

**IMA 2 - Usability Testing Report on Duolingo**

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## Introduction

Duolingo is a website and mobile app that allows users to learn a language for free. Users can download either the Android or iOS versions of the mobile app. Currently, Duolingo offers language instruction in 38 languages. In order to build language skills, learners are emailed daily reminders to login and practice their chosen language. Each language has associated skills that a user can gain proficiency in. There are 5 levels to each skill and each level (beginning with 0) contains lessons. Learners can earn experience points (XP) for activities that are completed in the app.

## Methodology

### Sessions/Participants

Because of the Covid-19 pandemic, I decided to interview 3 members of my family to gather their opinions on the usability of Duolingo. The test participants were:

- my 26-year-old son, who works in information technology (**Participant 1 – interview was conducted via Zoom**)
- my 22-year-old daughter, a current USF student pursuing a bachelor's degree in Elementary Education (**Participant 2**)
- my 49-year-old husband, who works in information technology (**Participant 3**)

I conducted usability tests with the participants in 3 different sessions on February 27. To begin each session, I gathered background info on the participant's familiarity with language learning apps and app usage, in general. All participants have experience using mobile apps on a daily basis to access email, financial information, social media, and e-commerce sites. All are native English speakers.

Through preliminary questioning, I found that each of them had at some point created a Duolingo account and used the app. However, none were actively using it. I provided an explanation of the study and how the process



## Learnability: Time to complete a task successfully

As already noted, **Task 1** took the longest amount of time because of the assessment that was required before participants could create an account. The opening screen asks the user to select from **Get Started** or **I Already Have an Account**. I asked the participants to go through the steps to create a new account, so they chose **Get Started**. From this screen, participants had to go through six more screens to reach the assessment. The intermediary screens asked the learner to select their language (**2<sup>nd</sup> screen**), provided a course overview and info on the content (**3<sup>rd</sup> screen**), asked for the referral source (**4<sup>th</sup> screen**), inquired about the reason for learning (**5<sup>th</sup> screen**), requested a learning goal (**6<sup>th</sup> screen**), and asked the learner to indicate whether they are new to the language or have some experience (**7<sup>th</sup> screen**).

All participants selected the option for new language learners and were then taken through a series of 10 questions. The questions were so that the app could determine what their language proficiency level was. Once the quiz was completed, the participants were then taken through 4 additional screens before reaching the screen to create a new profile. The screens indicated how many experience points and gems they earned, as well as their daily streak indicator and any gifts they received because they completed the quiz.

After going through these screens, they then reached the point where they could create a profile. They were asked to click on **Create a Profile (1st screen)**, enter their name (**2<sup>nd</sup> screen**), enter their email address (**3<sup>rd</sup> screen**), create a password (**4<sup>th</sup> screen**), and choose an optional upgrade to Duolingo Plus (**5<sup>th</sup> screen**). All users choose to decline the upgrade. After declining, they were then brought to an account confirmation screen, displaying a message that their account had been successfully created.

### Time on Task

	P1	P2	P3	Total	Average
<b>Task 1</b>	280	300	310	890	297
<b>Task 2</b>	76	70	60	206	69
<b>Task 3</b>	35	30	45	110	37
<b>Task 4</b>	75	65	72	212	71
<b>Task 5</b>	15	12	14	41	14
<b>Task 6</b>	27	31	28	86	29
<b>Task 7</b>	18	20	16	54	18

## Errors

The only errors made were during Task 4. All of the participants were unsure of how to navigate to the settings to turn off the app's sound. They each attempted to navigate to the settings from the app's main page, where there are a number of icons displayed at the bottom of the screen. Because there are only icons displayed without words, the participants had to guess which one to press to get to the settings. Participant 3 selected the wrong icon 3 times, while Participants 1 & 2 selected the wrong icon twice. Participant 2 shared that she wishes there were words identifying the icons, as this would make it easier to select the correct one the first time.

### # of Errors

	P1	P2	P3	Total	Average
Task 1	0	0	0	0	0.00
Task 2	0	0	0	0	0.00
Task 3	0	0	0	0	0.00
Task 4	1	3	3	7	2.33
Task 5	0	0	0	0	0.00
Task 6	0	0	0	0	0.00
Task 7	0	0	0	0	0.00

## Summary of Data

### Summary of Completion, Learnability (Time on Task) & Errors

Task	Task Completion	Learnability (Time on Task)	Errors
1	3	297	0.00
2	3	69	0.00
3	3	37	0.00
4	3	71	2.33
5	3	14	0.00
6	3	29	0.00
7	3	18	0.00

## Task and Satisfaction Questionnaire Results

### Task Questionnaire

1. How easy or hard was it to complete the steps necessary to create a new account?
2. How easy or hard was it to find one language you'd like to learn and add it to your profile?
3. How easy or hard was it to change the language to another language you'd like to learn?
4. How easy or hard was it to turn off and turn on auditory sound?
5. How easy or hard was it to go to a setting / preference and change a setting option?
6. How easy or hard was it to add a profile picture?
7. How easy or hard was it to log out of the account?

