

**Global Language Online Support System
(GLOSS):**

To what extent does it enhance learner proficiency?

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I. Introduction

The purpose of this study is to evaluate the effectiveness of the Global Language Online Support System (GLOSS) in enhancing foreign language proficiency of DLI students, particularly Arabic language learners. GLOSS is an online self-learning module designed to help DLI students improve their foreign language skills. The methodology used to test the effectiveness of GLOSS involved comparing and analyzing pre-and post test reading and listening scores of two groups of students. Thirteen students from each group took a repeated measure exam (pre- and post-test). After taking the pre-test, both groups were given the same assigned curriculum and supplementary authentic materials. In addition, the first group (Group A) was given several hours of extra self-instructional GLOSS materials. Pre- and post-test scores from the two groups were then compared and analyzed to see if GLOSS has made a difference or not.

II. Methodology

a) The Prototype

The Global Language Online Support System (GLOSS) is an online learning module that contains more than 3,900 reading and listening lessons from 33 languages. According to the Defense Language Institute, "GLOSS online language lessons are developed for independent learners to provide them with the learning/teaching tools for improving their foreign language skills" (DLIFLC, 2003). Each lesson consists of 4 to 6 activities and each activity is accompanied with feedback that provides learners with explanations and tutoring. The reading and listening texts were taken from authentic sources such as newspapers, TV, radio, and the internet. The material covers all topics and ranges from simple short conversations to complex reports and

articles. Lessons are classified according to topics such as the economy, politics, military, security, society, culture, science and technology. Topics are also categorized according to proficiency levels-1, 1+, 2, 2+, 3, 3+, and 4 (See Appendix 3). When a learner opens GLOSS, he/she has to select the language (e.g. Arabic), the skill (listening or reading), the topic (e.g. economy), and the level (e.g. 2). (DLIFLC, 2003)

b) Target Audience

The intended audience for instructional intervention is Arabic language learners at DLI. These learners are students who enroll in a 63-week intensive proficiency language program and who are required to be able to listen to and read foreign language texts at different domains and proficiency levels. The learners are native English speakers who study Arabic as a second language. Their broad educational attainment levels range from high school diplomas to graduate degrees, with the majority of students falling in the category of high school diploma with some college. The target group was selected from the 2nd semester, which is the midpoint of the program's timeline. Therefore, the intended cognitive domain at their level is a mastery of knowledge and comprehension. Learners are expected to interact with GLOSS lesson activities through individual self-instruction.

c) Expected Outcomes:

By completing the selected GLOSS online learning lessons, learners will be able to:

- 1) Understand the topic and main ideas.
- 2) Recognize supporting details, facts, and essential elements of information.
- 3) Summarize, paraphrase, and understand contextual clues.

- 4) Comprehend vocabulary related to selected topics.
- 5) Expand their schema and knowledge about these topics.
- 6) Attain some structural and syntactical knowledge that aid their understanding of reading and listening texts.
- 7) Demonstrate proficiency in reading short authentic reading texts and be able to understand short listening texts at news item levels.

d) Conditions and Process:

The test subjects are students who receive regular classroom instruction and take routine tests. The pre- and post-tests were scheduled and administered in accordance with the program's calendar agenda. Although GLOSS was included in as part of Group A students' program of study, GLOSS was not a mandatory part of the curriculum. The decision to incorporate GLOSS instruction within the DLI's Arabic Language curriculum was made by the teaching team, which is headed by one of the authors of this study. The intervention was implemented during regular class hours within the teaching schedule.

e) Pre-test Method and Instrument

The Pre-test consisted of two separate listening and reading tests. Each test contained several passages followed by 32 multiple choice questions. The students from the two groups (A and B) took the listening test in the morning and reading test in the afternoon. The following table shows listening and reading scores, along with letter grades for each group of students.

