

# Applied Arabic Textbook Readability Level for University Students at Al-Balqa Applied University

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**Abstract**—Readability is considered one of the main indicators of students' ability to understand reading texts. The purpose of this study was to define the level of Applied Arabic textbook readability for university students at Al-Balqa Applied University in Jordan. In order to do so, Cloze Test was administrated on four texts that students didn't read before taken from the Applied Arabic textbook. A sample of (54) university students participated in the study. The results showed that the four texts were within the frustration level, as the students' results on the four texts ranged between (0.46-0.66). There were no statistically significant gender differences on the readability level; indicating that both male and female students are facing difficulty in reading and understanding the texts of books. The study suggested the need for experimentation of textbooks on students to determine their readability level before implementing them to students to be appropriate to students' reading levels in order to address the problems students face while reading a text.

**Index Terms**—readability, applied Arabic textbook, Al-Balqa Applied University.

## I. INTRODUCTION

According to several researchers (e.g., Su, 2012; Yaşar & Aslan, 2021), curricula are considered official documents directed by the educational system that identifies the targeted group of these curricula and the desired goals to be achieved on the cognitive and skillful level. This makes the curricula the essence of the official education process (Mulenga, 2019). Usually, curricula are organized within a set of familiar topics planned based on the educational level of the targeted students (Priestley & Nieveen, 2020), which needs developing the curricula according to a planned sequence of instructions directed toward the students' educational activities and experiences in order to be consistent with the educational goals and objectives (Okon, 2018).

The absence of agreement among researchers on the concept of the curricula (Rudhumbu & Plessis, 2021) has led to disagreement among researchers in identifying the factors most influential on the curricula; whether they are the cognitive content included in the curricula since this it is related to students' previous experiences (Tabaundule, 2014); or the social contexts where curriculum planners work on developing an education that conforms to multicultural societies, which in turn helps each student to live a successful life within the society he belongs to (Mabwe, 2015). By contrast, the textbooks in the university courses represent the actual implementation of the curricula. Therefore, the curricula experts make their efforts to select reading texts that are appropriate to students' levels and abilities (Abusa'aleek & Khataybeh, 2020) as the textbooks of university courses are one of the main sources to provide students with different types of information and knowledge (Zhang, 2021).

The educational effectiveness of the textbooks of university courses is determined based on several factors, including the easiness of reading the texts; and the level of reading comprehension- since reading is an interactive process between the reader and the reading text (Gul, 2021; Hu, 2023). Thus, the quality of courses textbooks depends on the structure of the written texts and the level of easiness with which they are read and understood as the main purpose of reading is achieving reading comprehension and defining its different aspects and the purpose of the text.

In light of the pivotal role of language in learning other subjects; the main challenge facing curriculum developers of university courses lies in the techniques used in selecting the reading texts to match students' individual differences and conform to their abilities and intelligence level (Kodom & Pearl, 2019). Moreover, when accurately implemented, readability in language is related to understanding part of the written text, and the efficiency by which the reader can understand a text measured by time of reading, the amount of reading recalled, and questions answered, in addition to some other quantifiable measures of the reader's ability to process text (Sholihah, 2018).

With regard to Arabic in particular, the results of several studies showed a number of challenges facing students during reading texts (Abduh et al., 2018). The most important challenges include the difficulty in the structure of the

Arabic text (Zailani et al., 2012) and the semantics which causes difficulty in defining the exact meaning of the word (Shamsuddin & Ahmad, 2019). Accordingly, this study assesses the Applied Arabic textbook readability level for university students at Al-Balqa Applied University since the readability of this textbook was not determined yet, as most studies of Arabic readability concentrated on pre-university stages. Specifically, the study seeks to test the following hypotheses:

- **First Hypothesis:** The texts of the Applied Arabic textbook of Al-Balqa Applied University are not within the frustration level.
- **Second Hypothesis:** There are no statistically significant differences at ( $\alpha= 0.05$ ) in the readability level of the texts of the Applied Arabic textbook in light of gender.

