Implementation Project

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Implementation

Description of process

The usability testing took place in one of the classrooms after the students had gone home. The place was very quiet, with no distractions at all. It was a small classroom, located in building 621, Room # 335. There was only one computer in the classroom and it was attached to a Smart board, where you could see the actions taking place in the computer. The researcher took advantage of this big screen to watch what and how the test takers did.

Ten students were randomly assigned to take the usability testing of the prototype. As it was mentioned before, the classroom had only one computer. Therefore, only one student was tested at a time and the researcher took about two weeks to finish all the students, who were assigned to take the usability testing. The advantage of testing only one student was the easiness of watching one person working, rather than watching a bunch of people. All the test takers were scheduled to take the test at 3:30 pm. At this time of the day, the students go to their homes and, as a result, there were no distractions at all.

The **tools,** which were used in this implementation, were a computer with internet access, a list of the tasks that should be executed by the test takers, a list of survey questions that should be answered by each participant, the prototype in a form of a CD, an iPod for recording, and some blank paper.

The following was done as a preparation for the testing:

- Setting the place for the usability testing by arranging the chairs, desks, etc.

- Making sure that the computer worked fine and all the tests materials, such as the prototype and the questionnaire, were ready.
- Welcoming the test taker.
- Before diving into the tasks, the user has been familiarized with the program's environment and told briefly about the prototype and what it is all about.
- To avoid distracting the test taker, the tasks were written on cards and were given to the student one after the other. In other words, when the student was done with a task, the researcher would give him/her another card with a new task.
- Before starting a task, the researcher asked the participant if he/she had any questions or if he/she needed anything to be explained.
- The participant was told about the importance of his feedback, because future changes would be based on the feedback of the test takers.
- Most of the steps had been designed to run automatically, but also the users were able to go back if they need to reread or double check anything at anytime.
- Here is a list of the tasks that the test takers are assigned to complete. These questions were carefully designed to cover all the aspects of using this prototype.

Task # 1

Click on the program to open and follow the instructions

Task # 2

Click on the video to play.

Task # 3

Answer the questions about the video.

Task # 4

Listen to the recorded audio and then answer the questions.

Task # 5

Study the vocabulary list and then answer the questions.

Task # 6

Click on the link to record yourself or use your iPOD

The researcher observed this usability test. As previously mentioned, he preferred to test each user individually, because individual testing often provides more accurate results. Also, it is easier to observe one user than a group of users. The researcher stayed quiet and at a reasonable distance from the test taker during the testing. There were no clues, no suggestions or reacting to the things the user may say. In other words, he was neutral. Actually, the Smart board made it very easy for him to watch and follow every click of mouse by the test taker. He took very useful notes that described exactly what happened or, in other words, what the test taker did during each task. When the test taker finished the usability testing, he/she was asked to answer a survey. (See appendix Table 3 for the survey questions.) When every thing was done, the researcher thanked the test taker for his/her patience and participation.

The **schedule** of this test was designed to take place Monday through Friday, from 3:30 to 4:30 pm, for two weeks, because everyday only one user was tested. The data of this testing was the answers to the survey questions, in addition to the researcher's notes. Regards **statistical analyses,** the following were used to reach the findings.

- The bar graph or a histogram.
- The mode, which helped in pointing out the most frequent value assumed by a random variable
- The median, which helped in dividing the higher half of samples from the lower half.
- Percentile was used by the researcher as a value on a scale of one hundred that indicated the percent of a distribution that is equal to or below it.
- Quartile is a statistical term describing a division of observations into four defined intervals based upon the values of the data and how they compare to the entire set of observations.
- Arithmetic mean is the sum of the observations divided by the number of observations. It is often quoted along with the standard deviation.
- Standard deviation was used as a measure of how spread out the data was.
- Correlation was used as a measure of the relation between two or more variables.
- Descriptive statistics was used to describe the basic features of the data in a study. It provides simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data

The collected data has been thoroughly processed and analyzed using the computer statistical package “Excel.” All the statistical techniques were used, and many statistical tables were there. There are tables and histograms, to show the difference between the percentages of the responses. Also, the results of the data showed the standard deviation, or the standard error of the mean values, to clarify the differences between the means of the treatments.

Regarding the **accuracy** of this test, the researcher designed the test questions to provide a source of objective information for decisions and judgment. The test was accurate and it measured what it was supposed to measure. Although the test takers were tested individually, they all agreed on the same questions. Another important point is that, the entire test and the questionnaire question were related to the topic if the prototype.

Description of the audiences

The audiences are students of the Defense Language Institute (DLI), Middle East School 1, Department C, Team C2. There are thirty students. It is important to know that they are military personnel of different ranks and from different branches of the armed forces. Their ages range between 19 – 28 years old. Most of them have just finished high school and some of them are college graduates. Regarding their gender, 75% are male and 25% are female. Most of them do not have much experience, because they joined the army right after finishing high school, but the older ones are mature and full of life experience. The entire group has received a great deal of military training. 95% of the group is very motivated, because they will be financially rewarded if they pass their final exam and a bright future is

waiting for them in the field of Arabic translation. When they were asked about their interests, their answers showed that they are interested in different things, such as reading, writing, camping, fishing, watching movies, traveling, etc. Studying Arabic is mandatory for all of them. They have very good attitudes and are very easy people to deal with. They have come from all over the country and from different social and cultural backgrounds. Because of their solid computer skills, all of them are excellent in using technology. They are now in week eight of their studies, which will last for sixty four weeks. They are at the very beginning of the course.