Group A (Experimental Group)					Group B (Control Group)				
	Listening		Reading			Listening		Reading	
Student 1	29	A-	32	A	Student 1	26	B-	28	B+
Student 2	27	B	26	B-	Student 2	28	B+	30	A-
Student 3	22	C-	26	B-	Student 3	27	B	29	A-
Student 4	23	C	24	C+	Student 4	26	B-	20	D+
Student 5	31	A	32	A	Student 5	23	C	30	A-
Student 6	29	A-	32	A	Student 6	25	C+	31	A
Student 7	24	C+	27	B	Student 7	24	C+	28	B+
Student 8	29	A-	30	A-	Student 8	20	D+	26	B-
Student 9	22	C-	27	B	Student 9	27	B	29	A-
Student 10	25	C+	28	B+	Student 10	31	A	32	A
Student 11	23	C	26	B-	Student 11	23	C	28	B+
Student 12	26	B-	32	A	Student 12	23	C	23	C
Student 13	23	C	24	C+	Student 13	26	B-	27	B

f) Post-test Method and Instrument

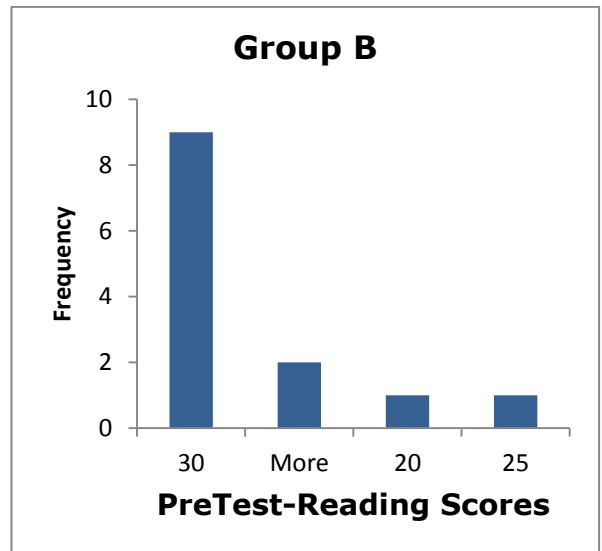
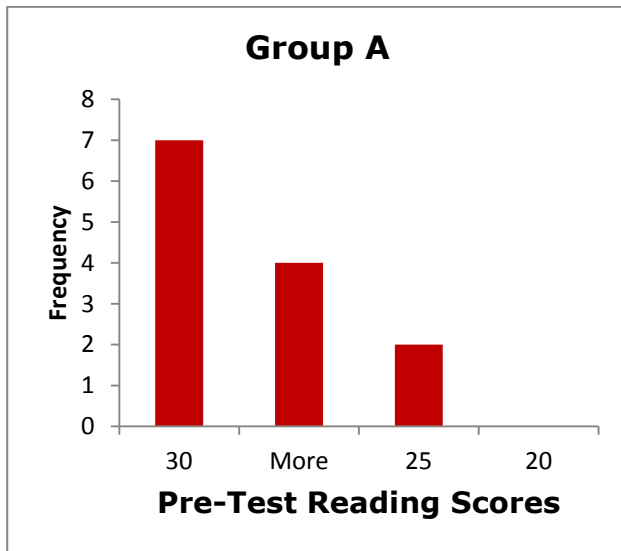
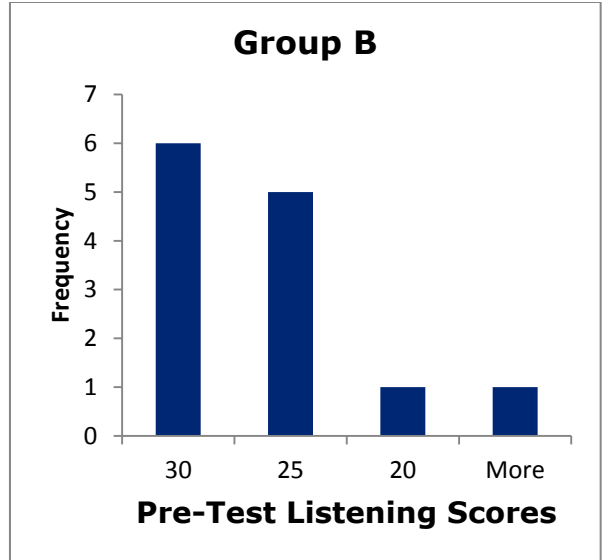
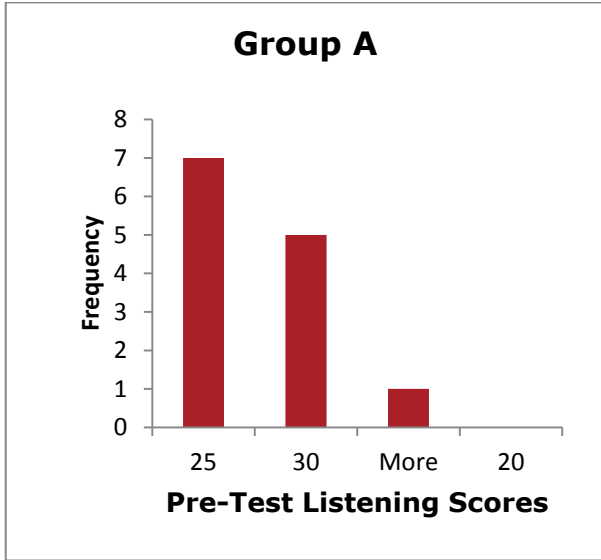
Like the pre-test, the post-test was also comprised of two separate listening and reading tests. Each test had several passages followed by 40 multiple choice questions. The students from the two groups (A and B) took the listening test in the first day and reading test in the second day. The following table shows listening and reading scores along with letter grades for each group of students.

