IMA 2 - Usability Testing Report

Busuu

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Introduction

Busuu is a free mobile application for language learning, which gives you a choice of learning twelve different languages: English, French, German, Portuguese, Italian, Spanish, Japanese, Russian, Chinese, Turkish, Polish and Arabic. It is available for both Android and iOS systems and offers lessons which advance progressively and are adapted to your level. You may start a language at the beginning level or at your current level. Busuu provides visual feedback.

The Busuu app has you choose a language before the registration procedure is complete, however, if you want to change your language after that, you need to upgrade to Premium. The Premium option gives you the option to study any of the twelve languages with more quizzes and vocabulary exercises, grammar units, corrections with native speakers, and even work offline. You can also earn official McGraw-Hill completion certificates. However, the free app is much more limited.

Six team members worked on this usability report collaboratively: Kathleen McManus, Kelly Coker, Erin Arnold, Nicholas Bardo, Kristen Brandt, and Syahirah Binti Abd Razak. To gather the data on the usability of the application, each member of the group interviewed two participants as a means of obtaining a convenience sample. Each team member interviewed the participants using the testing simulation script, an observation form to evaluate seven tasks, an end-of-session questionnaire, and a survey to determine the user's satisfaction with the app. After examining the data on Busuu, we determined that there are both pros and cons to this mobile language app.

Pros
1.   Easy to get an account and sign up.
2.   Extensive language list, including even those which do not use the western alphabet.
3.   Users can start at their level and progress at their own pace.

Cons
1.   The option to turn the audio feature on or off is not provided.
2.   Users were unable to choose another language without upgrading to Premium.
3.   It is difficult to manage changes once you choose your level, if you find that it's too easy or too difficult for you.

Overall, it was quick to get started in Busuu in the language of your choice . In language learning it is crucial to learn a language using the four skills of Reading, Writing, Listening, and Speaking. These standards are implemented in

the lesson plans of all public school teachers as delineated in the Florida Standards for Foreign Languages. This language app immerses you in all four skills simultaneously and learners have a chance to practice all these skills on their own without the fear of being called on in class to speak or write in front of others.

The motivation, attitude, anxiety, and self-confidence that we feel while learning another language is what is known as the Affective Filter. This filter was first proposed by Dulay and Burt in 1977, but is most closely associated with Stephen Krashen in 1985 as one of his five input hypotheses affecting language learning. Krashen stated that people acquire second languages only if they obtain input that is comprehensible at the same time that their affective filters are low enough to allow the input in. Using this language learning app in the privacy of your own home lowers the affective filter and may prove successful for some students.

Methodology

Participant selection

Participants were recruited through convenience sample, with each group member assigned to recruit two participants.   Due to this approach, data derived from this sample is not generalizable to a greater population demographic, but can provide some descriptive statistics to have a better idea of the practical dimensions of how Busuu is perceived by a variety of users. 12 total participants were recruited in this convenience sample. For the most part, those recruited were family members, coworkers, or colleagues. Due to the web-based nature of coordination among the group, the twelve participants were spread throughout the Southeastern United States.

Upon recruitment to the project, participants were told of the nature of the interview, the length of the interview (approximately a half hour), and the protocol for the process that framed the interview. Participants were assured that their participation was voluntary and that their participation would be anonymous.

Of the utmost importance in any research endeavor is establishing a trusting relationship between the researcher and the participants. Interviews were encouraged to take place in an informal setting, where users could feel comfortable answering questions free of judgement or pressure. To help scaffold the degree of comfort in the interview process, initial questions were largely related to personal background information of the participant. For example, their native language, occupation, favorite apps, and type of device. These initial demographic questions took between 5 and ten minutes to complete. After the initial round of questions, participants were guided through the seven tasks while being timed and

observed. It should be noted that this additional layer of observation and the presence of a timer may have affected the cognitive load of the participants to varying degrees. It is a variable that will be taken up later.

