guide, participants were asked to complete tasks two through five from the *Minecraft User Guide* on their own. Participants were instructed to talk through what they were doing and thinking as they worked through each task. After all tasks were complete, or 55 minutes had elapsed, whichever came first, each Participant was asked what their overall experience completing the tasks was and what their answers to the above questions were. After that, each participant was thanked for their time and asked if they had any additional feedback before Usability Test ended.

Findings

During each Usability Test, quantitative data including the time taken to complete each task and the total number of tasks completed in the allotted one-hour Usability Test were recorded. The results are included below in Table 1.

PARTICIPANT	TASK 2 (MINUTES)	TASK 3 (MINUTES)	TASK 4 (MINUTES)	TASK 5 (MINUTES)	TASK 6 (MINUTES)	TOTAL
1	2	8	10	18	15	53
2	4	6	9	6	N/A	55
3	3	17	12	4	16	52
4	5	34	N/A	N/A	N/A	55

Participant 1 completed all five tasks in the allocated 55-minute time. They struggled with Task 5 (“Managing Resources”) but otherwise did not encounter any major challenges in completing the tasks. Participant 2 completed four out of five of the tasks and moved through the tasks at a high speed. However, they “died” in game multiple times from falling while looking for “coal”, a required resource for Task 6 (“Understanding Lighting”), and therefore were unable to complete the final Task. Participant 3 completed all five tasks in the allocated 55-minute time. They encountered some challenges in learning the controls, and later with hostile “mobs” attacking them while trying to complete Task 6 (“Understanding Lighting”), but ultimately were successful. Participant 4 encountered the most challenges of any of the Participants. They had no previous computer game experience and struggled to complete Task 3 (“Controls”). While they began to get an understanding of the controls during the last 15 minutes of the Usability Test, they were “killed” in game by a hostile “mob” before they were able to complete Task 4 (“Collecting Resources”).

None of the participants reported that any of the tasks in the *Minecraft User Guide* felt repetitive or out of place. However, Participant 1, Participant 2, and Participant 3 thought that the order of Task 4 (“Collecting Resources”) and Task 5 (“Managing Resources”) should be reversed, so that Inventory Management is covered earlier in the *Minecraft User Guide*.

All four participants showed frustration with not understanding how the in game “Health” system worked, as well as the consequences for dying. Participant 2 stated that “I was not expecting to die from falling off that ledge while trying to get coal, or that I would lose everything I had with me when I died”. Participant 3 was frustrated with “random zombies coming into [his] house and attacking [him] for no reason”. And after dying from a hostile creature (A Zombie riding a Chicken), Participant 4 frustratedly remarked “are those chickens going to kill me next?!”.

Additionally, Participant 3 wanted to know more about food and how to grow food, while Participant 1 and Participant 2 wanted to know how to build more complex structures.

Participant 4 wanted to know how to craft weapons to slaughter the chickens near the “house” she had started building.

Recommendations

The Usability Testing proved extremely valuable in testing out of the content of the *Minecraft User Guide* and validating its effectiveness, as well as highlighting areas for improvement. Overall, the *Minecraft User Guide* was successful at introducing all four participants to the mining, crafting, and building aspects of Minecraft. However, that is only a fraction of what Minecraft is about, and that lack of understanding about basic game mechanics such as hunger, health, and hostile mobs caused participants a lot of challenges.

The User Guide should undergo four key revisions to assist users in understanding all aspects of Minecraft by the time they have completed the User Guide.

1. The order of Task 4 (“Collecting Resources”) and Task 5 (“Managed Resources”) should be swapped. This change will help new users to Minecraft understand how to manage resources before they have resources they need to manage.
2. A new Task related to managing food, health, and hunger should be added. This task could include sub-tasks such as collecting an Apple from a tree, eating the Apple to reduce hunger, and then seeing the reduced hunger increase the user’s health. This task could also include explanations of how you lose health in Minecraft (through falling, being attacked, or starving).
3. A new Task related to “mobs” should be added. This task could have the user observe both passive mobs, such as Chicken or Sheep, and hostile mobs, such as Zombies or Skeletons, to gain a better understanding of the various “living” creatures in Minecraft.
4. Task 6 (“Understanding Lighting”) should be removed. While this Task was meant to be helpful to new users, it proved extremely frustrating to multiple Participants due to the challenge of finding coal (which randomly generates in Minecraft). This Task does not provide as much additional value to the user as the two above tasks would.

Once the above four revisions are made, users who complete all tasks in the *Minecraft User Guide* will have a strong understanding of the foundational aspects of Minecraft as well as ideas of what they could learn next.