Usability Testing Project

Product: Discord

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Executive Summary

Our team conducted a usability test of the communication application, Discord. We tested Discord's functions of creating a server, creating a text channel, creating a moderator, or going through Discord's onboarding process. A screening survey was used in order to gain a range of participants with a generally low amount of experience in using Discord. Our main goal was to understand how Discord's user experience operates and how it could be improved. Our team recruited four participants for the usability tests. An incentive of $5 was used in the recruiting process. After the usability tests were completed, we held a meeting to analyze the data. Our main findings were then grouped into the following categories:

Ability to Create a Server and Text Channel

The results showed that the users do not have any issues in creating a server or a text channel. Users were able to make a server or text channel with little to no explanation.

Difficulty Locating Roles

All users had trouble looking for the "Roles" section in Discord. Without help from the moderator, all of the users claimed that they would not have been able to find it or would have looked for outside help.

Inconsistency with Onboarding Presentation

Users can easily miss the onboarding experience. This can hinder a new user as many of the terms specific to Discord may be confusing. Users may not understand the core ideas of Discord as a result.

Lack of Helpful Description

Some of the users did not find the onboarding information helpful. The onboarding tutorials did not provide enough information for users to complete the tasks.

Significance of Results

The results are important to uncover usability issues and guide revisions to the website.

Potential for Future Research

After our testing, our team saw some potential research projects we could conduct in the future. We noticed that some of our participants had different experiences when creating a new account. We would like to focus more on this and find potential ways to improve its functionality for new users.

Potential Errors in Study

Some potential errors occurred during our study. We were within a short time frame and had a limited number of participants for our study. This study was virtual, so we couldn't see some of the physical frustrations that the users had. Lastly, the timing for each task could potentially be off since our team used stopwatches and the recording for this data.

Our team recommends that Discord provide consistent onboarding experiences, explain what each feature is and where to find it, make the tutorials visually distinct from the promotional pop-ups, and make Roles more readily visible to users. We feel these recommendations would greatly improve Discord's usability and user experience.

Introduction

The new and revolutionary social platform, Discord, has gained much traction and popularity in recent years. There are a number of individuals with a wide variety of backgrounds that utilize the application. From hosting online events to simply communicating with like-minded individuals on various topics of interest, Discord has become a widely used application. This application not only caters to members of the gaming community but also is recruited for educational or business-related groups. Our team believes that from us testing the overall usability of the multitude of different and complex features in the communication application, Discord will be able to access far more communities. We also believe that this feedback will help lead to the improvement of usability and will encourage a safer online communication space for users of Discord.

In our usability testing project, we chose to test the onboarding process of some of Discord's features, the process of creating a server, the text channel creation process, and the creation of various roles. Discord does not provide exclusive tutorials for these features. Because of this, we chose to test users on their ability to utilize these features with very minimal issues in order to address the improvement of the Discord tutorial system and the overall usability of the application's multiple important action pathways. We gave our participants a list of tasks in order to have them complete the aforementioned features. This would allow us to see how quick and efficient they are when completing these tasks with minimal intervention. After completing the activities, we gained feedback from our participants about their overall experience by utilizing post-test interviews.

Methodology

Our team first drew up a plan for our usability testing of Discord. We then conducted a cognitive walkthrough, heuristic evaluation, and task analysis. This was so we could pre-assess the usability of Discord, get an understanding of the tasks we were testing, and "place ourselves in the user's shoes." Our team created a consent form that asked participants for consent on recording the usability test, taking pictures of the usability test, and recording information they give us that pertained to the usability test of Discord. A moderator script was written in order to keep the questions and statements asked consistently and to assist the moderator if they needed a guideline on what to say to our participants. An online product reaction form was created and used in place of product reaction cards. The product reaction form was given to participants after completing the usability test. This form consisted of 20 words that may be used to define a participant's experience of Discord. The words were split with 60% being positive emotion description words and the other 40% being negative emotion description words.

We focused on college students who attend Kennesaw State University. More specially, we desired participants from the Kennesaw Campus as participants on the Marietta Campus are typically STEM students. These students typically have more experience with Discord through gaming communities or educational groups. Our team recruited participants by communicating with people in public spaces and through online communication applications. An incentive of $5.00 was included in our participant recruiting process. The participants we sought out should also have little experience in the tasks of creating a server, creating a text channel, creating a

moderator, or going through Discord's onboarding process. In order to sort through the large population of students, our team created a survey for the participants to find out their experience with Discord. This survey will also help prevent our collected results from being skewed or inaccurate. After the survey was completed by our participants, we moved forward with setting up the usability test.

Our team was open to in-person or virtual usability tests. However, we ultimately decided a virtual modality would be the best to accommodate the many different schedules of our participants. In order for us to record our participants' actions, behaviors, and moods, we utilized an assortment of tools to do so. This included desktop computers or laptops with screen recording capabilities, Microsoft Teams for conducting the usability tests and screen sharing function, and a device for timing the usability test tasks.