Group A (Experimental Group)					Group B (Control Group)				
	Listening		Reading			Listening		Reading	
Student 1	39	A	40	A	Student 1	28	C	27	C-
Student 2	36	B+	37	A-	Student 2	33	B	36	B+
Student 3	24	D	30	C+	Student 3	36	B+	35	B+
Student 4	33	B	33	B	Student 4	32	B-	34	B
Student 5	37	A-	37	A-	Student 5	33	B	32	B-
Student 6	36	B+	37	A-	Student 6	37	A-	35	B+
Student 7	31	B-	33	B	Student 7	37	A-	29	C+
Student 8	36	B+	37	A-	Student 8	29	C+	27	C-
Student 9	29	C+	31	B-	Student 9	35	B+	35	B+
Student 10	36	B+	35	B+	Student 10	36	B+	38	A-
Student 11	27	C-	31	B-	Student 11	34	B	37	A-
Student 12	36	B+	39	A	Student 12	30	C+	30	C+
Student 13	37	A-	37	A-	Student 13	33	B	33	B

III. Results

a) Entry Conditions:

The statistical analysis of the pre-test scores shows that there is no significant difference between the two groups in reading or listening. The mean is essentially the same for both groups (25.62 vs. 25.31 in listening, and 28.15 vs. 27.77 in reading for Group A and B respectively). Hypothesis testing also confirmed that there is no significant difference between the two groups' pre-test scores in listening or reading (see Appendix 1). The following two pairs of charts illustrate a comparison of the groups' performance in each skill.



Although the mean is essentially the same for both groups, the listening charts show that more students from Group B achieved higher scores (between 25 and 30) while the reading charts indicate that Group A has lower range of test scores than group B.

