CALIFORNIA STATE UNIVERSITY
MONTEREY BAY

Pattern of Plural Noun Formation in Arabic

CAPSTONE PROPOSAL

Submitted in partial satisfaction of requirements of the degree of

MASTER OF SCIENCE in

Instructional Science and Technology

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Capstone Approvals: (At least one advisor and capstone instructor should approve)

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1. Executive summary

This capstone proposal aims at creating an e-learning module for learning plural noun formation in Arabic. The goal of the module is to help DLI students to acquire the pattern of plural noun formation in Arabic, which is a challenging feature for non-native learners due to irregularity and multiple ways of plural construction. The module divides Arabic nouns into category groups based on rhyming similarities. Instructional strategies used in this lesson are Gagne's Nine Events of Instruction. Students will be introduced to the module and then the lesson will be presented into small units, each one addresses a single group of plural noun by giving examples, showing the pattern, introducing the rule, and providing practice. The lesson presentations will include both audio and visual narration. After completing the lesson, the learners will have the opportunity to assess what they learn by taking a test and receiving feedback.

The resources used for completion of this project will be a computer and a digital camera in addition to software such as captivate, PowerPoint, movie maker, audio and video converters, and screen capture as well as the hosting websites. The total time needed for completion of this project is approximately 240 hours over a period of three months.

The module is scheduled to be completed, including usability and effectiveness tests by the third week of November 2011 and it will be ready for implementation in the first week of December 2011.

This instructional module can be used by DLI students as well as teachers. It will be posted online so that it can be accessible for self-learning or classroom instruction.
2. Introduction/background

2.1. Background on project
Unlike English, plural in Arabic is very irregular. For instance, in English a letter “s” is often added to the end of a singular noun (suffix) to form the plural. In Arabic, the situation is very complicated. We form the plural by several ways such as:

- Adding two letters to the end of a singular noun (suffixes).
- Adding one letter in the beginning and inserting another one before the end of a singular noun (prefix and infix).
- Inserting two letters in the middle of a singular noun (infixes).
- Inserting one letter in the middle of a singular noun (infix).
- Dropping a letter from the end (defix).
- Dropping the end and substitute it by doubling the preceding letter (defixing and suffixing).
- Dropping a letter from the middle and adding two letters to the end of a singular noun. (defixing and suffixing)

2.2. Problem description (gap analysis)
The multiple process of plural noun formation in Arabic indicated above makes the plural construction very irregular and difficult to master for English speaking learners whose native language forms plural by regularly adding one letter suffix (s) to the end of a singular noun. Therefore, acquisition of plural noun system in Arabic has never been an easy learnable language feature for non-native learners. The non-mastery of plural in Arabic has become a general problem of acquisition which affects students’ comprehension in general and their accuracy in particular. For example, the students often do not recognize the words (nouns) they already know when they see them in plural forms. Many times, radical and unpredictable changes that occurred to the singular noun make the plural form seem as completely new word for the students. Also in speaking, students often fail to
produce the correct plural form of a noun and they tend to generalize randomly without specific rule in mind. Furthermore, due to lack of a systemic plural-formation, students often resort to flash cards and memorization as an alternative way of learning plural. For instance, students tend to memorize singular nouns and their plurals. As result, students often get discouraged and overwhelmed by the amount of vocabulary they have to learn and memorize every week. Therefore, this project attempts to provide instructional solution to the learning need as identified in this gap analysis section.

2.3. Target audience and context
The Target audience for this proposed instruction is DLI Arabic language students. These students are native English speakers who enroll in a 16-month -intensive Arabic language course in which they receive six to seven hours of instruction per day. Most of these students are high school or college graduate with no prior knowledge of Arabic. After completion of this Arabic basic course, these learners are required to speak, and understand (listen, and read) Arabic at a proficiency level of 2 or better according ILR scale (ILR is scale of language proficiency rating set by a group of US government agencies).

The stakeholders of this project are teachers, department chairpersons, and academic specialists, deans of Arabic of schools, Provost, and associate provosts at DLI.

Moreover, this proposed instruction can be used by Arabic language learners and educators at other DLI locations, as well as DLI affiliates and partners.

