

IMA 2 - Usability testing report

Memrise

TEAM 3

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Introduction

Memrise is a language learning app that can be downloaded for free from the Internet and it is available for the Android and iOS platforms. Users may choose as many languages as they want from the more than 200 courses available, including constructed languages such as Klingon. Registering on Memrise requires an email address, Google+ or Facebook account but it was quite easy and we could begin to use the app immediately. There was no email verification requirement before beginning to use the app.

According to Wikipedia, Memrise is basically a flashcard app that employs the "spacing effect" and mnemonic devices, "partly gathered through crowdsourcing," to improve efficacy of learning. Points are earned, and their totals recorded, for successfully answering questions about the target language. This community aspect and "every learner is partly a teacher" (a quote from Memrise's "About Us" webpage) mean that anyone can create content without vetting. From the Memrise website (www.memrise.com):

"Thousands of courses are created in Memrise every day, covering +200 languages. You can browse all of our courses to find something you want to learn right now!"

"You can create a course using the 'Create a Course' page, which is also linked from your Dashboard. You can also learn about the course creation tools here so you can then make the best course for learning."

This crowd sourcing approach factors into some of the usability issues in the following report.

This usability test was conducted by 3 members: Kathryn Langdon, Patrick Mannion and Melinda Richwine. Each member interviewed two people, using a sample script for participants to complete a series of 5 tasks. Study participants then were given an end of session questionnaire regarding how easy or difficult they found the five tasks to complete, and a general satisfaction survey about the overall impression of the app. General remarks from test subjects were also recorded during the test.

The following are what the team members concluded to be the overall strengths and and weaknesses of Memrise as a learning aid:

Pros:

- Memrise is very simple
- Easy to use
- Free

Cons:

- More capability would be nice (too simple)
- Not enough explanation about the vocabulary, such as sample sentence
- Not enough graphics, or pictures to help in understanding the vocabulary
- Navigation is difficult
- Some of the words are spelled wrong or incorrect

Methodology

Sessions

All of the participants were family members or friends of the team members. The test sessions, approximately 30 minutes each, were conducted at team members' homes or in a restaurant. The participants were asked to perform five tasks in Memrise, a language learning app. When the participants finished the requested tasks they completed a follow up questionnaire, utilizing a 5-point Likert scale, indicating how easy or hard they found each of the five tasks (see Attachment B). Next, the participants completed another questionnaire that utilized a 7-point Likert scale, indicating their level of satisfaction by scoring 19 statements regarding various characteristics of the app, such ease of use, layout, and clarity (see Attachment C). The final task was to imagine how they would describe Memrise to a friend who had asked them about it (see Attachment A).

Participants

All of the six participants recruited were friends or family or members of the Memrise team members. Their ages ranged from 15 to 48. They also appeared to vary in experience and skill using hardware and application software. The usability testing took place from February 11th through February 14th. Four of the participants performed the usability testing at home. Two of them performed it on February 11th, while the other two did it on February 13. The other two participants did the usability testing in a restaurant on February 12.

Description:

P1: 42 year old Marketing Coordinator with University of South Florida's Theater Department; Uses Iphone for email, directions, shopping and streaming music and movies; no experience with language learning apps.

P2: 45 year old homemaker and substitute teacher; Uses Iphone for email, Facebook, coupons, and shopping; No experience with language learning apps.

P3: 46 year-old nurse; not much computer knowledge or experience; likewise, not much experience with learning apps

P4: 18 year-old high school student, who like many people his age, finds using an iPad and many apps (at least ones like Memrise) very easy.

P5: 48 year-old Enterprise System Administrator; extensive IT knowledge managing enterprise servers and desktop administration for K-12 public school district. Uses mobile device for music, navigation, web browsing, communication. Minimal experience with learning apps.

P6: 15 year-old High School Freshman IB Student; digital native. Uses mobile device for Music, Text, Social Media. Moderate amount of experience with learning apps.