Our team recruited four participants for the usability test. Prior to starting the test, we verbally asked each participant for consent to recording the usability test, taking pictures of the usability test, and recording information about the usability test of Discord. After gaining consent from the participant, we discuss what the participant will be doing, and the purpose of this usability test, and ask them if they have any questions before starting. At the beginning of each test, our team decided to get some background information on our participants with a short interview. The questions inquired about each participant's hobbies, lifestyles, and educational background. After the set of questions, our team began the usability test.

At the start of the usability test, the participants were asked to share their screens so that we could view their actions. Each participant was given a fake email to create a new account on Discord. This step was crucial to protect their information not being collected if they already had a Discord account and to initiate the onboarding process on Discord by creating a new account. Once the account was made, each participant was tasked with going through the onboarding. After the onboarding, the participants were asked to create a server, then a text channel, and lastly a moderator role. These usability tests each took around 30 minutes. After each task, the participants were inquired about their emotions toward each process they completed.

At the end of interviews and usability tests with all four of our participants, we held a meeting to discuss the connections and patterns we found. This included user behaviors, task times, or emotions that participants expressed. The product reaction form was also utilized in this discussion. Instead of utilizing FigJam, Miro, or any other whiteboard application, we chose to utilize Google Docs in order to the layout of thoughts and ideas. This was better for our team because of time constraints as well as accessibility. However, most of our team's analysis was done verbally and we mainly took note of major ideas and patterns we saw in the usability tests. After analyzing the information we found, our team refined and compiled our findings into this report.

Test Goals and Objectives
- To see whether new users of Discord can successfully create a server and text channels.
- To study whether the layout of Discord's Onboarding process successfully guides new users through the layout.

- To see whether new users of Discord can successfully create roles for a server and manage permissions.

Metrics

In order to obtain worthwhile results for the study, we made sure to choose participants who fell under four specific categories:

Occupation

In order to break the ice and allow participants to get comfortable before starting the usability test, we asked each of them a variety of introductory questions that allowed us to discover demographics among participants. The questions were asked as follows:

- Are you currently in school? If so, what year are you?
- Do you currently work? If so, how often and what do you do?

Messaging Experience

Since the usability test required users to log in to the Discord website using their browser of choice and interact with various features related to instant messaging, we made sure to choose participants that had basic experience navigating through the Internet. The questions that were asked during the user interviews that pertained to Internet experience included:

- Do you have any prior experience using messaging apps such as WhatsApp, Reddit, etc.(?)

Discord Experience

Before starting the usability test, we wanted to make sure that if any participants had prior experience using Discord, they did not fall under a high-ranking level of expertise (i.e. expert level) that could potentially skew the data. The question that we asked in regard to Discord experience was as follows:

- Do you have any prior experience using Discord? If so, what features have you used before?

Participants

The qualitative data that we were able to obtain about our participants are as follows:

User	Messaging Experience	Occupation	Discord Experience
A	Intermediate	School: College Junior Work: Part-Time	Beginner
B	Intermediate	School: College Freshman Work: None	Beginner
C	Intermediate	School: College Senior Work: None	Intermediate

| D | Intermediate | School: College Senior Work: None | Beginner |

Table 1: The table depicted shows the qualitative data gathered about the participants before the usability testing process began.

Scenarios & Tasks

Scenario 1

At the start of a new semester, you are a college student currently enrolled in ENG 1102. As a way to connect with all of your classmates and provide a way to help one another as you navigate through a brand-new course, you decide to create a Discord server dedicated to sharing notes. After creating an account on the Discord website, you start the process by creating a Discord server for your class.

Task 1: Create a Server to communicate with Classmates
- Find and click the "Add a Server" button.
- Click the "Create My Own" button.
- Click the "For a club or community" button.
- Name the server "English Class."
- Click the "Create" Button

Scenario 2

As a newcomer to the Discord application, you are greeted by multiple onboarding messages that highlight the notable features of the interface. In order to get acquainted with the application, you interact with the features.

Task 2: Go Through Discord Onboarding Process
- View new features.
- View tutorial on text channels.
- View the tutorial on messaging on the server.

Scenario 3

After interacting with the various onboarding features that Discord offered, you decide to create different text channels within the server to separate topics and maintain organization within the server. First, you want to establish a text channel dedicated to sharing notes.

Task 3: Create a Text Channel
- Find and click the "Create Channel" button.
- Select Channel Type (Text or Voice)
- Input Channel Name

Scenario 4

In order to facilitate the proper use of the server and make sure that other classmates are not using the server for reasons other than class-related materials, you decide to establish the "Moderator" and "Newcomer" roles. By creating these distinctions among channel members,

you are able to decide what each role member is allowed to do while interacting with the server.

Task 4: Create Two Roles (Moderator and Newcomer) and Establish Moderator Permissions
- Find and click on "Server Settings."
- Click on "Roles."
- Click on "Create Role."
- Create the Moderator Role.
- Go to the "Permissions" tab
- Toggle on the "Manage Nicknames" Permission for the Moderator role.
- Create the Newcomers Role by repeating steps 3 & 4

Findings/Test Results

This section will present the results that were found during the usability tests. This includes the findings in the cognitive walkthroughs and product reaction cards.