## II. LITERATURE REVIEW

Despite the multiplicity and diversity of the curricula, language curricula are still the base of the learning processes of the learning subjects (Dominic et al., 2017). Language is also the main tool of communication; therefore, language learning provides individuals with the needed skills to understand the information and transfer them to others (Rabiah, 2012). Also, reading is considered as the most significant skill among the language skills needed to be mastered since it is the base for learning other curricula (Rintaningrum, 2019). Multiple studies confirm that reading is not just a decoding process for text, but also reaching suitable levels of reading comprehension which is considered as noted by Snow (2010) a process of structuring and extracting meaning at the same time through the interaction with the text.

Readability as mentioned by many researchers (e.g., Hidayatillah & Zainil, 2020) is the level that reflects how it is easy or difficult to understand the text in terms of word or meanings. The aim of addressing readability is to assess students' reading level of the textbooks in the different educational stages to verify whether these textbooks are developed and selected appropriately, and the extent to which they conform to the level of the targeted students (Zhang, 2021). So, readability has a role in defining what is easy and what is difficult in order to make the language more understandable (Oksuz & Keskin, 2022); knowing that texts that are easy read can be understood more smoothly (Asem, 2012; Gallagher et al., 2012).

Moreover, there are multiple readability measurements including the employment of experts and curricula developers' opinions (Larsson, 2006). Sometimes, statistical equations are used to reveal text difficulty for a sample of readers taking into account several factors such as the number of word letters, and the number of the words in the sentence (Greenfield, 2004). However, the most employed method among researchers for measuring readability is the Cloze Test which focuses on fast processing of the written text by omitting some words from it and leaving them for the reader to predict (Sjahrony et al., 2017).

Several studies addressed the influencing factors on readability level. For instance, one study (Yulianto, 2019) showed that the grammatical structure of the text such as the average length of word and sentence, and the text language affect readability. So, researchers suggested readers participate in the process of defining the level of text readability; as reading is an interactive process between the reader and the text (Oksuz & Keskin, 2022). Additionally, other study (Hidayatillah & Zainil, 2020) found that the most influential factor in readability level is the difficulty of vocabulary. Furthermore, the most influential factors in the readability level are the difficulty of the used language in developing the curricula, where students face a huge challenge in understanding the language, which will affect the text readability (Sjahrony et al., 2018). Regarding the readability of the Arabic texts, researchers (e.g., Cavalli-Sforza et al., 2018) asserted that understanding the text is one of the influential factors on the level of Arabic texts' readability; this requires deeper processing of texts by extracting information above the existing lexical and grammatical features in order to facilitate the readability of those texts.

## III. PROCEDURES

The study selected a sample of students of Al-Balqa Applied University – Al-Huson University College in Jordan enrolling in the Applied Arabic course ( $n = 57$ ). Data was collected from the students' answers to the Cloze Test. After that, answers were classified and it was found that there are (3) invalid papers for lack of clarity of information. Thus, the final data analysis settled on the answers of (54) students.

The descriptive analytical design was employed to achieve the objectives of the current study. This research paradigm describes the educational experiences represented in the study by the readability of the Applied Arabic textbook taught in the first semester of the academic year 2022/2023 for the students of Al-Balqa Applied University, as well as the factors influencing the readability level in this textbook. Descriptive research is a process that describes experiences in the form of frequencies, percentages, and means (McMillan, 2008) and it is consistent with the purpose of the current study, which is defining the readability level of Applied Arabic textbook consisting of (160) pages covering (17) subjects. Four texts that the students did not study were selected (140-145), since these texts are new to the students, this will make results more accurate in revealing the actual level of readability of the selected textbook.

