The Golden Triangle Aimed at Enhancing Literacy among Arabic Speaking Students in the Junior High School –

The Implementation of a Learning/Teaching Model to Foster Knowledge of Academic Vocabulary in Arabic as L1

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Presentation outline

- Theoretical background:
  - Language Proficiency and Academic Success
  - The Definition of Academic Vocabulary and Its Importance
  - Challenges in Academic vocabulary development in Arabic as L1

- The current study
  - The interventional program
  - Results
  - Discussion

- Conclusions and future plans
Theoretical Background:
Language Proficiency and Academic Success

- In middle school, pupils are confronted with more intricate, linguistically richer, and more diverse texts across the different content areas as the complexity of academic materials escalates through the grades.

  (Fang, Schleppergell & Cox, 2006)

- Academic words, characterizing academic writing, are one of the prominent contributors to academic texts abstraction and density.

  (Townsend, Filippini, Collins & Biancarosa, 2012)
Theoretical Background:
Language Proficiency and Academic Success

- As texts become more complex, reading comprehension and learning process relies greatly on academic word knowledge where low academic vocabulary knowledge is seen as the main obstacle for pupils in the way for meaning construction when dealing with academic texts.

  (Stahl & Shiel, 1992; Cummins, 2003)

- Depicting appropriate academic vocabulary within a specific discipline is associated with success in that subject.

  (National Institute for Literacy, 2007).
Theoretical Background:
The saga of academic vocabulary

What is academic vocabulary?

Why is it important?
Theoretical Background:
The saga of academic vocabulary

What is academic vocabulary?

▪ The term Academic Vocabulary refers to the frequently utilized academic words that are salient across the different genres of academic writings that are not otherwise a prominent characteristic of other texts' types.

  (Coxhead & Nation, 2001; Coxhead, 2000)

▪ Academic vocabulary constitutes 8%-10% of academic texts and is mainly utilized for academic writing purposes.

  (Nation, 2001)
Theoretical Background:
The saga of academic vocabulary

Why is academic vocabulary important?

▪ Due to the frequency of academic words across different domains and academic genres, it is of great importance to acquire this cluster of words than lower frequency words that are domain-specific.

(Nation, 2001)

▪ For example, academic word knowledge accounted significantly for large proportion of variance in English-speaking junior-high students’ academic achievement across different knowledge domains.

(Townsend, Filippini, Collins & Biancarosa 2012)
Theoretical Background:

Challenges in Academic Vocabulary Development in Arabic as L1

- Academic vocabulary in Arabic as L1
- Socio-cultural factors
- The diglossic phenomena
Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

The diglossic nature of Arabic

- Significant linguistic disparities between spoken (SA) and literary (LA) Arabic are encountered across different domains, including vocabulary, syntax, morphology and phonology.

- SA has no formal orthographic representation

- Spoken Arabic (SA) is considered the native language of Arabic speakers whereas MSA is formally acquired upon commencing formal schooling.
Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

- Moreover, studies suggest, that LA is in fact a second language for Arabic native speakers, with Arabic duality imposing a challenge for literacy development.

(Ibrahim & Aharon-Peretz, 2005; Ibrahim & Eviatar, 2009; e.g. Abu-Rabia, 2000; Ibrahim & Eviatar, 2001; Saiegh-Haddad, 2007)
Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

Socio- Cultural Factors

- Demographics

  ⇒ Cultural and lingual diversity

  => Educational system separation

  => Low socio-economic status

(The State of Israel, 2018)
Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

- Socio-economic status, education and literacy: A focus on Israeli Arabs
  - Disparities in education are documented on several indexes of school class size, budget inequality, equipment’s, teacher’s education
    (for a comprehensive report see Blass, 2017; Abu-Asbeh, 2007)
  - In fact, the low SES of Arab pupils seems to be one of the main factors accounting for the low achievements of Arab pupils and literacy status
    (Zuzovsky, 2010)
Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

- How is this pronounced?