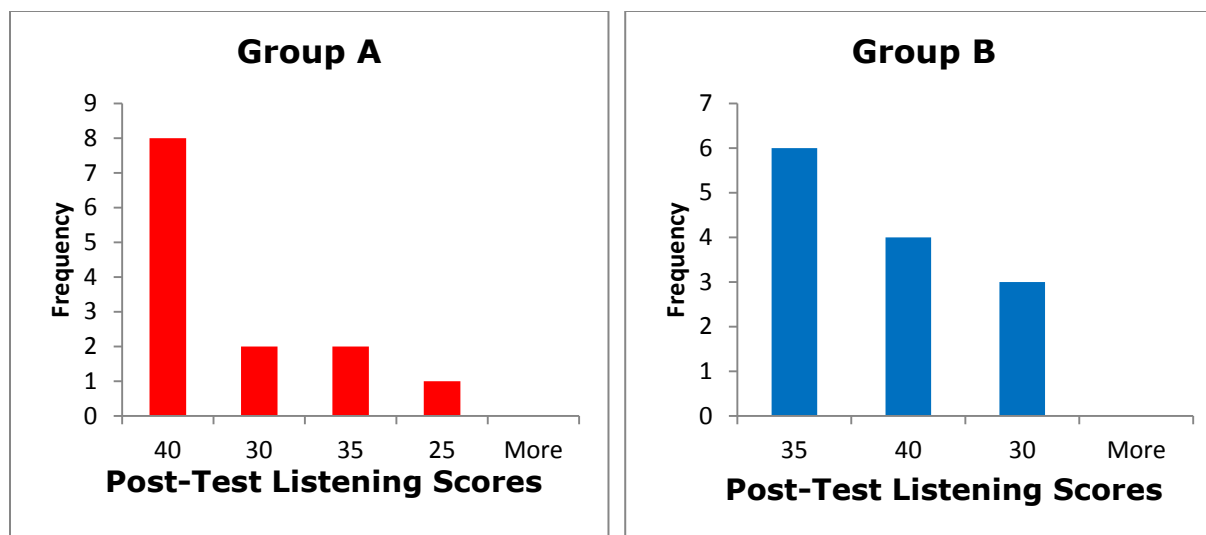
Based on the entry condition data (pre-test analysis), we can conclude that the performance of the two groups was identical. Overall, no group seemed to outperform the other.

b) Instruction

After taking the pre-test, both groups received 10 weeks of regular instruction from the curriculum and were provided with authentic supplementary materials. In addition, the experimental group (Group A) received 15 hours of GLOSS self-study materials for listening and 15 hours of GLOSS self-study materials for reading. The control group (Group B), was not provided with any GLOSS learning resources. Each hour of GLOSS online language lessons consisted of 4 to 6 activities. Group A students completed GLOSS lesson activities with little or no intervention from their teachers. The GLOSS lessons covered the same topics as the post tests, such as military/security, society (sports), geography (natural disaster), and science (health). These topics are similar to the subject matter covered by the authentic supplementary materials. This instruction was followed by a post-test taken by both groups as shown in the previous section.

c) Outcomes

The following pair of charts compares the two groups' post-test performance in listening.