Upon completion of the seven tasks, participants were asked to complete an end of session questionnaire. The first piece of the survey employed a 5 point likert scaled instrument to gauge participant satisfaction with the app and various components. The scale ranged from"Super hard" to "Super easy", with varying degrees of difficulty represented in the three point between these polarities. For the user satisfaction survey, 19 questions were proctored in using a 7 point likert instrument as participants were asked to respond to statements. On the seven point scale, 1 represented "strongly disagree", while 7 represented "strongly agree." This data was aggregated in this analysis to provide a descriptive set of mean responses in relation to the overall usability of the app. Below is a brief description of learnability, participants, and errors encountered.

Learnability

Compared to other language learning apps on the market, Busuu combines a number of features that are innovative. This somewhat all inclusive approach to language learning allows for flexibility, but also make for less intuitive language learning and a less structured sense of purposeful design. The interface, though easy to use, was not engaging in the way that other language learning apps on the market can be.

Errors

- Participants were not able to complete task four, dealing with changing the audio settings in the app.

Satisfaction

- Participants rated their overall satisfaction with this application just above median neutrality.

Results

Task Completion Success

The total participants involved in this project encompassed twelve people from different backgrounds. The participant observations for performing the tasks were divided among the team members as follows: Kathleen McManus (Participants 1 & 2), Kelly (Participants 3 & 4), Erin (Participants 5 & 6), Nicholas (Participants 7 & 8), Kristen (Participants 9 & 10), and Syahirah (Participants 11 & 12).

Generally, the best usability tests involve frequent small tests, rather than a few big ones. You gain maximum insight by working with 4-5 users and asking them to think aloud during the test. As soon as users identify a problem, you fix it immediately (rather than continue testing to see how bad it is). You then test again to see if the "fix" solved the problem. Results showed that all participants managed to complete Task 1 (create a new account), Task 2 (choose a language), Task 5 (change setting option), Task 6 (find audio feature and repeat) and Task 7 (sign off Busuu). Only nine of the participants completed Task 3 (change to another language). Task 4 (turn auditory sounds off and on) contributed the lowest percentage (50%). Five participants that managed to turn on and off auditory sound were probably just able to change the phone setting instead of changing it within the app itself. However, different types of devices used by participants in completing this usability test may have affected the final finding, especially in regards to Task 4.

Task Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7
1	√	√	-	-	√	√	√
2	√	√	-	-	√	√	√
3	√	√	√	-	√	√	√
4	√	√	√	√	√	√	√

5	√	√	-	-	√	√	√
6	√	√	√	-	√	√	√
7	√	√	√	√	√	√	√
8	√	√	√	√	√	√	√
9	√	√	√	√	√	√	√
10	√	√	√	√	√	√	√
11	√	√	√	-	√	√	√
12	√	√	√	√	√	√	√
Success	12	12	9	6	12	12	12
Completion Rates	100%	100%	75%	50%	100%	100%	100%

Learnability: Time to complete a task successfully

Time to complete the task was recorded for each participant since it reflects the level of difficulty in completing the task given. Success rates are very telling statistics. After all, if users can't accomplish their target task, all else is irrelevant. User success is the essential point of usability. However, the finding is very subjective since it also depends on IT skill of each individual. The hypothesis that can be provided is: the higher the IT involvement in their daily life or work, the shorter the time needed to complete the task. This can be proven when the same task is tested among participants of different backgrounds.

There was a large gap of time for task completion (e.g., Participant 1 took only 10 seconds while participants 5 took 100 seconds for the same task). The results showed that Task 4 took the longest time to complete (Avg. = 98.25 seconds)

while Task 7 (logging off) was the shortest with an average of 20.91 seconds. This is because logging off can be considered as one of the simplest tasks. Time spent on Task 3 (Change to another language) was high, at 75.82, due to the inability of some participants to complete the task. Completion times for Task 1 (create a new account), 2 (find one language to the profile), and 5 (change setting option) ranged from 21 seconds to 66 seconds. Lastly, Task 6 is an average in-term of difficulty because the completion rate is median among seven tasks, given as 44.67 seconds.