Heuristic Evaluation

In the Heuristic Evaluation portion, we documented the following heuristics from Nielson's 10 Heuristics. Each section will explain how Discord upholds or violates these heuristics.

1. Visibility of System Status

    In the scenarios, Discord consistently provides feedback when the user provides input or creates something. During the onboarding process, the website uses animated circles and exclamation points to guide the user. Before a user commits to an action, they are able to preview the potential changes on the interface. When a user creates a text channel or server, the server immediately displays it on the screen.

2. Match Between System and the Real World

    Discord does a sufficient job of using terminology that is commonly used with their audience. It uses more casual speech that would appeal to its younger audience.

3. User Control and Freedom

    Discord is consistent with its use of emergency exits and resets. Users are able to undo actions that they may have done and regret. However, when previewing a role before creating it, Discord will not save the changes made to that role.

4. Consistency and Standards

    Discord adheres to typical digital standards. It follows rules for nav location, hex codes, and switches.

5. Error Prevention

    Discord prevents users from committing errors by providing error messages and hiding dangerous actions. An example of this is that users must scroll to the bottom of the

permissions to give a role all permissions.

6. Recognition Rather Than Recall

    Discord makes most elements, actions, and options visible from the main interface.
    While creating a server, each step and option is shown with a description. However, the
    roles are hidden away, users would need to remember where they are.

7. Flexibility and Efficiency of Use

    Discord provides flexibility in customization and server creation. New users are able to
    use ready-made templates and view the onboarding. Expert users are able to create
    their own servers and customize them with complex features.

8. Aesthetic and Minimalist Design

    Discord only presents information that is related to the server. This includes Nitro,
    communities, etc. However, the pop-ups promoting Nitro can send the user on a
    different path than they intended.

9. Help Users Recognize, Diagnose, and Recover from Errors

    Discord uses terminology and language that the user is familiar with to help them
    address and recover from errors. They also provide a FAQ for help within the website.

10.   Help and Documentation

    Discord provides onboarding for creating a text channel and server but fails to provide
    context for complex features. The onboarding appears as a pop-up, similar to the
    promotional Nitro messages.

Cognitive Walkthrough
In the Cognitive Walkthrough portion, each scenario will be broken up into tasks, a table of the
success rates and times participants took to complete the tasks, and other observations that
were found.

Scenario 1 Tasks
1. Find and click the "Add a Server" button.
2. Click the "Create My Own" button.
3. Click the "For a club or community" button.
4. Name the server "English Class."

5. Click the "Create" button.

Participant	Task 1	Task 2	Task 3	Task 4	Task 5	Overall Time
A	Success	Success	Success	Success	Success	51s
B	Success	Success	Success	Success	Success	25s
C	Success	Success	Success	Success	Success	20s
D	Success	Success	Success	Success	Success	20s

Table 2: The table depicted shows the participants' successes for each task. Each participant is listed in the left column, and the tasks are written on the top row.

In this scenario, each participant was able to complete the tasks. For each task, 100% of the participants completed the without outside help. After completing this scenario, two of the participants commented on the experience.

Participant B stated that they thought the process was "fairly straightforward." They explain the steps they went through to create the server to emphasize its simplicity.

Participant D mentioned that the process "seemed easy enough." They made a comment that they were hesitant if the plus icon created a server because the hover text stated: "Add a Server." Other than this, they claimed to have no issues.

During this scenario, two of the four participants noted the yellow exclamation point on the "Add a Server" button once registering. One thing to note is that after each participant created an account with the test account, Discord did not present the yellow exclamation point to Participant C.

Scenario 2 Tasks
1. View new features.
2. View tutorial on text channels.
3. View the tutorial on messaging on the server.

Participant	Task 1	Task 2	Task 3	Overall Time
A	Success	Fail	Fail	N/A
B	Success	Success: Viewed and read it	Fail	17s
C	Success	Fail	Fail	N/A
D	Success	Success: Viewed it but immediately exited	Success: Viewed it but immediately exited	17s

Table 3: The table depicted shows the participants' successes for each task for Scenario 2.

In this scenario, every participant was able to view the new features that Discord offers. However, the success rates for tasks 2 and 3 varied amongst the participants.

For tasks 2 and 3, two of the four participants succeeded in viewing the onboarding tutorials for text channels and messaging in the server. Participants A and C did not receive the pop-up tutorials at all for the text channels and messaging.

While Participants B and D were able to view the tutorials, their reactions to the pop-ups varied. Participant B briefly read the description for text channels before dismissing them. When asked whether they found the pop-ups helpful, they stated that "they just told me what a text channel was" and did not elaborate on whether the pop-up guided them. They missed the pop-up for messaging until scenario 4.

Despite viewing the tutorial for text channels and messaging, Participant D immediately exited the tutorials when they popped up. When asked to elaborate, they stated that they looked like the new features pop-ups and were used to exit out of ads from other websites.