- Lower academic attainments on national tests among Arab pupils when compared to their Jewish counterparts, found in both fifth and eighth grade levels in the four tested core subjects (native language proficiency, science and technology, mathematics and English).

- Low matriculation certificate eligibility rates and higher drop-out rates are found amongst Arab students.

- Results on the Meitzav show a consistent trend of higher achievements among the Druze community with the lowest achievements among the Bedouin community.

Theoretical Background:
Challenges in Academic Vocabulary Development in Arabic as L1

- A case of language minority?

  The socio-linguistic context of the Arab population in Israel

Taken together, Arab children in Israel seem to have a linguistic disadvantage with less opportunities to foster basic oral skills in MSA, requiring higher language register than that of spoken Arabic.
Previous findings: Makhoul and Olshtain (2015)

N=1132

⇒ Seventh graders commence middle school with very low academic knowledge.

⇒ The Bedouin community, characterized by lower socio-economic background showed the lowest performance whereas the highest level of performance was found among the Druze community.

⇒ Gender differences were encountered, pointing to girls’ superiority in performance across all measures and age groups.
The current study

Study objectives

1. Fostering and expanding students’ knowledge of key academic words (based on an earlier study on vocabulary needed by junior high-school students Makhoul & Olshtain, 2015)

1. The development of an evidence-based teaching/learning model based on up-to-date teaching methodology
Research questions

• Is the implemented intervention program effective in promoting academic vocabulary knowledge?
  ⇒ Higher attainments on the receptive and productive academic vocabulary measures as well as in reading comprehension skills

• Will improved vocabulary knowledge become a long term feature of learning?
  ⇒ Will any observed improvement be maintained: follow-up assessment in 8th grade?
Research design and description

Participants

Assessment tools

Procedure
Participants

School sample

3 schools
(General Arab)

1 school
(Druze)

1 school
(Bedouin)
The interventional program

- Interventional Program structure and features
- Study Design
Programs Aims

On the Pupils’ level:

Extensive exposure to a large academic vocabulary repertoire and to • deeper processing of words, which will, in turn, contribute to reading comprehension across the different disciplines.

On the teachers’ level:

Active participation in building an experimentally validated • interventional model for Arabic instruction that addresses the pedagogical needs of fostering Arabic literacy skills. As such, expertise in implementing the new approach will be gained, assisting in teachers’ professional growth.
Instructional Learning Model

Digital literacy model
(Hobbs, 2010)

Alternative learning instruction environment:
Blended learning
(Horn & Stacker, 2011)
Instructional Learning Model

Alternative learning instruction environment:

Blended learning

(Horn & Stacker, 2011)
Instructional Learning Model

Digital literacy model

(Hobbs, 2010)
Teachers’ professional development training workshop

Leading Teachers

Teacher development

Application of the intervention program

Providing new tools and practices

Passing and sharing information

Reflection on instructional\pedagogical approaches
The Program contents and structure
Curriculum: instructional units

- ✔ Varied thematic contents
- ✔ Teachers’ guide
- ✔ Adapted to the Arabic teaching ministry curriculum

- Priming Units
- Reading comprehension
- Academic Vocabulary
- Linguistic Knowledge
- Writing
- Evaluation
Priming Units

1- Opening Screen

Icon - Teachers’ Guide

Presentation of the words to be taught in the unit according to roots

2- Dictionary

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3- Activity 1: Identification Level

10 Multiple choice questions.

4- Activity 2: Identification Level

5 Groups of questions, each for every root that will be taught in the unit. The student should choose the word to complete the sentence correctly (out of given options).

5- Activity 3: Identification Level

5 Groups of questions, each for every root that will be taught in the unit. The student should provide the word to complete the sentence correctly, according to the sentence context and a given root.
Reading comprehension

1- Opening Screen

Presentation of the words to be taught in the unit according to roots.