### Instrument of the Study

The Cloze Test is a proper indicator of text readability (Janan, 2011), as there are no other appropriate methods to assess Arabic readability. The current study employed the Cloze Test since it is characterized by structural accuracy and

high levels of validity and reliability. The test depends on the order of the omitted words, the student's reading ability, and the accurate understanding of the reading text. The study followed the following procedures in developing the Cloze Test:

1. Four texts that the students did not read were selected from Applied Arabic textbook in the first semester.
2. Seven words were omitted from each text; in case the seventh word was a preposition, a conjunction, or a relative pronoun, the blank will be in the word following it. Based on this order, the total number of words in the text was (24) words.
3. Reprinting the texts from the book taking into account the following:
  - The length of the blanks of the omitted words shall be equal to avoid the student to think that the differences in the length of the blank are due to the length of the omitted word.
  - The student does not fancy that the different length of words is due to the vacuum length of the deleted word.
  - Printing the text as it is in the book in term of letters, size, font type, space between the words and the lines.
  - Replacing punctuation as they are in the book.

#### Test Validity

To check test validity, the test was presented to a jury of faculty members working in Jordanian universities who are specialists in measurement and evaluation, curricula, and teaching methods in addition to some educational supervisors. The jury made some remarks that were taken into account regarding the need to copy the text as it is in the textbook in terms of word formation, replacing equal blanks for all the omitted words.

#### Test Reliability

To check test reliability, it was administrated to a pilot sample consisting of (27) students out of the original study sample in order to ensure that the test instructions are clear and to calculate the correlation coefficient of the test. The time needed to answer each text was defined and the average test time per text was (12) minutes. Also, the test-retest method was used to check reliability by administrating the test and re-administrating it after two weeks. Pearson Correlation was also calculated between their scores on the test. Table 1 shows the reliability values on the test questions and the test in general.

TABLE 1  
PEARSON CORRELATION COEFFICIENT OF EACH TEXT OF THE FOUR TEXTS OF THE READABILITY TEST (CLOZE)\*

Text	Number of omitted words	%
First Text	4	0.91
Second Text	7	0.88
Third Text	7	0.90
Fourth Text	6	0.89
Total	24	0.90

\*Total Sample Size (27) students

#### Scoring Procedures

The test was scored using matching scoring method, according to the following procedures:

- Give one score to the original word that was in the text prior to its deletion as well as any word that matches the original word and is synonymous with it in meaning, thereby, preserving the integrity of the idea.
- Give zero for the incorrect word.
- Give zero to the blank that has not been filled.
- Spelling and grammar mistakes were not taken into account in scoring.
- The maximum score was one for each blank while the minimum score was zero. Since the test includes 24 blanks, the minimum score is zero and the maximum score is 24. In order to facilitate measuring the readability, the total scores were converted to percentiles to facilitate their classification in levels of readability.

In order to measure the level of readability, the classification proposed by Sjahrony and his colleagues (2018) was adopted as it measures the readability levels of Arabic texts. According to this classification, the scores obtained by students on the Cloze Test are classified on the basis of three categories: Independent reading (90-100%), teaching and learning purposes (75-89%), frustration (0-74%).

## IV. RESULTS AND DISCUSSION

The study has endeavored to define Applied Arabic textbook readability level; the results are as follows:

**First Hypothesis: "The texts of the Applied Arabic textbook of Al-Balqa Applied University are not within the frustration level".**

In order to test this hypothesis, means and standard deviations were calculated (Table 2) for the level of readability of Applied Arabic textbook for the university students at Al-Balqa Applied University.

TABLE 2  
MEANS AND STANDARD DEVIATIONS OF THE PERFORMANCE (STUDY SAMPLE) IN THE READABILITY TEST (CLOZE) COMPOSED OF FOUR TEXTS IN DESCENDING ORDER ACCORDING TO THE RELATIVE IMPORTANCE

Text	Lower Score	Higher Score	Mean	Std. Devi.	Readability Level
Third Text	0	7	0.66	0.153	Frustration
Second Text	0	7	0.48	0.105	Frustration
First Text	0	4	0.46	0.232	Frustration
Fourth Text	0	6	0.46	0.156	Frustration

Table 2 shows that the mean scores of readability level ranged between (0.46-0.66) on the four texts. The sample of the study showed low levels of reading performance (frustration level) – based on the statistical standard adopted in this study. The results also showed that the third text was in the frustration level. However, the students' performance was better in this text compared to the other three reading texts. This result mirrors a clear difficulty that can be considered as basically related to the difficulty in the structure of the sentence in Arabic. The sentence in Arabic in which the phonetic, morphological, and semantic structures overlap to help the reader understand the meanings of the vocabulary that relate to the structure of the word and the context in which it appears, which in turn makes it difficult for the student to read the text and understand it.