Evaluation Tasks/Scenarios

The participants were instructed to do the following tasks in Memrise (The task forms and questionnaires are included in the attachments in the Appendix):

- Task 1. Complete the steps necessary to create a new account. Stop after your account has been created.
- Task 2. Find one language you like to learn and add it to the profile / account.
- Task 3. Change the language to another language the participant would like to learn.
- Task 4. Turn off and turn on auditory sound.
- Task 5. Go to the settings/preferences and change any one setting option.

Results

Task Completion Success Rate

The team members (Richwine, Langdon, and Mannion) kept records of the participants while they were working through the tasks. All of the subjects successfully completed all of the tasks for a 100% completion rate. One participant that successfully completed the task used an existing Google+ account to login instead of creating a new account within the app.

Task Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
Langdon P1	✓	✓	✓	✓	✓
Langdon P2	✓	✓	✓	✓	✓
Mannion P3	✓	✓	✓	✓	✓
Mannion P4	✓	✓	✓	✓	✓
Richwine P5	✓	✓	✓	✓	✓
Richwine P6	✓	✓	✓	✓	✓
Success	6	6	6	6	6
Completion Rates	100%	100%	100%	100%	100%

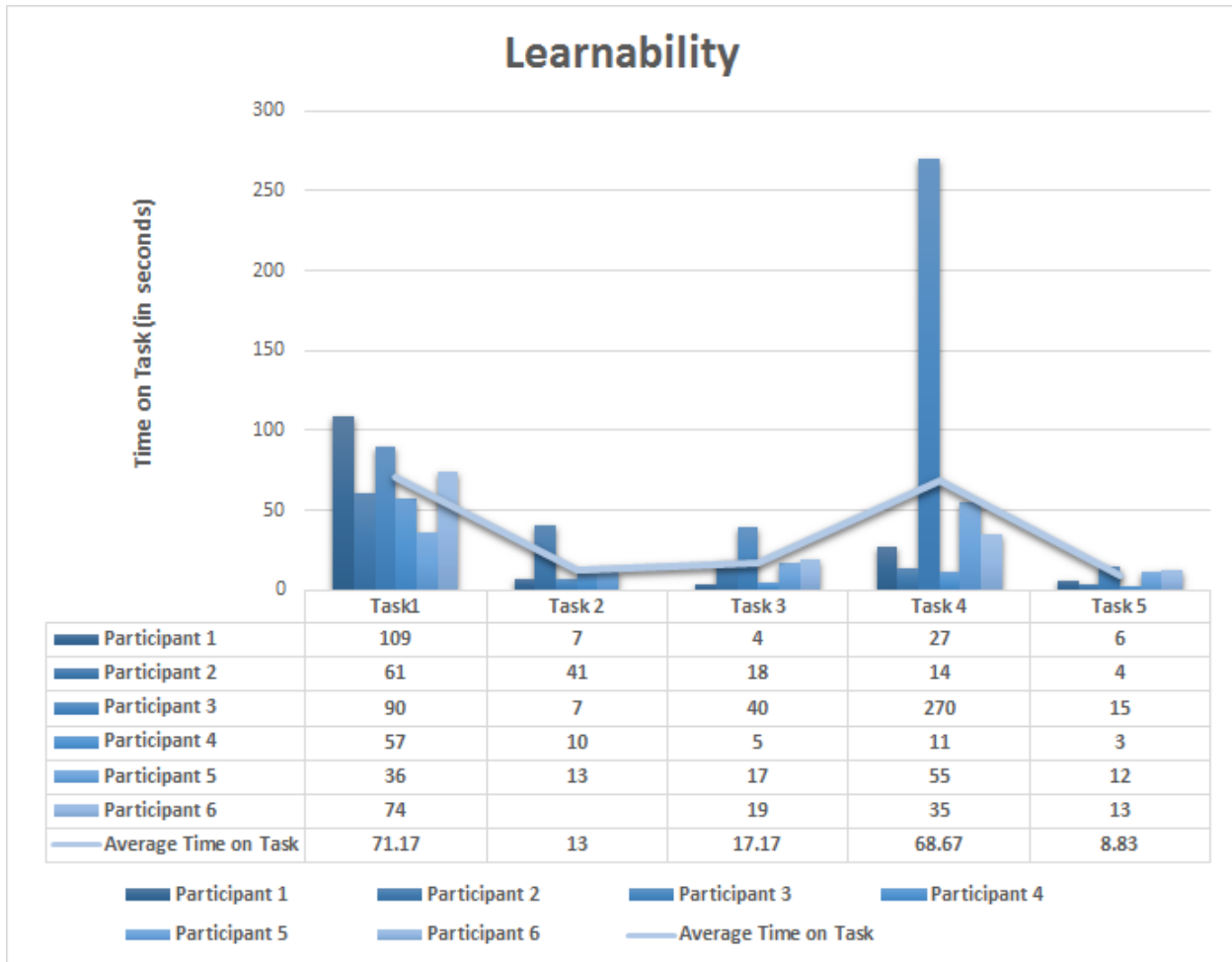
Learnability: Time to complete a task successfully