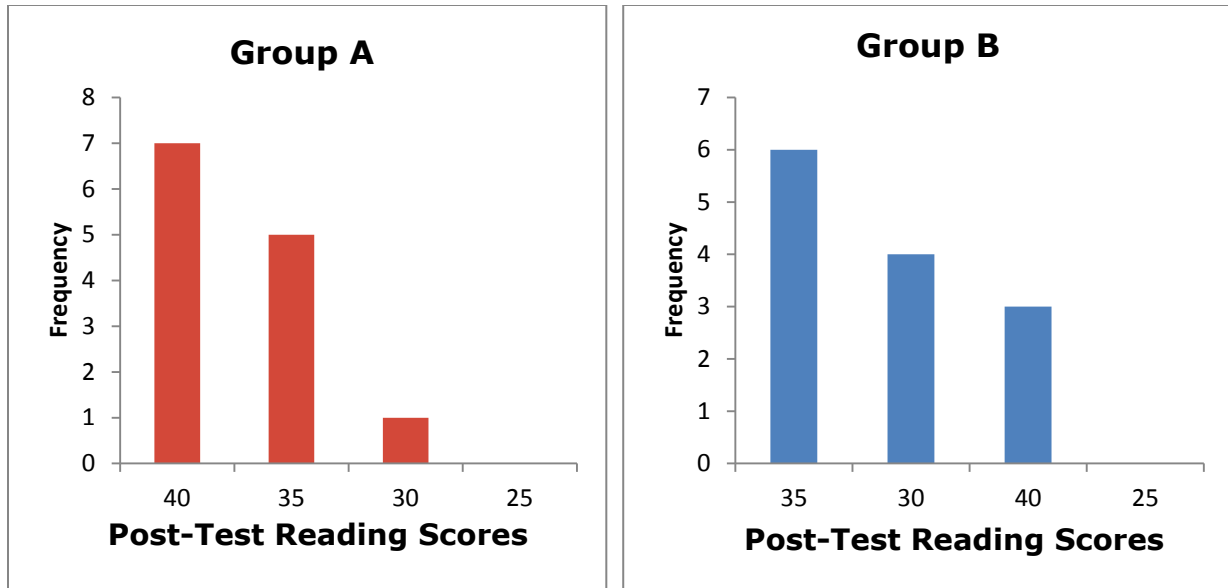


Post-instruction test analysis reveals the following facts about listening:

- 1) The means of the two groups are essentially the same (33.62 for Group A and 33.31 for Group B).
- 2) The variance (performance range) for Group A is higher than Group B (20.42 vs. 8.73).
- 3) More students from Group A achieved higher scores (between 35 and 40) than Group B.

Since the means are identical in both pre-test and post-test, there's no significant evidence that the intervention (GLOSS) gives Group A an advantage over Group B (see Appendix 2).

The following pair of charts compares the two groups' performance in reading.



On the other hand, post-intervention test analysis for reading indicates that:

- 1) The mean for Group A is slightly higher than Group B (35.15 vs. 32.92).
- 2) The variance (performance range) for Group B is slightly higher than Group A (13.42 vs. 10.47).
- 3) More students in Group A achieved higher scores (35-40) than Group B.

Despite the mean difference between the two groups, hypothesis testing revealed that there is no significant statistical difference between the two groups. Therefore, there is no evidence to suggest that GLOSS (our intervention) is effective in improving foreign language skills (see Appendix 2) and we can conclude that GLOSS has not made a difference.

IV. Recommendations:

Based on the findings of this study, which show no evidence that Global Language Online Support System (GLOSS) could enhance the language proficiency of students better than other authentic supplemental materials, we suggest that: (1) teachers should not rely on GLOSS as a standalone learning tool. They must use a variety of other authentic materials to supplement the DLI curriculum; (2) When using GLOSS, teachers should review and select GLOSS activities that enhance listening and reading comprehension, such as those that focus on main ideas and supporting details; (3) Not all students can benefit equally from GLOSS self-instruction. Teachers should guide students through each lesson by selecting relevant tasks, for example, syntax and lexical activities can be used in the early stage of the program; and (4) Future studies should be conducted to evaluate GLOSS effectiveness at different stages of the program and allow more instructional time, as this project only assessed 15 hours of self-instruction for each skill (listening and reading) and was only implemented during the program's midpoint instructional period.

V. Summary

This goal of this project was to assess the extent to which Global Language Online Support System (GLOSS) can enhance the foreign language proficiency of DLI students. Our main target audience was Arabic language learners. Two sister classes (13 students each) at the halfway point of the program were selected as subjects for this study. The pre-test scores of the two groups in reading and listening were compared, and the analysis indicated that there were no performance differences within the two groups. Following the pre-test, both groups were exposed to 10 weeks of instruction from the regular curriculum and provided with authentic supplementary

materials. Additionally, the first group (Group A) was given extra 15 hours of self-instruction from GLOSS in reading as well as listening. After this intervention, both groups took post-tests in reading and listening. Again, the post intervention scores were compared and analyzed to see if GLOSS had made a difference. Despite the slight variation that in reading, the overall performance of the two groups did not reflect statistically significant differences. One limitation of this study was that the intervention had occurred in the middle of the program and was executed for a limited period of time. There's no information available to indicate that the result would be different, had GLOSS been implemented at the beginning of the program and carried out for several weeks instead of several hours. The other limitation is that not all students can benefit equally from GLOSS as variances in performance indicated. We also do not know what the outcome would be if the students were guided and directed to specific activities.