Findings from evaluation

After the usability testing, the data showed that all of the students who took the test were able to log into the program smoothly and easily. The result of this question was 100%. Another 100% area is the area of navigating the prototype back and forth. Every test taker answered “strongly agree.” 80% of the users strongly agreed that the recorded audios played well and easily. 88% strongly agreed that the tasks were clear and easy to understand. 94% of the participants liked the program and wanted to see more like it. 60% of the test takers mentioned that the colors of the prototype were clear and attractive. 83% of the test takers strongly agreed that it was easy to read the texts. 70% of the students agreed that the video played well and clearly. The results of the data analysis have been presented in tables as well as graphs

Table 1

Percentages of Responses

#	Item	Percentage
1	Log in	100%
2	Audios	80%
3	Navigation	100%
4	Videos	70%
5	Tasks	88%
6	Colors	60%
7	Clear and attractive	90%
8	I like it	94%

Figure 1

Percentage of Responses

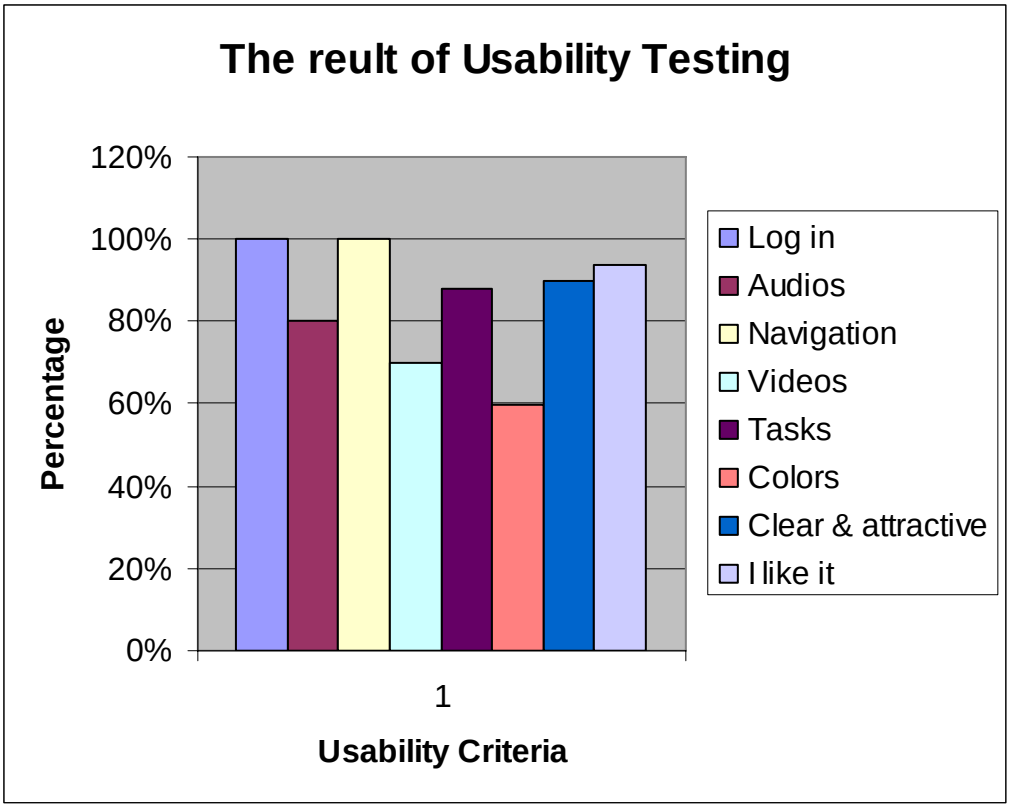

Table 2

Descriptive statistics

	Usability testing
Mean	41.571
Standard Error	2.6624
Median	44
Mode	#N/A
Standard Deviation	7.0441
Sample Variance	49.619
Kurtosis	-0.4931
Skewness	-0.6834
Range	20
Minimum	30
Maximum	50
Sum	291
Count	7
Confidence Level(95.0%)	6.5147

Indications of findings

- In general, it is clear that the program works fine and it can be shared with other fellow teachers in Middle East School 1 and other Arabic schools.

- In the future, when developing such programs, a great deal of attention should be paid to the harmony between images, texts, audios and videos.
- Based on the feedback, the researcher would work on changing the colors of the prototype. It was the area that received the lowest grading in the survey. The current colors are light green for the text background and black for the text color. A dark color for the background and a light color for the text will be applied.
- Another area that received low grading is the video. The problem of the video is that it plays in some computers and it does not in others. The researcher will reinsert it into his prototype, hoping that this reinsertion will solve the problem.
- In general, the results showed a drastic success in the usability of the prototype. Also, it is expected that the prototype will have a positive effect on the students speaking skills.

Appendix

Table 3

Questions of usability testing Questionnaire

No.	Question	5 S. agree	4 Agree	3 Not sure	2 Dis-agree	1 S. disagree
01	I could easily log into the program.					
02	I could easily navigate through the program					
03	I could go back and forth to wherever I wanted.					
04	I could complete the task efficiently.					
05	The prototype's colors were clear and attractive					
06	It was easy to read the texts.					
07	The recorded audios played well and clearly.					
08	The video played well and clearly.					
09	The navigation bar worked fine.					
10	The photos were clear, beautiful and attractive,					
11	Texts and audios were in harmony.					
12	The instructions were clear, specific and easy to understand.					

13	The tasks were clear and easy to understand.					
14	The waiting time for the next activity was reasonable.					
15	I think this program will help me speak better.					
16	I liked this program.					
17	I would like to see more lessons like this one.					

Is there anything in the program that you disliked?

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Do you have any suggestions?

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Do you recommend this program to other people?

Yes ……

No …….

If No, explain.

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