There seemed to be a degree of confusion initially, but with a minimal amount of time the participants learned how to use Memrise. Task 1 (creating an account and logging in) took the most time to complete, as might be expected as it involved inputting username, email, and password, with a mean of 71.17 seconds. Task 2, finding and adding a language to the participant's profile, was the second easiest to finish and only took, on average, 13 seconds to complete. Task 3, changing the language of study to another language, was only a little slower than Task 2 and took an average of 17.17 seconds. Turning the sound off and on, Task 4, took 68.67 seconds on average; however some of the participants found this task very difficult. Five of the participants finished in under a minute, but one took

270 seconds, which was five times slower than the next closest time (55 seconds). We might conclude that Task 4 was actually the most difficult because it did not involve inputting data as Task 1 did. Changing a setting or preference, Task 5, took an average of 8.83 seconds. The averages of the times it took to perform the different tasks ranged from 8.83 to 71.17 seconds. Three of the five tasks took less than 20 seconds to complete, but the other two took roughly around 70 seconds.

Time on Task

	P1	P2	P3	P4	P5	P6	Total Time on Task	Average Time on Task
Task 1	109	61	90	57	36	74	427	71.17
Task 2	07	41	07	10	13	--	78	13
Task 3	04	18	40	05	17	19	103	17.17
Task 4	27	14	270	11	55	35	412	68.67
Task 5	06	04	15	03	12	13	53	8.83



Errors

None of the participants made any critical errors during the usability testing; only non-critical errors were documented. A non-critical error is defined as an error that is not severe enough to interfere with completing the task. Task 4, which required the participants to turn the audio off and on, resulted in the highest number of non-critical errors (47). This is indicated in bold red in the table below. The cause of the relatively higher number of errors in this task was due to the participants difficulties to locate the sound option switch within the app. Tasks 1, 2, and 3 resulted in four non-critical errors each. Task 5 resulted in only three errors.

All participants made non-critical errors when searching through the preference menu for the audio settings (Task 4). P1 made a non-critical error logging in, but was able to complete the task. P5 made a non-critical error logging in, by using an existing Google+ account, but was able to

complete the task. Both errors were a result of the username already existing, which is technically not an error on the user's part. A non-critical error is noted for P6 on Task 2. The participant completed Task 2 prior to being directed; it was completed along with Task 1.

Errors

	P1	P2	P3	P4	P5	P6	Total # of Errors	Average # of Errors
Task 1	0	0	1	3	0	0	4	0.67
Task 2	0	1	0	2	0	1	4	0.67
Task 3	0	1	3	0	0	0	4	0.67
Task 4	1	1	37	3	2	3	47	7.83
Task 5	0	0	3	0	0	0	3	0.50