VI. References

Defense Language Institute's Foreign Language Center. (2003). *Global Language Online Support System*. Retrieved May 5, 2010 from <http://gloss.dliflc.edu/search.aspx>

VII. Appendixes

a) Appendix 1: Pre-Test

1- T-Test for Listening Pre-test Scores for Group A and B

t-Test: Paired Two Sample for Means		
	Group A	Group B
Mean	25.61538462	25.30769231
Variance	9.58974359	7.730769231
Observations	13	13
Pearson Correlation	-0.362568033	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.228540337	
P(T<=t) one-tail	0.41153722	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.82307444	
t Critical two-tail	2.178812827	

2- T-Test for Reading Pre-test Scores for Group A and B

t-Test: Paired Two Sample for Means		
	Group A	Group B
Mean	28.15385	27.7692
Variance	9.474359	10.6923
Observations	13	13
Pearson Correlation	0.210811	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.347524	
P(T<=t) one-tail	0.367109	
t Critical one-tail	1.782288	
P(T<=t) two-tail	0.734217	
t Critical two-tail	2.178813	

3- Descriptive Statistical Data for Pre-test Listening Scores for Group A and B

GROUP A	
Mean	25.61538
Standard Error	0.858879
Median	25
Mode	29
Standard Deviation	3.096731
Sample Variance	9.589744
Kurtosis	-1.33791
Skewness	0.40632
Range	9
Minimum	22
Maximum	31
Sum	333
Count	13

GROUP B	
Mean	25.307692
Standard Error	0.7711514
Median	26
Mode	26
Standard Deviation	2.7804261
Sample Variance	7.7307692
Kurtosis	0.6895446
Skewness	0.1190724
Range	11
Minimum	20
Maximum	31
Sum	329
Count	13

4- Descriptive Statistical Data for Pre-test Reading Scores for Group A and B

GROUP A	
Mean	28.153846
Standard Error	0.853696
Median	27
Mode	32
Standard Deviation	3.0780447
Sample Variance	9.474359
Kurtosis	-1.545707
Skewness	0.1941136
Range	8
Minimum	24
Maximum	32
Sum	366
Count	13

GROUP B	
Mean	27.76923
Standard Error	0.90691
Median	28
Mode	28
Standard Deviation	3.269909
Sample Variance	10.69231
Kurtosis	1.686047
Skewness	-1.26198
Range	12
Minimum	20
Maximum	32
Sum	361
Count	13

b) Appendix 2: Post-Test**1- T-Test for Listening Post-test Scores for Group A and B**

t-Test: Paired Two Sample for Means		
	Group A	Group B
Mean	33.61538462	33.30769231
Variance	20.42307692	8.730769231
Observations	13	13
Pearson Correlation	-0.508375392	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.169714113	
P(T<=t) one-tail	0.434031234	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.868062468	
t Critical two-tail	2.178812827	

2- T-Test for Reading Post-test Scores for Group A and B

t-Test: Paired Two Sample for Means		
	Group A	Group B
Mean	35.153846	32.92307692
Variance	10.474359	13.41025641
Observations	13	13
Pearson Correlation	-0.5192355	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.3369593	
P(T<=t) one-tail	0.1030146	
t Critical one-tail	1.7822875	
P(T<=t) two-tail	0.2060293	
t Critical two-tail	2.1788128	