Scenario 3 Tasks
1. Find the button to create a text channel.
2. Fill out the information for the channel.

Participant	Task 1	Task 2	Overall Time
A	Success	Success	10s
B	Success	Success	25s
C	Success	Success	14s
D	Success	Success	15s

Table 4: The table depicted shows the participants' successes for each task for Scenario 3.

In this scenario, each participant was able to complete the tasks. For each task, 100% of the participants completed the without outside help. Two of the four participants immediately looked at the plus icon next to "Text Channels" in the navigation.

However, Participants A and D hovered over other areas of the screen before going to the plus icon. Participant A looked around at the dropdown next to the server's name and far left navigation first before clicking on the plus icon.

Participant D hovered over the "Text Channels" heading before clicking on the plus icon. Their initial thought was that the "Text Channels" text was where they would create a server. They quickly changed their mind after noticing the plus icon despite the plus icon being highlighted with an orange, animating circle (see Figure 1).
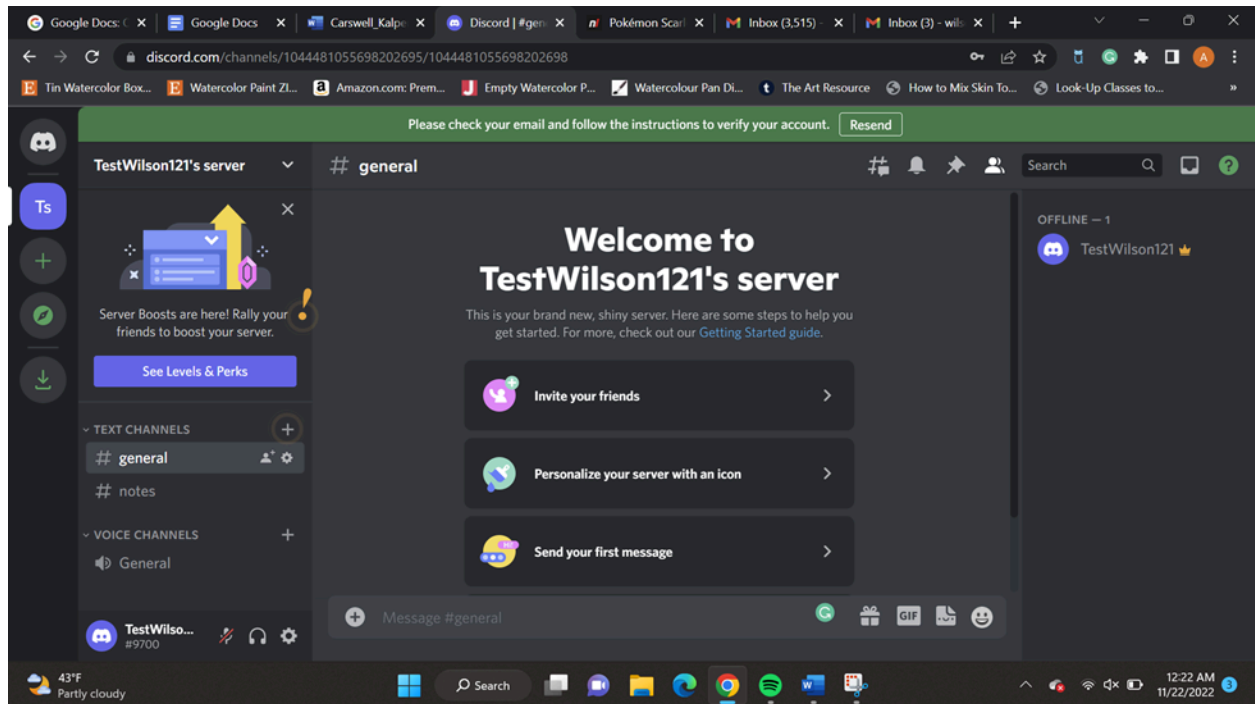
Figure 1: The figure illustrates the Discord interface with the highlighted circle around the plus icon next to "Text Channels."

Scenario 4 Tasks
1. Click on "Server Settings."
2. Click on "Roles."
3. Click on "Create Role."
4. Create the Moderator Role.
5. Create a "Manage Nicknames" Permission for the Moderator role.
6. Create the Newcomers Role.

Participants	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Overall Time
A	Fail	Success	Success	Success	Success	Success	3m 7s
B	Fail	Success	Success	Success	Success	Success	1m 50s
C	Fail	Success	Success	Success	Success	Success	3m 18s
D	Fail	Success	Success	Success	Success	Success	2m 8s

Table 5: The table depicted shows the participants' successes for each task for Scenario 4.

In this scenario, each participant was able to complete the tasks. However, every participant needed assistance from the help desk in order to complete the scenario. Otherwise, every

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participant would have failed the first task and would not have been able to complete the other tasks.

While attempting to find the Roles section, two of the four participants went to the members' list, clicked on their name, and clicked the plus icon under "Roles."

One thing to note is that while searching for the Roles section, Participant A goes to the server settings and backs out of it. They did not immediately find the Roles section in the settings, backed out of the section, and looked around before returning to the settings.