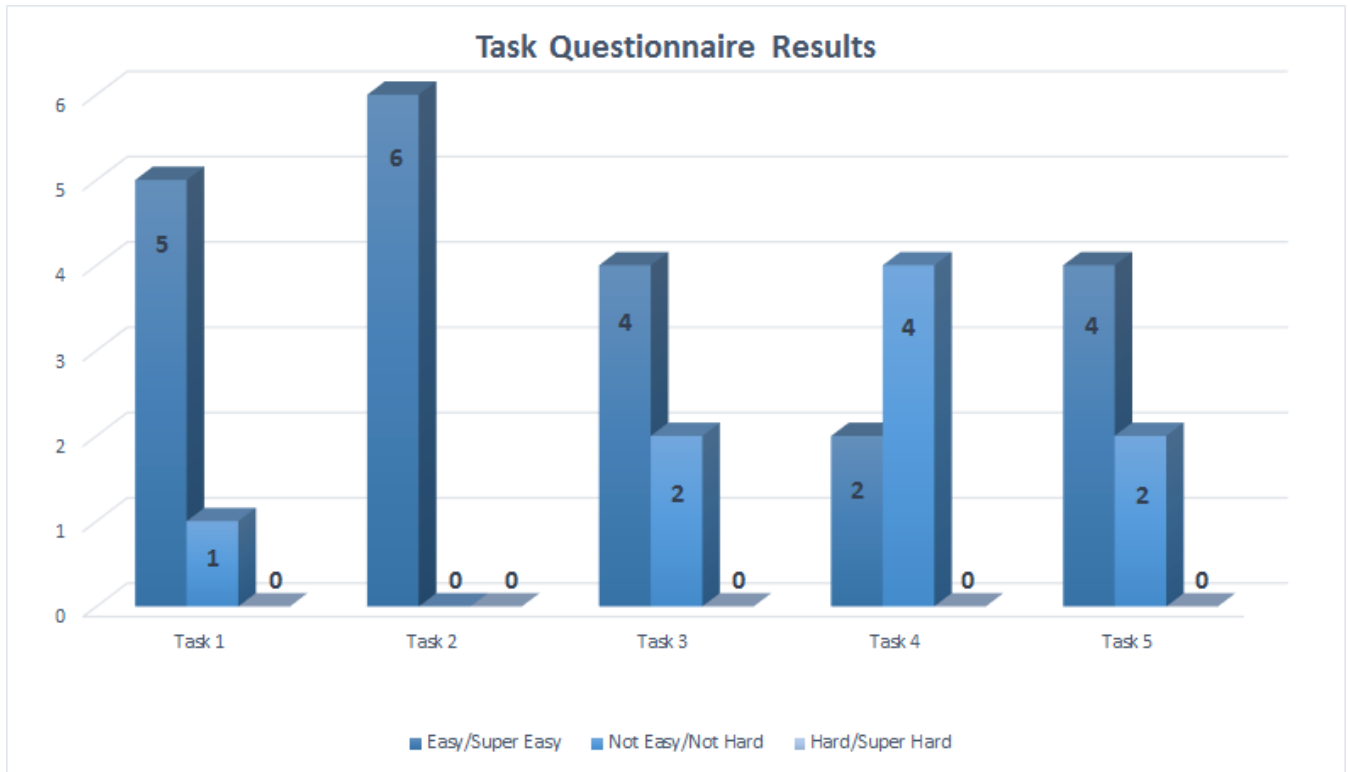
Summary of Data

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

Task	Task Completion	Learnability (Time on Task)	Errors
1	6	71.17	4
2	6	13	4
3	6	17.17	4
4	6	68.67	47
5	6	8.83	3

Satisfaction

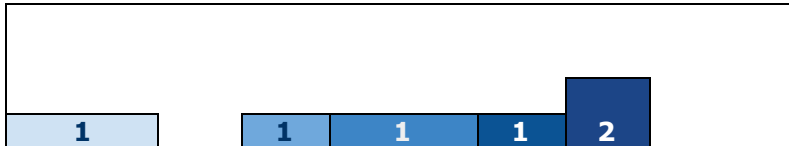
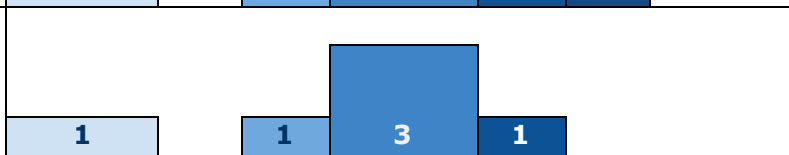
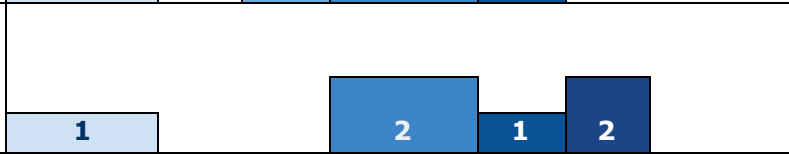
100% of the participants considered it easy ("Super Easy" or "Easy") to choose and add a language to their account (Task 2). Task 1, setting up an account, was considered easy by 83.33% of the participants. Adding an additional language (Task 3) and changing any option on the app (Task 5) were both considered easy by 66.67% of the participants. Only a third of the participants (33.33%) felt turning the sound on and off (Task 4) was easy; however, users' errors for this task ranged from 1 to 37 clicks.