3- Descriptive Statistical Data for Post-test Listening Scores for Group A and B

GROUP A	
Mean	33.6153846
Standard Error	1.25339775
Median	36
Mode	36
Standard Deviation	4.51918985
Sample Variance	20.4230769
Kurtosis	0.1151116
Skewness	-1.0600991
Range	15
Minimum	24
Maximum	39
Sum	437
Count	13

GROUP B	
Mean	33.30769
Standard Error	0.819511
Median	33
Mode	33
Standard Deviation	2.954788
Sample Variance	8.730769
Kurtosis	-0.76934
Skewness	-0.4699
Range	9
Minimum	28
Maximum	37
Sum	433
Count	13

4- Descriptive Statistical Data for Post-test Reading Scores for Group A and B

GROUP A	
Mean	35.1538
Standard Error	0.89762
Median	37
Mode	37
Standard Deviation	3.23641
Sample Variance	10.4744
Kurtosis	-1.197
Skewness	-0.2849
Range	10
Minimum	30
Maximum	40
Sum	457
Count	13

GROUP B	
Mean	32.92308
Standard Error	1.015657
Median	34
Mode	35
Standard Deviation	3.662002
Sample Variance	13.41026
Kurtosis	-0.968103
Skewness	-0.493058
Range	11
Minimum	27
Maximum	38
Sum	428
Count	13

c) Appendix 3: Global Language Online Support System (GLOSS) Webpage

Global Language Online Support System - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://gloss.dliflc.edu/

Global Language Online Support Syst...

G.L.O.S.S. Search Resources Diagnostic Assessment

GLOSS Links

- Search Resources
- Diagnostic Assessment
- GLOSS Administration

Global Language Online Support System - Search Resources

GLOSS online language lessons are developed for independent learners to provide them with the learning/teaching tools for improving their foreign language skills. Reading and listening lessons are based on authentic materials (articles, TV reports, radio broadcasts, etc.) and consist of 4 to 6 activities. The motivating tasks are accompanied with in-depth feedback that provide learners with thorough explanations and tutoring just like an attentive and experienced teacher would do. With more than 5,600 instructional hours of materials, GLOSS is a valuable resource in maintaining and improving language ability of the learners.

Language

<input checked="" type="radio"/> All	<input type="radio"/> Albanian	<input type="radio"/> Arabic	<input type="radio"/> Azerbaijani
<input type="radio"/> Chinese	<input type="radio"/> Croatian	<input type="radio"/> Dari	<input type="radio"/> Egyptian
<input type="radio"/> French	<input type="radio"/> Greek	<input type="radio"/> Gulf-Arabic	<input type="radio"/> Hausa
<input type="radio"/> Hebrew	<input type="radio"/> Hindi	<input type="radio"/> Indonesian	<input type="radio"/> Iraqi
<input type="radio"/> Japanese	<input type="radio"/> Korean	<input type="radio"/> Kurdish-Sorani	<input type="radio"/> Kurmanji
<input type="radio"/> Levantine	<input type="radio"/> Pashto	<input type="radio"/> Persian	<input type="radio"/> Portuguese
<input type="radio"/> Punjabi	<input type="radio"/> Russian	<input type="radio"/> Serbian	<input type="radio"/> Spanish
<input type="radio"/> Swahili	<input type="radio"/> Tagalog	<input type="radio"/> Thai	<input type="radio"/> Turkish
<input type="radio"/> Urdu	<input type="radio"/> Uzbek		

Proficiency Level

<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 1+	<input checked="" type="checkbox"/> 1+2	<input checked="" type="checkbox"/> 2
<input checked="" type="checkbox"/> 2+	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 3+	<input checked="" type="checkbox"/> 4

Skill / Modality

<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Reading
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Topical Domain