Time on Task

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	TOT	AVG
Task 1	105	38	120	120	98	91	32	75	19	31	34	25	**788**	**65.67**
Task 2	5	2	30	2	69	20	49	48	2	2	6	16	**251**	**20.92**
Task 3	273	368	30	2	0	30	20	149	10	64	15	22	**834**	**75.82**
Task 4	130	300	60	60	180	110	9	69	39	65	92	65	**1179**	**98.25**
Task 5	54	32	10	30	11	15	10	53	15	10	10	25	**275**	**22.92**
Task 6	39	10	60	45	20	17	17	46	31	84	73	94	**536**	**44.67**
Task 7	64	29	30	10	10	12	13	55	9	4	19	30	**230**	**20.91**

Errors

Summarize errors

The errors were calculated by the number of steps each participant took to complete a task minus the actual number of steps it took to complete the task. The Busuu app does not have any volume adjustment, thus Task 4 (turn off audio) contained insufficient data that resulted in an unsuccessful task. Task 7 had the minimum amount of errors (total errors 13 and mean 1.083) due to the easiness of just logging off the application. Furthermore, most people had discovered the settings button, and consequently the log off option, in their previous attempts at other tasks. It should be noted that Task 6 contained the highest number of errors, with Task 3 coming in a close second at 64 errors. Participants found both tasks challenging.

The reason that the errors in completing Task 3 were significantly high was due to Participant 10's errors totalling 31, whereas, Task 6 was consistently high for everyone across the board. It is important to note this difference between the two tasks in the event of further study since our convenience sample encompassed only twelve participants. The Busuu app in comparison with the Duolingo app described in the sample project, contained a higher amount of errors. One suggestion for ameliorating this error ratio would be to include a volume adjustment button in its mobile application and perhaps a more user-friendly interface.

Errors

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	TOT	AVG
Task 1	0	0	2	2	3	4	0	3	1	3	1	2	21	1.75
Task 2	4	2	1	1	3	1	4	7	0	0	1	0	24	2
Task 3	3	5	0	0	2	2	2	16	0	31	2	1	64	5.333

Task 4	?	?	?	?	?	?	?	?	?	?	?	?	N/A	N/A
Task 5	0	2	0	1	0	1	0	3	2	0	3	2	14	1.166
Task 6	0	0	3	3	8	6	6	8	9	19	2	3	67	5.583
Task 7	2	0	0	0	1	1	0	2	2	6	0	1	13	1.083

Summary of Data

The table below contains three elements of Task Completion, Learnability(Time on Task) and Errors Total. The lowest completion rating, highest time on task, and highest error per task are highlighted in bold. The participants were unable to complete Task 4 in the Busuu app, thus resulting in a task completion rate of 50%, with the highest time on task being 98.25 seconds so the results were deemed invalid. This stems from the lack of a volume button from within the Busuu app. However, some participants thought they were successful since they used the volume adjustment on their phone. Task 7 received the highest overall achievement score with a 100% Task Completion rate, 20.91 seconds for Time on Task and a minimal 1.083 mean for the Total number of Errors.

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

	Task Completion	Learnability (Time on Task in seconds)	Errors Total (Average)
Task 1	12 (100%)	65.67	21 (1.75)

Task 2	12 (100%)	20.92	24 (2)
Task 3	9 (75%)	75.82	64 (5.333)
Task 4	**6 (50%)**	**98.25**	*Invalid (N/A)*
Task 5	12 (100%)	22.92	14 (1.166)
Task 6	12 (100%)	44.67	**67 (5.583)**
Task 7	12 (100%)	20.91	13 (1.083)

Task and Satisfaction Questionnaire Results

The task and satisfaction questionnaires were completed by the twelve individuals who participated in the usability testing. Participants were asked to rate the difficulty of the 7 tasks performed in a range of 1-5, starting with 1 (super easy) and ending with 5 (super hard). The task questionnaire table below shows the breakdown of the participants' answers and the percentage who found the task to be easy (combination of easy and super easy). Task 1 (setting up a new account) and task 2 (finding a language and adding it to your account) both indicated high learnability for the app with 92% of participants rating them as easy. Less than half of the participants found task 3 (changing the language you would like to learn) to be easy with 42%. 58% of the participants found this task to be not easy or hard. This appears to be a direct result to the fact that there was a software upgrade required to perform this task within the application.