Satisfaction Questionnaire Results

	1	2	3	4	5	6	7	
	Strongly Disagree			Do Not Agree or Disagree			Strongly Agree	Percent Agree
Overall, I am satisfied with how easy it is to use this language learning app.			1	2	1	2		16.67%
It was simple to use this language learning app.			1	1	2	1	1	16.67%
I could effectively complete the tasks using this language learning app.					4	2		0%
I was able to complete the tasks quickly using this language learning app.			3	1	1	1		50%
I was able to efficiently complete the tasks using this language learning app.					3			

					2		1			0%		
I felt comfortable using this language learning app.						1	2			2	1	50%
It was easy to learn to use this language learning app.								1	3	2		0%
I believe I could become productive quickly using this language learning app.											2	50%
This language learning app gave error messages that clearly told me how to fix problems.						1	1	4				33%
Whenever I made a mistake using the language learning app, I could recover easily and quickly.							2	1	2	1		33%
The information (such as on-line help, on screen messages and other documentation) provided with this language learning app was clear.						1		2	2	1		16.67%
It was easy to find the information I needed.							2	1	1	2		33%
The information provided for this language learning app was easy to understand.							1		4	1		16.67%
The information was effective in helping me complete the tasks.							1	3	1	1		16.67%
The organization of information on the language learning app screens was clear.							2	2		1	1	66.66%
The interface of this language learning app (buttons, menus, graphics) was pleasant.							1		3	1	1	16.67%

I liked using the interface of this language learning app (buttons, menus, graphics).		33%
This language learning app has all the functions and capabilities I expect it to have.		33%
Overall, I am satisfied with this language learning app.		16.67%

User experience

When analyzing the questionnaire results, many of the participants indicated that the app was simple and slightly easy to use, but the documented comments while using the app, and the number of clicks to accomplish a task, indicate at least one of its aspects to be unclear or confusing. Some of the participants could not quickly determine how to use the app, and had difficulty determining what to do. When they were taking a quiz they were often unaware that’s what they were supposed to be doing. Finding the Home Page was confusing and navigation in general was a problem for many, specifically changing the audio options. Once you were in a course and wanted to leave, the “quit” button was very small and hard to see. It was difficult to start a course over, if you needed a refresher. Turning the audio on and off (Task 4) was extremely problematic for two of the participants. One took 37 clicks and over 4 minutes to accomplish the task. Another of the participants completed the task with few clicks, but still spent over a minute, which seems excessive for such a basic function.

Two of the participants felt that the app would be helpful to learn a language, but most exhibited a lukewarm attitude. They felt the target language contents and formatting were poor. For example, some of the text was too small to read and there were misspelled words. The outer pages looked nice, but some of the vocabulary pages were disorganized. Participants felt as if some of the screens were not professionally done; “crowdsourcing at it’s worst” was a comment from a participant. Organization seemed to be one of the issues because finding the Home Page

seemed difficult. Navigating through screens was also an issue, as was turning the audio on and off. Some of the posted links were also inactive.

One participant also felt that there may be some security issues because the EULA (End User License Agreement) allows Memrise access to “phone, pics, GPS, wifi, etc.” and he removed the app immediately after the testing. In fact, the testers reported that none of their users has returned to use the apps on their own.