Overall Times Across Scenarios
To compare the times that each participant took to complete each scenario, we created a table to display the times each participant took to complete a scenario. Each of these times is also compared to the average time the team took to complete each scenario. This is to observe whether the participants had a noticeably different time to complete the tasks than users who were familiar with each scenario.

Participants	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Overall Time
A	51 s	N/A	14s	3m 7s	~4 minutes
B	25 s	17s	25s	1m 50s	~3 minutes
C	20s	N/A	14s	3m 18s	~4 minutes
D	20s	17s	15s	2m 8s	~3 minutes
Team	15s	10 s	8 s	27s	1 minute

Table 6: The table depicted shows the participants' completion times for each scenario and their overall time.

When looking at all of the times for each participant, the shortest task for everyone was creating a text channel, and the longest task for everyone was creating the roles and establishing permissions. For Scenario 1, Participants C and D had the same time, more likely due to having some prior knowledge of Discord before participating in the test. For Scenario 2, a strange phenomenon occurred. While Participants B and D were able to interact with the onboarding messages upon login into the testing account, Participants A and C did not receive any onboarding messages at all. Scenario 3 contained the fastest completed times across all participants, making the task of creating a text channel the easiest and most user-friendly out of all tasks that were tested. Finally, Scenario 4 contained the slowest completed times across all participants, which is plausible since the tasks required to complete the scenario had the most amount of steps.

Product Reaction Form
The Product Reaction Cards portion is broken up into a section depicting which words each participant chose and another section counting the usage of each term. Each participant chose several adjectives out of twenty to describe the overall experience of creating a server, going

through onboarding, adding a text channel, and creating the moderator and newcomer roles.

Word Usage Across Participants

To document the adjectives each participant used to describe the overall process of going through the scenarios, we created a table with each participant and the words they chose.

Participant	Product Reaction Card Adjective
A	Advanced, Organized, Understandable, Fast, Straightforward, Friendly, Appealing, Approachable, Unfamiliar
B	Organized, Understandable, Unclear, Straightforward, Friendly, Appealing, Clean, Approachable, Hard to Use
C	Advanced, Organized, Understandable, Fast, Straightforward, Engaging, Friendly, Clean, Appealing, Effective, Approachable
D	Organized, Inefficient, Complex, Clean, Unfamiliar

Table 7: The table depicted shows the product reaction cards that each participant chose.

Word Usage Across Participants

In addition to listing the adjectives that each participant chose, we also counted the number of times each term was used.

Term	Frequency
Advanced	1
Organized	4
Understandable	3
Fast	2
Inefficient	1
Unclear	1
Straightforward	3
Engaging	1
Friendly	3
Complex	1
Clean	2
Appealing	3
Effective	1
Approachable	3
Unmotivating	0
Dated	0

Unprofessional	0
Unfamiliar	1
Uncomfortable	0
Hard To Use	1

Table 8: The table depicted shows the frequency that each reaction card was chosen.

Some common pattern in the words chosen was that the overall process from start to finish was organized, understandable, and straightforward. However, the participants also had areas of unfamiliarity (e.g, unfamiliar, hard-to-use, inefficient) during the process.

Discussion

In this discussion, we will discuss the significance of the findings we found in the various methods completed.

General Findings

During the usability tests, several notable patterns arose. While participants navigated Discord's onboarding and walked through the specified scenarios, the team observed:

- Participants found that creating a server and text channel was easy to accomplish
- Participants struggled to locate the Roles section
- Discord is inconsistent with its presentation of onboarding
- The current onboarding does not explain how to accomplish a task
- The onboarding's presentation impacts whether users view them

Ability to Create a Server and Text Channel

During the usability tests, all the participants did not struggle with creating a server and text channel. As shown in tables 1 and 3, all the participants had comparable completion times for these scenarios. In addition, the participants were able to complete the tasks despite some not being instructed by the tutorials.

The participants may have had some help from the platform, such as with the blinking exclamation point, but some of the participants, such as Participants A and C did not see these upon registering. Instead, they relied on previous experiences with digital interfaces and clicked on the plus icon. The plus icon indicated that they were able to add a server and text channel.

The ease with which the participants completed these tasks indicates that these features are easier to understand for more inexperienced users of Discord. While the platform explains what these features are, such as what a text channel is, the participants did not feel the need to have step-by-step instructions of how to complete these tasks.