Moreover, university course developers usually presume that university students have previous knowledge regarding the Arabic text structure; the ability to understand the text; define its different aspects and its main idea. Thereby, they concentrate more on the structure of the text than on its readability level and this is what made it difficult for the sampled students to report higher scores on the Cloze Test used in this study. Finally, after developing university textbooks, these are not subjected to experimental administration on targeted samples of will use these textbooks in their university courses; this creates a gap between what is presumed by the author's and the previous experiences of the university student, and this led to the result of this study. The result of the study is consistent with the results reported by Yulianto (2019); Hidayatillah and Yetti (2020); Oksuz and Keskin (2022); and Sjahrony and his colleagues (2018), as they indicated that the text language, the nature of words used and the length of sentences affect the overall level of readability.

**Second Hypothesis: "There are no statistically significant differences at ( $\alpha = 0.05$ ) in the readability level of the texts of the Applied Arabic textbook in light of gender (male, female)".**

In order to test this hypothesis, means and standard deviations were calculated (Table 3) for the level of readability of Applied Arabic textbook for the university students at Al-Balqa Applied University in light of gender. T-test was employed to define the statistical differences in the mean scores.

TABLE 3  
MEANS AND STANDARD DEVIATIONS OF THE PERFORMANCE (STUDY SAMPLE) IN THE READABILITY TEST (CLOZE) COMPOSED OF FOUR TEXTS IN DESCENDING ORDER ACCORDING TO THE RELATIVE IMPORTANCE

Text	Gender	Number	Mean	Std. Devi.	T	df	Sig.
First Text	Male	27	0.44	0.244	-0.437	52	0.664
	Female	27	0.47	0.223			
Second Text	Male	27	0.47	0.111	-0.921	52	0.361
	Female	27	0.50	0.100			
Third Text	Male	27	0.66	0.178	-0.252	52	0.802
	Female	27	0.67	0.125			
Fourth Text	Male	27	0.44	0.115	-0.871	52	0.388
	Female	27	0.48	0.189			

Table 3 shows that there are no statistically significant gender differences at ( $\alpha = 0.05$ ) in all the texts. It is also noted that females' performance (0.47-0.67) was better than males' (0.44-0.66) in all the texts. Regarding the most difficult text, it was the first text; even so, there were no statistically significant gender differences in the difficulty level of this text. Consequently, it can be noted that gender has no effect on the level of readability of the Applied Arabic textbook, since the results of males and females were so close, even though there was a slight difference in favor of the females. This result is supported by Sjahrony and his colleagues (2018) who found that gender has no effect on the readability level of Arabic textbooks of Malaysian university students.

## V. CONCLUSION AND RECOMMENDATIONS

The study aimed to define the readability level of Applied Arabic textbook at Al-Balqa Applied University. In doing so, the study used the Cloze Test. After analyzing the data, the study found the level of readability of the Applied Arabic textbook was within the frustration level, and that there were no statistically significant gender differences in the readability level reported among the sampled students. In light of the results, it can be noted that the difficulty of the texts of this textbook is mainly due to the fact that the curriculum developers focused on writing texts in specialized language more than the level of readability as they assume that the students have previous experiences in Arabic skills that enable them understand these texts. However, the current study confirmed that there is a general weakness in Arabic skills among students, which was confirmed by the absence of differences between males and females in the level of readability. It can therefore be concluded that students generally have poor Arabic language skills.

In light of the previous conclusions, the current study suggests the need for the experimentation of the texts of Arabic textbooks in general on students after being developed to define their readability level, which in turn will define texts with high difficulty levels to redevelop them to become readable. Also, there is a need to support textbooks with extra educational resources to help students read and understand them.

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