2.4. Literature review
When it comes to teaching plural noun in Arabic, students are often told that there two types of plural: Sound (regular) which is formed by adding two letters to the end and broken (irregular) where we add letters in different positions such as beginning, middle or the end of a singular noun as explained in the problem
background section. Unfortunately, the later (irregular plural) is the most common and frequent type of plural form in Arabic.

Furthermore, neither the curriculum of Arabic basic course in DLI nor textbooks of Arabic grammar provide learners with rules or system to follow for forming irregular plural. With the absence of material on the subject, this project will be the first of its kind to provide learners of Arabic with a model for plural noun formation. The model presented by this project will create a system that used by learners to regularize irregular plurals. In other world, the system created by this model will make all plural nouns in Arabic look regular by classifying all singular nouns into sound groups and deriving rules and systems for each group.

The model advocated by this project is based on some assumptions of linguistics and second language learning theories which presume that all languages have systems and patterns. “A separate lexical rule mechanism would be redundant because the same patterns can be used for productive word formation. The patterns are also needed to explain subregular productivity” (Riehemann, 2001., p. 20). Accordingly, our model seeks pattern and systems of Arabic nouns in order to establish a rule for forming plurals.

The project is also based on current industry trends of automated-learning by creating e-learning units that controlled by learners. Horton (2006. p. 63) argued that learners should be given a control over how they experience presentation. In this instruction learners will have ability to view each segment of lesson presentations, practice what they learn, and assess themselves and get feedback. During the lesson, learners will also be able to control the number of times and ways of navigation.

Horton (2006) explained three types of e-learning activities which are absorb, connect and do activities. In this module, each lesson unit will includes absorb
activity where learners listen to the audio and view presentations, followed by do
activities where learners practice and apply what they learn.

Clark and Mayer (2008) listed a number of principles for e-learning design. Most
of these principles will be reflected in our e-learning module. For example, the
design will include visual words, graphics, and audio narration in conversational
style. Also, the lesson will be segmented into several noun groups and each
segment will include worked examples and practice. Finally redundancy principle
will be applied as lesson parts will be presented in written words accompanied by
narrated audio.
3. Solution Description

3.1. Goals of the project
The goal of this project is to produce instructional module that helps target audience from DLI students learn and acquire plural noun formation system in Arabic. After completion of this instruction, learners would be able to:
- Categorize singular nouns into rhyme groups (a group of words that sound alike).
- Recognize rhyme groups.
- Recognize the pattern of plural rule for each rhyme groups
- Form plural nouns from a variety of singular nouns.
- From a singular noun from any plural noun.

3.2. Proposed solution to fulfill the gap
The solution provided in this instructional module helps the learners recognize the system of plural formation in Arabic by teaching them:
- What type of plural nouns that can be formed by adding two letters to the end of a singular noun (suffixing).
- What type of plural nouns that can be formed by adding one letter in the beginning and inserting another one in the middle (prefixing and infixing).
- What type of plural nouns that can be formed by inserting two letters in the middle of the noun (infixing).
- What type of plural nouns that can be formed by inserting one letter in the middle of the noun (infixing).
- What type of plural nouns that can be formed by dropping a letter from the end (defixing).
- What type of plural nouns that can be formed by dropping the final letter and doubling the preceding one (defixing and suffixing).
- What type of plural nouns that can be formed by dropping letter from the middle and adding two letters at the end of a singular noun (defixing and suffixing).
3.3. Major instructional strategies and justification

Gagne's Nine Events of Instruction are the instructional strategies that will be applied in this module (see appendix). Here are the steps and the contents of the lesson.

- First, a short video will be used to introduce learners to this module (Gain Attention).
- Second, the lesson objectives will be provided in an interactive slide. (Inform Learners of Objectives).
- Third, a slide showing one example of singular and its plural from each noun group will be presented to activate learners’ background knowledge (Stimulate Recall of Prior Knowledge).
- Fourth, learners will be able to view the presentation form each lesson unit (Present the Content).
- Fifth, after viewing and hearing singulars and their plurals, learners will be asked to observe similarities between nouns and generate rules. Then learners can view the rule button for feedback (Providing Learning Guidance).
- Sixth: After learning rules, learners will be provided with singular nouns and asked to make plurals. They will also be provided with plural nouns and asked to form the singulars (Elicit Performance-Practice).
- Seventh, Learners can view the feedback on each practice from a rollover slides (Provide Feedback).
- Eighth, after completing all lesson units (all noun groups), learners will take a final test to assess what they learn (Assess Performance).
- Ninth, at the end of the lesson, learners will be directed to a newspaper and they will be asked to read an article and underline plural nouns and find their singulars based on the rule of each rhyming group they learn (Enhance Retention and Transfer for Job).
### 3.4. Media components