Task 4 (turning off/on the auditory sound) had the greatest negative effect on the usability of the app with 17% of the participants finding it to be easy and 58% finding it to be super hard. Over half of the participants found task 5 (changing a preference setting) to be easy with 67% and the same with task 6 (find audio feature and repeat) at 58% easy. Task 7 (logging out) was the only task that 100% of the participants found to be easy.

The information from this questionnaire illustrates that the Busuu app has a high level of learnability due to the large percentages of participants who found the basic functions of setting up an account, choosing a language, changing a setting, and logging out to be easy (tasks 1, 2, 5, and 7). The usability of this app is compromised by the user's difficulty in adjusting the auditory functions and lack of language options in the basic (free) version.

Task Questionnaire Table

	Super Easy	Easy	Not Easy Or Hard	Hard	Super Hard	Mean Rating	Percent Easy
Task 1	7	4	1			1.5	92%
Task 2	6	5	1			1.6	92%
Task 3	1	4	7			2.5	42%
Task 4		2	2	1	7	4.1	17%
Task 5	4	4	3	1		2.1	67%
Task 6	2	5		2	3	2.9	58%
Task 7	5	7				1.6	100%

Percent Easy (%) = Easy & Super Easy Responses combined

Satisfaction Questionnaire Table

Questions	1 Strongly Disagree	2	3	4 Do not agree or disagree	5	6	7 Strongly Agree	Mean Ratings	Percent Agree
1.Overall, I am satisfied with how easy it is to use this language learning app.		1	2	2	3	2	2	4.75	58%
2. It was simple to use this language learning app.			3		4	2	3	5.17	75%
3. I could effectively complete the tasks using this language learning app.			3		1	5	3	5.42	75%
4. I was able to complete the tasks using this language learning app.			2	1	1	5	3	5.5	75%
5. I was able to efficiently complete the tasks using this language learning app.			1	3	3	3	2	5.17	67%
6. I felt comfortable using this language learning app.			2	2	1	4	3	5.33	67%
7. It was easy to learn to use this language learning app.			3	3	2	2	2	4.75	50%
8. I believe I could become		1	2	4	1	2	2	4.58	42%

Statement								Mean	%
productive quickly using this language learning app.									
9. This language learning app gave error messages that clearly told me how to fix problems.	4	1		5			2	3.33	17%
10. Whenever I made a mistake using the language learning app, I could recover easily and quickly.		2	1	4	2		3	4.50	42%
11. The information (such as online help, on-screen messages and other documentation) provided with this language learning app was clear.	1	3	1	1	3	1	2	4.08	50%
12. It was easy to find the information I needed.		2	1	4	3		2	4.33	42%
13. The information provided for this language learning app was easy to understand.			1	3	4	2	2	5.08	67%
14. The information was effective in helping me complete the tasks.			3	1	4	2	2	4.92	67%
15. The organization of information on the language			3	1	1	5	2	5.17	67%

								Mean	%
learning app screens was clear.									
16. The interface of this language learning app (buttons, menus, graphics) was pleasant.			1	1	3	4	3	5.58	83%
17. I liked using the interface of this language learning app (buttons, menus, graphics)			2	1	3	3	3	5.33	75%
18. This language learning app has all the functions and capabilities I expect it to have.		1	2	3	3	1	2	4.58	50%
19. Overall, I am satisfied with this language learning app.		2		3	2	3	2	4.83	58%

Percent Agree (%) = Agree & Strongly Agree Responses combined

User Experience

There were a variety of mixed opinions on the usability experience with this app but some common themes were shown more prevalently on the satisfaction questionnaire than others.