Icon - Teachers’ Guide

2- Dictionary

" acompañar a alguien, ser compañero de alguien, ser alrededor de alguien, estar junto a alguien, estar al lado de alguien, estar en el lado de alguien, estar en la compañía de alguien, estar en el lado de alguien, estar en la compañía de alguien, estar en el lado de alguien"
Reading comprehension

3- Rereading activity

Video Watching concerning the theme of the text

Discourse after watching the video and before reading

4- Reading Activities

Reading the text (right side) and answering comprehension questions (left side).
The student is asked to find in the text and highlight the words on each root (that were taught in the unit).
Presentation of the words to be taught in the unit according to roots.
3- Grammatical activities (identification, production, comparison…)

Functional grammar activities - Handling grammatical issues related and provided by the text, in accordance to the curriculum.
1- Opening Screen

Presentation of the words to be taught in the unit according to roots. The student should use these words.

2- Dictionary

Icon- Teachers’ Guide

In a group, from the list of the words taught in the unit, the student should use these words.

<table>
<thead>
<tr>
<th><strong>Arabic</strong></th>
<th><strong>English</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>تعليم</td>
<td>Teaching</td>
</tr>
<tr>
<td>استخدام</td>
<td>Use</td>
</tr>
<tr>
<td>تتبع</td>
<td>Follow</td>
</tr>
<tr>
<td>معلومات</td>
<td>Information</td>
</tr>
<tr>
<td>معلوم</td>
<td>Knowledge</td>
</tr>
<tr>
<td>مثال</td>
<td>Example</td>
</tr>
</tbody>
</table>

Tasks:
- Use what you have learned in class to illustrate your ideas.
- Follow the student's directions.

Materials:
- Maroon = colored material used in the unit.
3- Defining the writing genre

4- Defining the writing task: written example

5- Defining the writing task: rebuilding an written example

After the description of the task, there an example of the essay that should be written. The student can discover the essay components by clicking on ◄. The words in RED are the words taught in the unit.

The student should identify to which part in the essay the paragraphs belongs.

The students analyze the example with their teachers.
6- Writing

The student writes his own essay.

7- Writing Evaluation

Evaluation- STEP 1

The student evaluate his own essay by using these tips.

Evaluation- STEP 2

Peer Evaluation
Evaluation - Academic vocabulary

Trivia Activities

Matching Activities

Multiple choice activities
Evaluation - Learning process

1. Which unit you liked the most?
2. Did you like the unit?
3. What part of the unit was the hardest?
4. How this unit can help you in your daily life?
5. Write one piece of information you learned from the unit.
Each unit has its teacher’s guide that includes Plan.
<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priming:</strong> semantic handling of the week target vocabulary</td>
<td><strong>Reading comprehension:</strong> Introductions, text and comprehension exercises and target word exploration in context.</td>
<td><strong>Language:</strong> Morphology and syntax</td>
<td><strong>Academic writing:</strong> Writing tasks</td>
<td><strong>Summery and assessment:</strong> Target word acquisition assessment both on receptive and productive levels</td>
</tr>
</tbody>
</table>

**ROOTS**

**Weekly structure**

- **Pharos** ancient Egypt
- Water: sources, crises and solutions
- **Democracy**
- Biological variety
- **Animal interaction**
- **Globalization**
- Kings in history

- **Seminar** History
- Materials state of matter
- **The environment:** problems and solutions
Assessment tools

- Receptive academic vocabulary: Identification
- Productive academic vocabulary: Production and application
- Reading comprehension
**Test description**

The test includes 46 matrixes, each including 3 target words and 3 distractors (semantically related). The pupils’ are required to match the target words in the right column with their definition on the left column. In each cluster, words were matched in terms of their grammatical function (nouns, verbs and adjectives) and verb conjunction to avoid morphological priming.