These results indicate the participants do not have issues with creating a server and text channel. Thus, they do not need more explanation or onboarding to customize their server. Instead, they are able to create their server with minimal to no explanation of text channels, and the server creation provides enough context for users to understand (See Figure 2). Any

improvements with onboarding users should be focused on other areas of the platform instead of server and channel creation.
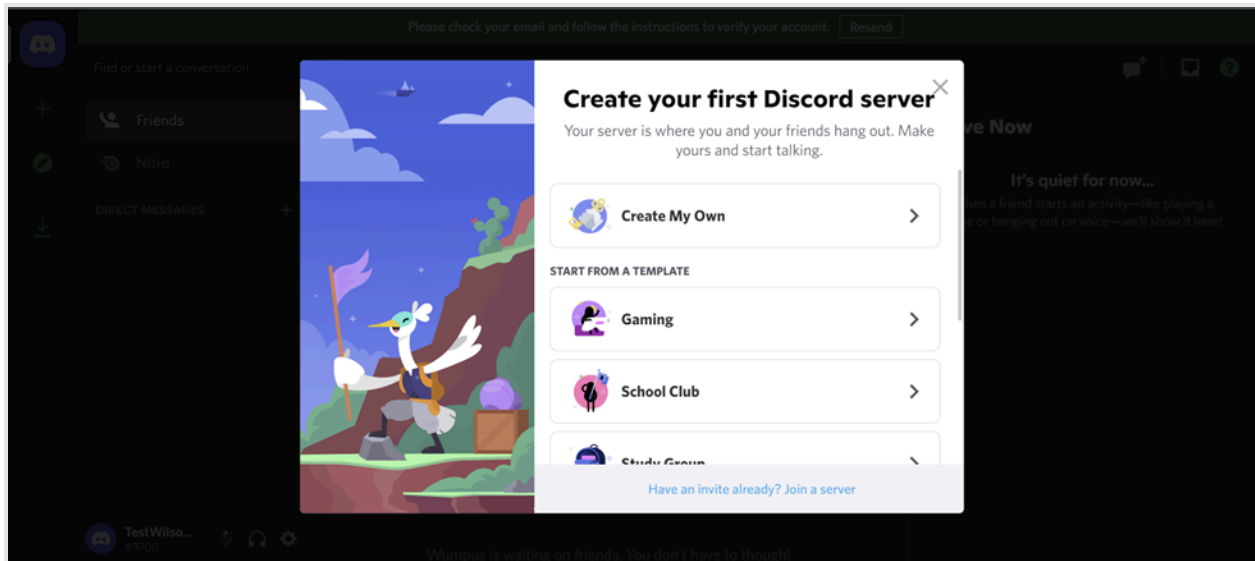

Figure 2: The figure illustrates a pop-up to create a server.

Difficulty Locating Roles

Another pattern that the team found was the difficulty participants had while searching for the Roles section. In all tests, each participant searched the entire interface to find role creation. In two of the usability tests, Participants A and D went to the members' list and clicked on the plus icon there, and expressed their confusion when they were unable to add a role from that feature.

The participants' struggle with searching for the Roles section can also be indicated in the time they took to search for it. Participant C, for example, took over 3 minutes to search and create two roles. Compared to the time that the team took to complete this scenario with previous knowledge of role creation, Participant C spent _ times longer than our team.

Without assistance, all of the participants stated that they would not have been able to find it or would have gone to outside help. With the roles being nested under several dropdowns (See Figure 3), our inexperienced participants had difficulty searching for the section before they could even create a role.
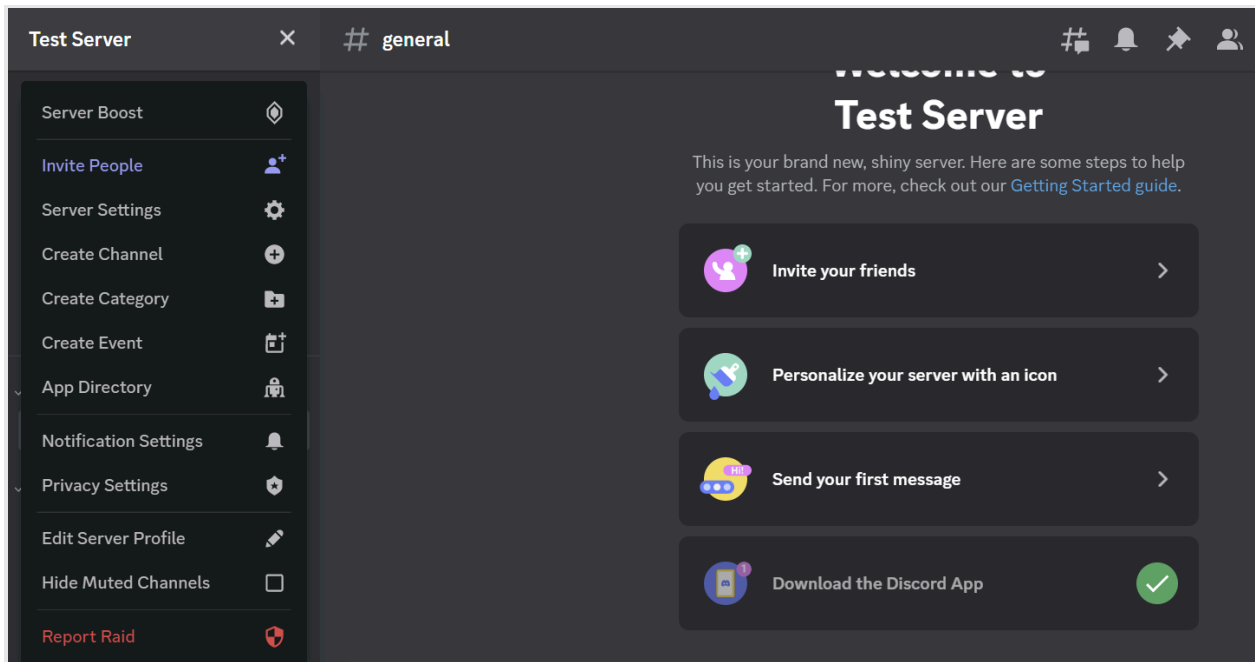
Figure 3: The figure illustrates the server settings nested in a dropdown next to the server name.