The following types of media are used for this project:

- Adobe Captivate for developing e-learning module.
- PowerPoint for presentations to DLI instructors and administrators.
- Window movie maker for developing instructional video.
- Camera for creating talking head part of the video.
- External microphone for narrating the audio part of the module.
- Other supporting software such as screen capture, video and audio converters.
- A host site for online delivery of e-learning module such as Weebly.

### 3.5. Anticipated challenges

Expected challenges during development of this project are:

1. Writing a production of script that covers all aspect of the topic (different types of plural nouns categories which are more than ten).
2. Segmenting the topics into small but continued lessons.
3. Incorporating all segments into one module.

To address the above challenges, we allocate enough time for development. So, we can write the script and revise it as much as needed.

Expected challenges during production phase might include

- Creating e-learning on captivate with navigation menus and screen design.
- Producing video and interactive slides.
- Producing several lesson segments that are less boring and less overwhelming while maintaining uniformity and consistency.
- Clear narration and presentation.
- Appropriate color and visually appealing design.

To address the above challenges, we should have enough time for production, editing, testing, and revising as well as exploring different features of captivate and other software needed for production.
4. **Methods/procedure**

The project will be developed and designed in different stages.

- The first stage is the writing of the project proposal and development of Instructional Design Document (IDD). In this stage the problem will be identified and analyzed, the solution will be proposed, and performance objectives will be stated.
- The second stage involves a translation of the performance objectives into actual lesson plan and segmenting the lesson into smaller units.
- The third stage is the writing of the script for production of the instructional module.
- The fourth stage will be designing and developing captivates slides.
- The fifth stage will be producing slides for different parts of the lesson.
- The Sixth stage is to develop the assessment tools such as practices and quizzes with scoring and feedback.
- The eighth stage includes conducting of usability test, and instituting necessary modifications.
- The ninths stage will be the assessment of the module effectiveness.
- The tenths stage will be instituting necessary modifications after effectiveness assessment if needed.
- The final stage will be the publishing of e-learning on the host website.
5. Resource:

5.1. Time

The approximate total number of hours needed for production, design, development, and implementation of this project will be 200 divided as follows:

- 30 for hours for material development and design.
- 15 hours for writing the project proposal.
- 10 for writing the production script
- 50 for production of lesson segments.
- 50 hours for development of e-learning module on captivate.
- 30 hours for testing, evaluation, and modification.
- 10 hours for delivery and evaluation after the delivery.
- 5 for publishing and posting the e-learning module on the website.

5.2. Money/Cost/Hardware/Software

The cost of this project will mainly be:

- The number of hours spent for the development, implementation, and evaluation of our proposed instruction.
- Production software such as captivate.
- Production hardware such as digital camera.
- Delivery software such as dream weaver for posting the e-learning on the website.

To minimize the cost, no expensive materials will be used. The available computers and equipment will be utilized. We will also use free software such as movie maker, audio and video converters, and screen capture as well as free website such Weebly.
6. Timeline/progress report

6.1. Milestones check list
The timeline for the design, development, and implementation of this instruction would be as follows:

- The development of final proposal will be completed on September 27/2011.
- The development of e-learning module will be completed by November 15/2011
- Evaluation of the instruction will be completed by on November 22/2011.
- Delivery of e-learning module will be on December 13/2011

6.2. Deliverables and Dates
- Submitting the draft of project proposal by Sep. 13/2011.
- Submitting final version of capstone proposal by Sep. 27/2011.
- Working on the e-learning project from Oct. 12 – Nov. 08/2011.
- Finalizing the e-learning project by Nov. 15/2011.
- Conducting evaluation and testing (summative/effectiveness and formative/usability) between Nov. 15 –22/2011.
- Finishing evaluation and start writing the final report by Nov 22 /2011.
- Revising final deliverables by December 06/2011.
- Preparing capstone presentation by Dec. 06/2011.
- Finalizing presentation slides and conducting the rehearsal Dec. 11/2011
- Submitting capstone project by Dec. 13/2011
7. Evaluation/testing plan

7.1. Formative evaluation plan
The purpose of this formative evaluation tools is to assess the usability of instructional materials before it is delivered to the target learners. The formative evaluation tools are used to assess the following:

- The performance objectives.
- The tasks and activities.
- The content of the instructional materials.
- The Delivery of the instructional materials.