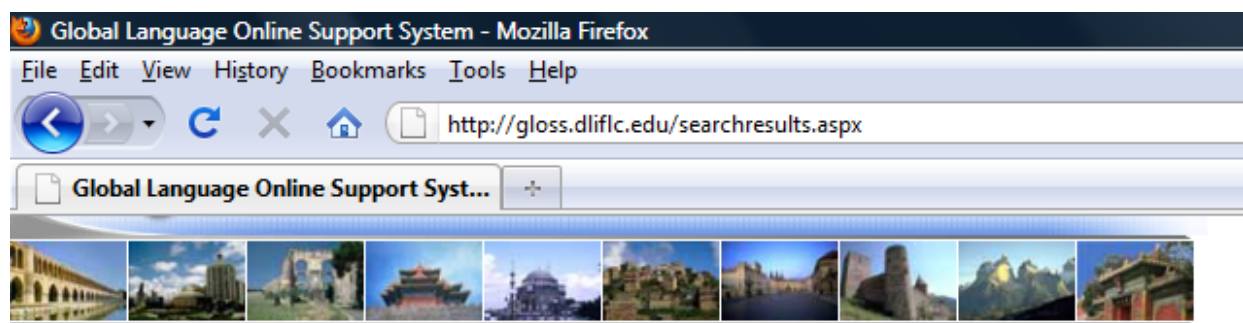
<input checked="" type="checkbox"/> Culture	<input checked="" type="checkbox"/> Economy	<input checked="" type="checkbox"/> Environment	<input checked="" type="checkbox"/> Geography
<input checked="" type="checkbox"/> Military	<input checked="" type="checkbox"/> Politics	<input checked="" type="checkbox"/> Science	<input checked="" type="checkbox"/> Security
<input checked="" type="checkbox"/> Society	<input checked="" type="checkbox"/> Technology		

Limit results to lessons with video:

Show 3990 Results

Done Global

Final Project.docx - ... Symantec Endpoint ... Global Language O...



Selected Languages: Arabic

Selected Levels: 1,1+,2

Selected Topics: Culture,Environment,Geography,Military,Science,Security,Society

152 results

New Search

Topic	Lesson Title ▲	Description	Competence	Downloads
 Geography Level 2	"Kan ya ma kan Street" Restaurant ... View Source Info	Description of an Arabic restaurant	Discourse	No Downloads Available
 Military Level 2	"Swift Sword II" Maneuvers View Source Info	An article on military maneuvers in an Arabic country	Lexical	No Downloads Available
 Culture Level 2	A Call to Artists to Move Their Paintings Out of Exhibition Halls View Source Info	An article describing the availability of art in the Arab world	Lexical	No Downloads Available
 Society Level 1	A Conversation at a University View Source Info	A recorded audio about a conversation at a University	Lexical	No Downloads Available
 Culture Level 1	A Family in Yemen View Source Info	A recorded audio about a family in Yemen	Lexical	No Downloads Available

Result Page:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ▶ ⏪

Page 1 of 31

Results 1 through 5 of 152



The screenshot shows a web browser window with the URL http://gloss.dliflc.edu/products/gloss/ad_mi003/default.html. The browser tab is titled "Overview Page". The page content includes a navigation menu with links for "Glossary", "Source", "Info", "Resources", "Tutorial", and "Feedback". Below the menu is a section titled "Activities:" with a list of five numbered items (1, 2, 3, 4, 5). The main content area is titled "مناورة «السيف السريع» 2" and contains a "Lesson Overview" section. This section is structured as follows:

- Lesson Overview**
 - OBJECTIVE**

Explore military terminology in the context of a military event, and learn to recognize the difference between verbs carrying important information and verbs providing a supporting function.
 - DESCRIPTION**
 1. Think about the meaning of some military terminology.
 2. Practice how these military terms work in sentences.
 3. Extract the main elements of information from the text.
 4. Discriminate between verbs that carry the main information and those that do not.
 5. Determine which ideas to retain and which ones to exclude from a summary.
- Begin Lesson**

The taskbar at the bottom of the browser shows several open applications: "Project.docx - ...", "Symantec Endpoint ...", and "Overview Page - Mo..."