This is crucial to consider when discussing Discord's onboarding. While Discord thoroughly explains each step of creating a server, the platform does little to explain what roles are and where to access them. Each participant had not created roles for a server before, and without any explanation, they maybe would not know it was a feature, to begin with.

Because roles play a major part in organizing and customizing permissions in a server, hiding this feature behind the "Server Settings" and under a dropdown hinders many new users. A user who is unfamiliar with Discord will not be able to find the roles without some difficulty. This severely limits the extent that a new user can customize their server. Without any explanations for what roles are and how to access them, Discord is preventing new users from creating roles and assigning permissions for their servers.

Inconsistency with Onboarding Presentation

An unexpected observation during our tests was the inconsistency of Discord's onboarding. Ideally, when a user registers for an account, they should be met with the same onboarding process and introductory information (See Figure 4). However, this was not the case, and this variance in onboarding impacted how each participant navigated the website.
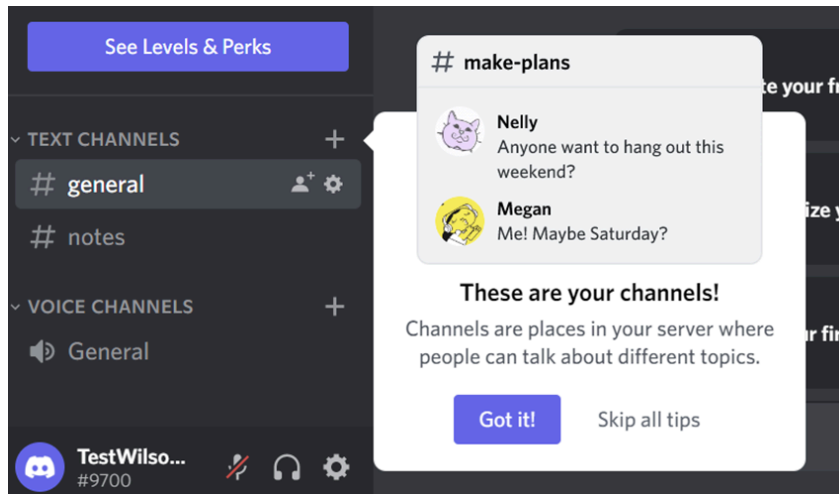
Figure 4: The figure illustrates the pop-up tutorials in Discord.

In two of the four usability tests, the participants did not see the highlighted circle, exclamation point, and pop-up tutorials. This presents issues for the users because they are missing the basic tutorials. This can greatly impact a new user because many of these terms of specific to Discord, and a user may not understand the basic foundations of the platform. Without even a foundational level of understanding, some new users may be greatly limited in their ability to customize a server. Instead of being able to create several channels for different needs, they may have all their chats disorganized into a single general chat.

This can discourage a user from continuing to use Discord. Because Discord's distinctiveness comes from its complex customization, new users may not be able to access these features and choose to use simpler messaging platforms. This can cause Discord to lose users to other competitors.

Lack of Helpful Description
In the onboarding that Discord does provide, some of the participants do not find the information helpful. While the tutorials explain what the feature is, it does not go into detail on how to use and implement it.

As previously mentioned, the tutorials did not provide enough information to complete the tasks. Participant B admitted that the tutorials explained what the feature was but did not explain how to use them. Participant D exited the tutorials even before reading them because they thought they were ads. However, the participants were able to complete scenarios 1 and 3 without the tutorials.

This uncovers issues regarding not only the absence of onboarding but also the extent the current onboarding helps users. While Discord does provide tutorials for text channels and messaging, they did not provide value for the participants. Half of the participants could not see the tutorials and the half that did found little value in them.

This is primarily due to the information that is delivered. After being asked their thoughts on the tutorials, the participants found that creating a server and text channel was straightforward.