The participants in this evaluation will be:

- A selected group form DLI students who will be real representatives of our target learners.
- Observers: A group of experts from DLI instructors

The evaluation will be implemented by having the participants do the following:

- The participant learners will navigate the instructional module and fill out evaluation Form (Assessment tool for Learners)
- The experts will review the lesson plan and teaching materials, watch the instructional module, and fill out the evaluation form (Assessment tool for Observers)

The evaluation will be conducted during the third week (15 –22) 2011 at DLI facility. The participants will be notified by the exact date and time.

The approximate time for learners will be 30 -40 minutes to navigate the module and fill out the evaluation tool.

The approximate time for experts will be 2 – 4 hours to review the instructional materials and instructional module and make their evaluation.
Based on the result of the formative evaluation the instructional materials and instructional module will be revised, or modified. Such modifications might include:

- Altering or modifying the design, navigation tools, colors, font etc...
- Modifying lesson segments.
- Modifying quiz and practice questions.
- Rewriting the performance objectives.
- Removal or change the content of an activity.
- Change the sequence of the activities /tasks.
- Edit or modify a lesson segment or slide.

### 7.2. Summative evaluation plan

The purpose of this summative evaluation is to assess the effectiveness of this instructional module after being taken by the target learners; Summative evaluation will be implemented in form of practice and test as follows:

- Before taking the lesson, learners can take a pre-assessment test to evaluate their prior skills and knowledge of plural noun formation in Arabic.
- After watching each segment, there will be comprehension check questions to give learners an opportunity to practice and apply what they learn.
- After completing the whole module (all lesson segments), learners will take a post-assessment (quiz) to assess the effectiveness of the instruction.

If the result of the summative evaluation shows that instruction is not effective or does not fully meet the intended purpose (solve performance problem), the module will be revised. Such modifications might include:

- 1- Modifying tasks and activities.
- 2- Adding a task or activity
- 3- Change the sequence of the activities and tasks.
- 4- Edit or modify a unit or lesson content.
8. References:


Instructional Strategies Online is a site that presents the full text of teaching methods including direct and indirect concepts.

http://olc.spsd.sk.ca/de/pd/instr/strats/formation/index.html

Kevin Kruse. (N.D) Gagne's Nine Events of Instruction: An Instruction. Retrieved on September 21, 2011 from

http://www.utsweb.net/Instructional%20Design%20Resources/GagneStyle.pdf

Riehemann, S., Z. (2001). *A construction approach to idioms and word-:* Formation: A dissertation submitted to the department of linguistics and the committee on graduate studies of Stanford university in partial fulfillment of the requirements for the degree of doctor of philosophy

### 9. Appendix:

<table>
<thead>
<tr>
<th>Instructional Event</th>
<th>Internal Mental Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gain attention</td>
<td>Stimuli activates receptors</td>
</tr>
<tr>
<td>2. Inform learners of objectives</td>
<td>Creates level of expectation for learning</td>
</tr>
<tr>
<td>3. Stimulate recall of prior learning</td>
<td>Retrieval and activation of short-term memory</td>
</tr>
<tr>
<td>4. Present the content</td>
<td>Selective perception of content</td>
</tr>
<tr>
<td>5. Provide &quot;learning guidance&quot;</td>
<td>Semantic encoding for storage long-term memory</td>
</tr>
<tr>
<td>6. Elicit performance (practice)</td>
<td>Responds to questions to enhance encoding and verification</td>
</tr>
<tr>
<td>7. Provide feedback</td>
<td>Reinforcement and assessment of correct performance</td>
</tr>
<tr>
<td>8. Assess performance</td>
<td>Retrieval and reinforcement of content as final evaluation</td>
</tr>
<tr>
<td>9. Enhance retention and transfer to the job</td>
<td>Retrieval and generalization of learned skill to new situation</td>
</tr>
</tbody>
</table>

Gagne's Nine Events of Instruction adapted from an article by Kevin Kruse