### Task Questionnaire Results

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Total (per participant)	Mean (per participant)
<b>Participant 1</b>	1	2	1	2	1	2	2	11	1.57
<b>Participant 2</b>	1	1	1	4	3	2	2	14	2.00
<b>Participant 3</b>	1	1	1	3	3	2	2	13	1.86
<b>Total (per item)</b>	3	4	3	9	7	6	6	38	5.43
<b>Mean (per item)</b>	1	1.33	1	3	2.33	2	2	12.66	1.81

\*Scale: 1 (super easy), 2 (easy), 3 (not easy or hard), 4 (hard), 5 (super hard)

### Satisfaction Questionnaire

1. Overall, I am satisfied with how easy it is to use this language learning app.
2. It was simple to use this language learning app.
3. I could effectively complete the tasks using this language learning app.
4. I was able to complete the tasks quickly using this language learning app.
5. I was able to efficiently complete the tasks using this language learning app.
6. I felt comfortable using this language learning app.
7. It was easy to learn to use this language learning app.
8. I believe I could become productive quickly using this language learning app.
9. This language learning app gave error messages that clearly told me how to fix problems.
10. Whenever I made a mistake using the language learning app, I could recover easily and quickly.

11. The information (such as on-line help, on-screen messages, and other documentation) provided with this language learning app was clear.
12. It was easy to find the information I needed.
13. The information provided for this language learning app was easy to understand.
14. The information was effective in helping me complete the tasks.
15. The organization of information on the language learning app screens was clear.
16. The interface of this language learning app (buttons, menus, graphics) was pleasant.
17. I liked using the interface of this language learning app (buttons, menus, graphics).
18. This language learning app has all the functions and capabilities I expect it to have.
19. Overall, I am satisfied with this language learning app.

### Satisfaction Questionnaire Results

	Participant 1	Participant 2	Participant 3	Total (per item)	Mean (per item)
<b>Q1</b>	7	7	7	21	7.00
<b>Q2</b>	7	6	7	20	6.67
<b>Q3</b>	7	7	6	20	6.67
<b>Q4</b>	5	6	7	18	6.00
<b>Q5</b>	6	7	7	20	6.67
<b>Q6</b>	7	7	7	21	7.00
<b>Q7</b>	5	7	7	19	6.33
<b>Q8</b>	7	7	6	20	6.67
<b>Q9</b>	4	4	4	12	4.00
<b>Q10</b>	6	6	6	18	6.00
<b>Q11</b>	7	6	7	20	6.67
<b>Q12</b>	6	6	6	18	6.00
<b>Q13</b>	7	7	7	21	7.00
<b>Q14</b>	7	7	7	21	7.00
<b>Q15</b>	7	5	7	19	6.33
<b>Q16</b>	7	5	7	19	6.33
<b>Q17</b>	7	6	7	20	6.67
<b>Q18</b>	6	5	7	18	6.00
<b>Q19</b>	6	6	7	19	6.33
<b>Total (per participant)</b>	121	117	126	364	121.34
<b>Mean (per participant)</b>	6.37	6.16	6.63	19.16	6.39

\* Scale: 1 (strongly disagree) – 4 (do not agree or disagree) – 7 (strongly agree)

## User experience

Participant 1 thought that the green opening screen and the mascot were appealing and suggested that using the app might be fun. He thought that, overall, the app seems like a fun app for someone to use who wants to learn a different language. He did have difficulty with Task 4, which asked the user to turn off the sound. He was unsure whether this was referring to sound effects or the actual volume on the device.

Participant 2 also thought that Duolingo is a fun way to learn a different language because it engages the learner, visually, through audio, and by asking the learner to type answers to questions. She also thought that the ability to practice phrases repeatedly helps to build memory. She did observe that she wished there were words corresponding to the icons on the main page. She also liked that you could see streaks and your progress on the main page.

Participant 3 also enjoyed using Duolingo. He thinks that it's a good app to learn another language if you make sure to use it regularly and as long as you don't mind viewing the ads for the free version.

## Recommendations

### Task 1 - Create a new account

Change	Justification	Severity
<ul style="list-style-type: none"> <li>Allow users to create account before doing the language quiz.</li> </ul>	<p>Users were required to complete a 10-question quiz to determine language proficiency before creating their account.</p> <p>This was mentioned as a desired change by all participants.</p>	High

### Task 4 – Turn off and on auditory sound within the app

Change	Justification	Severity
<ul style="list-style-type: none"> <li>Add the names of the icons to the app to assist users with navigating the app.</li> </ul>	<p>All participants had some difficulty with locating the setting to perform this task.</p> <p>They mentioned that making it clearer as to where this option was located would have made completing the task easier.</p>	High



## **Conclusion**

All of the participants feel that the Duolingo app offers an accessible, friendly way to learn a new language. Once you have created an account and taken the initial language quiz to determine your learning level, you are ready to start practicing a new language. Duolingo provides daily practice reminders, and you can practice for as little as 5 minutes a day. While all the participants thought that the interface was visually appealing, they did feel that adding words to the icons would help with navigating their way through the app. For someone who may not be familiar with what a gear icon represents, they may not know that they should click on it to access their settings. Overall, they would recommend the app to others as a simple way to practice a new language.