Recommendations

Change	Justification	Severity
Make it easier to turn the sound off and on	It took one participant almost a minute, and one more than 4 minutes to change the audio setting. Participant was clicking on anything to try to find what to do.	Medium
Make sure the language is accurate.	Participants found words spelled wrong, sometimes pictures don't match words.	High
Security issues?	EULA allows access to users GPS, phone, and pictures, many were uncomfortable with this level of access.	Medium
Lack of instruction.	Participants didn't find things intuitive, often not knowing what they should be doing. There were minimal instructions to help.	Medium
Navigation is difficult.	Returning to the home screen was problematic, what subjects thought was the home button took you to your courses.	Medium
Institute vetting process	Pronunciations are sometimes incorrect, or memory aids are inappropriate.	Medium

Conclusion

All of the users were able to get things done, albeit with difficulty. Many found the app simple, but would have liked a little more direction. One of the common problems was that navigation was difficult. In particular, getting back to the home screen was difficult for many of the participants. One mentioned that the home button, didn't take you back to the home screen, but rather back to your courses. Several users remarked at the simplicity of the app, yet it still took them a lot of time to complete some of the tasks. The users that had the most success with the app were those that were already technologically savvy. In addition, some users remarked on the sometimes "non professional" look of the app. Testers reported that none of their users has returned to use the apps on their own. M. Richwine reported that user P5 removed the app immediately after testing due to the liberal EULA.

Attachments

Attachment A: Completed Observation Sheets (with participant descriptions and/or reviews of the app?)

Attachment B: Completed End-of-Session Questionnaires on Ease of 5 Tasks

Attachment C: Completed Satisfaction Questionnaires

Attachment D: Summary of Text Questionnaire

Attachment E: Satisfaction Questionnaire Table

Summary of Task Questionnaire

	Super Easy	Easy	Not Easy or Hard	Hard	Super Hard	Mean Rating	Percent Easy
Task 1	1	4	1	0	0	2.00	83.33%
Task 2	1	5	0	0	0	1.83	100%
Task 3	1	3	2	0	0	2.17	66.67%
Task 4	0	2	4	0	0	2.67	33.33%
Task 5	0	4	2	0	0	2.33	66.67%

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

Satisfaction Questionnaire table

	1 Strongly Agree	2	3	4 Do not agree or disagree	5	6	7 Strongly Disagree	Mean Rating	Percent Agree
1. Overall, I am satisfied with how easy it is to use this language learning app.			1	2	1	2		3.67	16.67%
2. It was simple to use this language learning app			1	1	2	1	1	5.0	16.67%
3. I could effectively complete the tasks using this language learning app					4	2		5.33	0%
4. I was able to complete the tasks quickly using this language learning app.			3	1	1	1		4.0	50%
5. I was able to efficiently complete the tasks using this language learning app.				2	3	1		4.83	0%
6. I felt comfortable using this language learning app.		1	2			2	1	4.50	50%
7. It was easy to learn to use this language learning app.				1	3	2		5.17	0%
8. I believe I could become productive quickly using this language learning app.	1		2		1		2	4.33	50%
9. This language learning app gave error messages that clearly told me how to fix problems.	1		1	4				3.33	33%
10. Whenever I made a mistake using the language learning app, I			2	1	2	1		4.33	33%

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.		1		2	2	1		4.33	16.67%
12. It was easy to find the information I needed.			2	1	1	2		4.50	33%
13. The information provided for this language learning app was easy to understand.			1		4	1		4.83	16.67%
14. The information was effective in helping me complete the tasks.			1	3	1	1		4.33	16.67%
15. The organization of information on the language learning app screens was clear.		2	2		1		1	3.67	66.66%
16. The interface of this language learning app (buttons, menus, graphics) was pleasant.		1			3	1	1	5.00	16.67%
17. I liked using the interface of this language learning app (buttons, menus, graphics).	1		1	1	1	2		4.17	33%
18. This language learning app has all the functions and capabilities I expect it to have.	1		1	3	1			3.50	33%
19. Overall, I am satisfied with this language learning app.	1			2	1	2		4.33	16.67%

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