*Receptive Academic Vocabulary Test (RAVT)*

Schmitt, Schmitt & Clapham, 2001
Receptive Academic Vocabulary Test (RAVT)
Productive Academic Vocabulary Test (PAVT)

- **Test description:**
  - The pupils are asked to fill in the correct missing academic word. To prevent the test-takers from filling in another semantically correct word, the minimal number of the words' first letters will be included.
  - 140 sentences were included from different knowledge domains.

Laufer and Nation, 1999
Productive Academic Vocabulary Test (PAVT)

13. QUESTION

"By what method can we solve the problem?" (للفظ: خ، لف).

18. QUESTION

"Establish the list of the young people's cultural activities." (لفظ: ن، نظ، ن، نظ)
Students’ Questionnaire
Before-After Intervention

Part 1: Digital Skills
Me and the Computer

Part 2: Reading Skills

Part 3: Students’ attitude towards Blended Learning and learning with the intervention program (After intervention only)
Teachers’ Questionnaire
Before-After Intervention

Part 1: Digital Skills
Me and the Computer

Part 2: Teaching with the intervention program
Before the intervention- as they expect
After intervention- as they experienced it

Part 3: Teachers’ achievements so far

Part 4: their students achievement (after intervention only)
Planning and organizing the teaching according to the Golden Triangle program

Component 1 - Management of the lesson and its organization according to the principles of mixed learning
Component 2 - Fidelity for the Purposes of the Program The promotion of academic vocabulary and use of mixed teaching model

Teaching, learning and evaluation methods

Component 1 - Using a variety of methods and means, differential work with students
Component 2 - Development of higher order thinking during the lesson / Link to previous knowledge learned
Component 3 - feedback and evaluation during class
Vehicle 4. Use of ICT technologies

Arabic language Knowledge and mastery in Teaching

Component 1 - Knowledge in the field of "Arabic language"
Component 2 - Familiarity with the Arabic language curriculum and the intervention program
Component 3 - Use of academic professional language
Component 4 - reference to typical difficulties shown by students at this age

Observations

<table>
<thead>
<tr>
<th>Observations</th>
<th>Beginning of the program</th>
<th>Middle of the program</th>
<th>End of the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>Beginning of the program</td>
<td>Middle of the program</td>
<td>End of the program</td>
</tr>
</tbody>
</table>
## Observations

### Interactions and classroom climate

1. **Component 1** - Encouraging intervention and active participation of students
2. **Component 2**. Physical environment (the appearance of the classroom and its organization and the learning environment)
3. **Component 3** - Develop a deliberate atmosphere and active experience between the students themselves and between them and the teacher
4. **Component 4** - Appreciation of student responses to the content learned and working in a digital environment

### Reflection of the observer on the lesson

1. **Component 1.** Difficulties during operation
2. **Component 2.** Notes and Insights

---

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Observation Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of the program</td>
<td>Component 1. Difficulties during operation</td>
</tr>
<tr>
<td>Middle of the program</td>
<td>Component 2. Notes and Insights</td>
</tr>
<tr>
<td>End of the program</td>
<td></td>
</tr>
</tbody>
</table>
Teachers’ Questionnaire for control group

Part 1: Teachers’ achievements so far

Part 2: Digital Skills Me and the Computer

Part 3: Their students achievement

Open question: which digital environments they use in their lesson and in what frequency
Reading comprehension questions and assignments were introduced in 4 clusters:

20 assignments were constructed and underwent an extensive psychometric evaluation, targeting 4 comprehension levels:

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1: identification level of general information</td>
<td>3</td>
</tr>
<tr>
<td>Cluster 2: comprehension of specific information both explicit and implicit</td>
<td>9</td>
</tr>
<tr>
<td>Cluster 3: vocabulary</td>
<td>3</td>
</tr>
<tr>
<td>Cluster 4: summarizing questions</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehension level</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literal</td>
<td>4</td>
</tr>
<tr>
<td>inferential</td>
<td>4</td>
</tr>
<tr>
<td>Evaluation, integration and application of ideas and information</td>
<td>9</td>
</tr>
<tr>
<td>Meta-linguistic</td>
<td>3</td>
</tr>
</tbody>
</table>
Results

The results indicated that all the dependent variables are normally distributed ($p > .05$).