Around half of the participants in this usability study concluded that the app was not very intuitive or user friendly. Participant 9 stated, "This app has all the basic necessities of a language learning app but lacks a positive customer experience… rather than offering an instinctual navigation, it is harder to figure out where things are." Participant 5 stated, "It is not too user friendly, there are no back options on the bottom menu. Participant 1 and Participant 9 thought the app was easier to use if you were already familiar with technology.

On the satisfaction questionnaire, only 42% of the participants agreed that it was easy to find the information needed, that they could recover quickly when making mistakes, or that they could become productive quickly when using this language learning app. Only 17% of the participants agreed with the statement that "This language learning app gave error messages that clearly told me how to fix problems." As the lowest agreed upon statement, this points out a major design flaw in helping users troubleshoot issues within the app itself.

Other, less prevalent criticism came from unrelated areas of the app. Participants 10 and 12 would prefer other language learning apps they've used in prior experiences. In addition, a whopping third of the participants (P6, P10, P11, and P12) noted that they did not like that the app charged for additional premium features.

Though there was a lot of negative feedback on usability for this application, it is important to note that only around half of the participants felt this way and that the other remaining participants noted very positive experience with the app, particularly participants 2, 3, 5, 7 and 11.

Participant 3, for example, said "she would suggest this to friends since it was better than Duolingo and easier to use." Participant 5 noted, "seems like a pretty cool app," and while he did mention design flaws, he also pointed out that he might be willing to even purchase the premium features. Participant 7 not only liked the app, but had used it before. Participant 11 did not like that it wasn't entirely free but still thought it was "useful for those who want to learn [a] language."

The most highly agreed upon statement in the satisfaction questionnaire was that, "The interface of this language

learning app was pleasant (83%)." Other highly agreed upon statements included that the language learning app was easy to use, that tasks could be effectively completed, and that the user liked using the interface of the app.

There was some users who liked some features but heavily disliked others. Participant 9 did not like many things about the app but spoke highly of the ease of logging in with the log-in through Facebook feature. Participant 7 had used the app before and liked it but thought it would be more fun to play with or against other people.

Overall, the Busuu app is not for everyone and roughly half of the participants gave negative feedback, while the other half reported positive experiences. This application shows promise but attracts a wide range of opinions with a seemingly "you either like it or you don't" kind of pattern.

Recommendations

Our recommendations from the task submission related to the audio dimensions and support features of the application. All participants struggled with the provided tasks dealing with the audio components of the application, and the majority reported that the feedback on mistakes and on screen support features were lacking, something that hampered intuitive use. These areas are integral for a user friendly interface where language learning can be successfully engaged with.

In self reported summary data, task four proved to be the most difficult, followed by task six. In these tasks, users were asked to deal with the audio features of the app. In task four, this was to adjust the volume settings, while in task six this dealt with hearing the audio features and repeating aloud after hearing the words. These areas could addressed in future design innovations.

In the summary report, it was clear that some confusion surrounded the built in supports for users within the applications. According to a relatively greater percent of participants, The error messages were not clear, it was hard to see where mistakes were made, and there was little help in terms of options for moving forward. These impressions were reflected in feedback from participants in relation to their initial expectations before using the app not being met.

Moving forward, it is recommended that the Busuu developers continue to focus their attention and updates of the software upon the user support features and feedback messaging as well as the audio control features. These focused recommendations would help create a more user friendly and intuitive application.

Conclusion

Most participants completed the basic tasks in Busuu fairly quickly. They felt that learning a language in that way was fairly easy, as long as they didn't have to change anything. They liked both the audio portion as well as the exercises and felt confident that they could recognize simple sentences and conversations after only a brief trial. Some expressed an interest in using the app to learn a language, especially those who had not been successful in more traditional programs. They also enjoyed progressing at their own pace.

They were frustrated with their inability to make simple changes, but were cognizant of the fact that it was a free app and that there were bound to be limitations of this nature. Overall, they understood that this was a free app designed to entice them into more in-depth language learning for which they would have to pay. Some participants were inspired to further their language learning with Busuu, while might be interested if Busuu improved some of its user support features and feedback messaging.