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Even the participants that did not receive the tutorials were able to complete these tasks. This caused the participants to exit the tutorials, and they fail to gain any additional understanding.
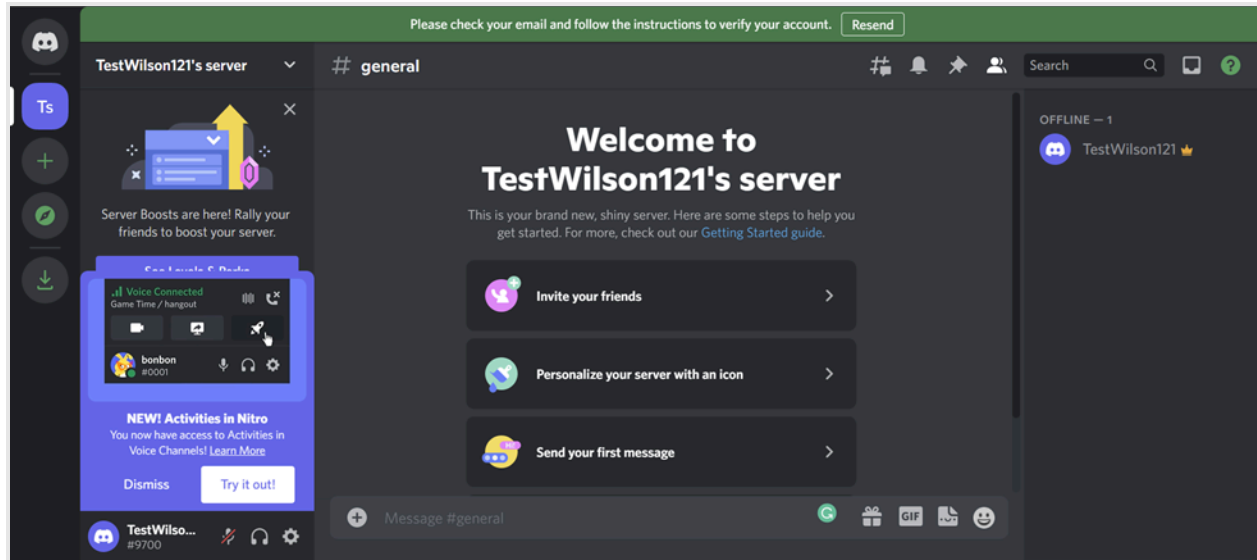

Figure 5: The figure illustrates the Nitro pop-ups on Discord's interface.

The tutorials also visually appear similar to Discord's Nitro ads, and this similarity may also impact whether users read the tutorials. When logging into Discord, the website will show new features or remind the user about subscribing to Nitro (See Figure 5). Because of the resemblance between these pop-ups to the tutorials, users like Participant D may close out of all pop-ups altogether

While this is not an issue with simpler features, this can pose a serious usability problem for more complex features, such as with role creation. If the tutorials appear similar to the platform's ads and do not provide more information, this can hinder whether a user can discover more complicated features. The roles feature is not as discoverable as server and text channel creation. This was evident in the amount of time it took for the participants to find the Roles section and complete scenario 4. Because of this, users would need more context on what roles are, where to find them, and how they function.

As the current platform stands, Discord fails to provide helpful descriptions that are visually distinct from other parts of the screen. While this is less important for basic features, users may abandon the platform if they are frustrated with more complex features.

Significance of Results

These results are important to not only uncover usability issues but also guide revisions to the website. If these issues were to persist it can affect the number of new users and the time these new users stay on the platform.

Because of the number of competitors, it is vital that Discord considers its usability problems. If other users continue to struggle with using the platform, other websites may address these issues and attract more users. This can decrease the number of new users registering with Discord.

It can also impact the time that new users continue to use Discord. If the users that do register are unable to discover customization options, they may feel less likely to understand the uniqueness that Discord has to offer. This can deter them from subscribing to Nitro or abandoning the platform altogether.

Potential for Future Research
After our testing, our team realized some potential research projects we could conduct in the future. During a test with one of our participants, we thought about testing the different processes of boarding between the browser and the application. We noticed that some of our participants had different experiences when creating a new account. Some showed pop-up notifications while others did not. Overall, we would like to focus more on Discord's onboarding process and find potential ways to improve its functionality for new users.

Potential Errors in the Study
There were some potential errors that occurred during the study that we conducted, like the limited number of participants and physical limitations. Since we were working on this study within a short time frame, we had a limited number of participants for our study. Additionally, since we conducted this study online, we could not see the potential physical frustrations that the users had. Seeing whether they were puzzled or frustrated could have provided our team with more qualitative data to analyze. Lastly, the timing for each task could potentially be a few seconds off since our team both used stopwatches and the recording to record this data.

Recommendations
To improve Discord's onboarding experience, we present the following recommendations for the interface. The recommendations are shown in descending order of priority.

1. Provide consistent onboarding experiences. To ensure that all users understand the basics of Discord, it is essential that each user experiences the same onboarding. This is so all users have the understanding they need to locate and use different features.

2. Explain what each feature is and where to find it. The onboarding needs to explain what each feature is, where to find it, and how to use it in order to be of more use to users. This would help in instances where users could not find where the roles were.

3. Make the tutorials visually distinct from the promotional pop-ups. By displaying onboarding material differently from the promotional content, users may be less likely to exit them. The tutorials can be displayed by highlighting the current card while graying out the remainder of the screen. This highlights the tutorial more than the current circle and exclamation point.

4. Make Roles more readily visible. Because the Roles are nested under the server settings, many participants missed the page. This can be remedied by putting the link to the Roles section under the server dropdown (See Figure 3).