Parametric analyses was conducted
Correlation between the dependent variables

*Table 1.* Pearson correlation coefficients between the three dependent variables ($N = 65$)

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>RAVT</th>
<th>AVAC</th>
<th>ARCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAVT</td>
<td>1</td>
<td>.91***</td>
<td>.48***</td>
</tr>
<tr>
<td>AVAC</td>
<td></td>
<td>1</td>
<td>.54***</td>
</tr>
<tr>
<td>ARCT</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

***$p < .001$***
Pre-post differences in academic vocabulary knowledge

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th></th>
<th>After</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>t</td>
<td>p</td>
<td>d’</td>
<td></td>
</tr>
<tr>
<td>TAVT</td>
<td>65.75</td>
<td>15.93</td>
<td>77.26</td>
<td>13.33</td>
<td>-5.49***</td>
<td>.00</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>AVAC</td>
<td>64.19</td>
<td>19.21</td>
<td>76.69</td>
<td>16.91</td>
<td>-4.65***</td>
<td>.00</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>ARCT</td>
<td>65.16</td>
<td>16.57</td>
<td>84.37</td>
<td>10.23</td>
<td>-10.23***</td>
<td>.00</td>
<td>1.27</td>
<td></td>
</tr>
</tbody>
</table>
Pre-post differences in academic reading comprehension

***

**p < .001**

ARCT
Pre-post performance differences between the different subgroup

\[ F(1, 63) = 16.63, p < .001, \eta^2_p = .21 \]

\[ F(1, 63) = 14.75, p < .001, \eta^2_p = \]
Pre-post performance differences within the different subgroup

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th></th>
<th>After</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>t</td>
<td>p</td>
<td>d'</td>
</tr>
<tr>
<td><strong>Druze</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAVT</td>
<td>73.09</td>
<td>10.61</td>
<td>75.23</td>
<td>14.17</td>
<td>-.78</td>
<td>.44</td>
<td>.14</td>
</tr>
<tr>
<td>PAVT</td>
<td>72.62</td>
<td>14.14</td>
<td>73.89</td>
<td>16.86</td>
<td>-.41</td>
<td>.68</td>
<td>.08</td>
</tr>
<tr>
<td>ARCT</td>
<td>65.93</td>
<td>17.17</td>
<td>87.68</td>
<td>6.80</td>
<td>-7.16***</td>
<td>.00</td>
<td>1.27</td>
</tr>
<tr>
<td><strong>Arab</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAVT</td>
<td>58.64</td>
<td>17.10</td>
<td>79.23</td>
<td>12.37</td>
<td>-9.16***</td>
<td>.00</td>
<td>1.59</td>
</tr>
<tr>
<td>PAVT</td>
<td>56.02</td>
<td>20.11</td>
<td>79.40</td>
<td>16.76</td>
<td>-6.76***</td>
<td>.00</td>
<td>1.18</td>
</tr>
<tr>
<td>ARCT</td>
<td>64.41</td>
<td>16.20</td>
<td>81.16</td>
<td>11.96</td>
<td>-7.61***</td>
<td>.00</td>
<td>1.33</td>
</tr>
</tbody>
</table>
Follow-up assessment: 8th Grade

N=70

- n=34 (20 males)
  Poor reading comprehension skills (PRC)

- n=36 (10 males)
  High reading comprehension skills (HRC)

Reading comprehension
Follow-up assessment: 8th Grade

Differences in the score of ARCT by time (T1,T2,T3) in each group

<table>
<thead>
<tr>
<th>Study groups</th>
<th>T1 M</th>
<th>SD</th>
<th>T2 M</th>
<th>SD</th>
<th>T3 M</th>
<th>SD</th>
<th>F</th>
<th>p</th>
<th>ηp²</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRC group</td>
<td>44.29</td>
<td>27.23</td>
<td>80.45</td>
<td>18.62</td>
<td>59.26</td>
<td>14.21</td>
<td>26.64***</td>
<td>&lt;.001</td>
<td>.63</td>
</tr>
<tr>
<td>HRC group</td>
<td>59.75</td>
<td>30.70</td>
<td>77.02</td>
<td>31.85</td>
<td>74.00</td>
<td>10.72</td>
<td>6.80**</td>
<td>.01</td>
<td>.29</td>
</tr>
</tbody>
</table>

**p < .01, ***p < .001**
Follow-up assesment: 8th Grade
Discussion

- Pre-post improvements was obtained following the participation in the intervention program on academic vocabulary measures and reading comprehension.

✔ Intervention program effectiveness in promoting academic vocabulary knowledge and reading comprehension
Discussion

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>o The <strong>Druze</strong> showed significantly higher performance on academic vocabulary measures.</td>
<td>o <strong>General Arab group</strong>: Improvement on academic vocabulary measures as well as in academic reading comprehension was noted.</td>
</tr>
<tr>
<td></td>
<td>o <strong>The Druze group</strong>: Improvement was only observed in reading comprehension.</td>
</tr>
<tr>
<td></td>
<td><strong>Group differences:</strong></td>
</tr>
<tr>
<td></td>
<td>o No differences in academic reading comprehension were found between the groups, noting that low scores on both groups were observed.</td>
</tr>
</tbody>
</table>
• The results point to long term effects of the intervention program on reading comprehension skills

• The reduction in reading comprehension in 8th grade when compared to the post-test in 7th grade suggests to the necessity for progressive interventional practices also in 8th grade.
Future plans

1. Collecting more data to increase the power of the current study

2. Reflect on the results and incorporate changes based on professional feedback from the teaching personal and involved research group.

2. Follow up the pupils progress next year to examine long term effects for the current program both on our target measures as well as academic achievement across the different taught subject domains.
Study significance

- This study and intervention program connect results of an earlier study of academic vocabulary knowledge among seventh graders with a teaching/learning model based on most up-to-date approaches.

- It has the potential of reducing literacy gaps among junior high school students and improving achievement in subject matter areas for all students. As such, it can function as an evidence-based proto-type for all Arabic speaking students at this age level. By doing so, we hope to induce policy change that can pave the way for reducing the literacy gaps within the Arab educational system.
Implications

1. **The Pupils' level**: the program proposed here will allow extensive exposure to a large academic vocabulary repertoire and to deeper processing of words, which will, in turn, contribute to reading comprehension across the different disciplines.

1. **Education policy level**: the program will provide policy makers with information and findings on how to implement a multi-dimensional instructional model in the Arab schools, which will enable the promotion of structured and better-suited Arabic and digital literacy programs. The success of the model is expected to invoke necessary changes in the Arab educational system. Furthermore, the research findings will set the foundation for examining the suitability of the model for Arabic literacy instruction at both elementary and pre-school ages.
Schools participating by area
Keeping the effect-Following after 8th graders

- Developing a reading comprehension test, a one parallel to ARCT in 7th grade) for 8th graders (those who participated in the intervention program in 7th grade), in order to examine the long-term effects of the program after its end.

The test that was built is similar to the reading comprehension test that was in seventh grade in terms of:

- Subject- Refugees (in order to rule out that the subject of the text affected students' performance in the reading comprehension test);
- Structure of the questions and their goals: The number of questions and their goals remained the same, only adapted to the new text;
- Text length is adjusted to the level of students at the beginning of eighth grade;
- The test included reading graphic aids such as drawings, maps, charts and tables just like the seventh grade test.
Thank you for your attention!

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