

ARABIC LANGUAGE TEXTBOOK READABILITY FOR FOURTH-YEAR MIDDLE SCHOOL IN ALGERIA

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Abstract

This investigation endeavors to ascertain the readability level of the Arabic language textbook designated for fourth-year middle school students in Algeria and to identify any potential disparities in readability across genders. Employing a descriptive methodology, this research incorporated the creation of a cloze test featuring three passages extracted from the textbook, which was administered to a cohort of 173 students.

The findings revealed that the Arabic language textbook possessed a high readability level, with 57.22% of the participants finding the content suitable, a percentage that aligns with the independent level range of readability. Moreover, the analysis disclosed no significant gender-based differences in readability. Based on these outcomes, the study advocates for a heightened emphasis on the assessment of textbook readability to enhance educational content delivery.

Keywords: Readability; Arabic Language Textbook; Fourth-Year Middle School.

Introduction

Textbooks serve as fundamental tools in the educational process, supporting learners throughout the academic year by facilitating the acquisition of knowledge, attitudes, values, and skills. Teachers also rely heavily on textbooks as vital guides and rich information sources, reflecting the educational goals set forth in the curriculum. The importance of textbooks extends beyond the classroom, with parents, educational institution managers, and teachers prioritizing their procurement at each academic year's onset. This underscores their pivotal role in student preparation and personality development, aligning with societal objectives.

Despite the advent of innovative educational media, textbooks remain the cornerstone of teaching and learning processes. (Rahmawati, 2012, 1) The focus on evaluating the ease and complexity of textbooks and educational materials intensifies with younger audiences. Materials designed for kindergarteners carry paramount importance, followed by those for primary and then middle (referred to as intermediate in Algeria) school stages.

This prioritization stems from the evolving reading skills at these levels, where students typically reach independent reading proficiency in the later stages of middle and early secondary education. Consequently, the issue of readability becomes more pronounced at these levels (Taima, 2004, p.530).

Reading is essential in all educational endeavors, acting as a gateway to academic success and broader human knowledge. A deficiency in reading skills often translates to underperformance in other academic areas. Effective reading is crucial for quick comprehension and academic achievement across various disciplines. A student's proficiency in language enhances their reading speed and understanding of the material. Thus, the focus on reading in research aims to foster effective learning through innovative teaching strategies, particularly in the initial stages of primary education (Abdelwahab, et al, 2004, p.179).

Abu Ghazal underscores the importance of aligning students' developmental characteristics with curriculum design and textbook authorship at various age stages. Developing scientific content based on the standards of students' cognitive development facilitates predicting their learning capabilities and proficiency in specific cognitive tasks at any given age. This alignment helps to avoid the inefficiencies of educational efforts that are misaligned with the students' cognitive growth levels.

Piaget posited that each developmental stage signifies a qualitative transformation in students' knowledge and cognitive abilities, advancing through consistent sequences across different cultures. Each stage builds upon the cognitive structures and abilities of its predecessor, indicating that educational shortcomings at one stage can extend and integrate into subsequent stages of cognitive development. This necessitates careful construction of scientific content and its presentation methods to ensure they are appropriate for the students' developmental stages (Beni Khalaf, 2015).

The significance of readability stems from its role in facilitating knowledge acquisition, serving as the primary means through which readers engage with the thoughts and experiences of others, across time and space. Reading is instrumental in shaping an individual's personality, instilling values, deepening principles, forming attitudes, and developing talents and interests. As an educational linguistic communication skill, reading should be accessible, aligning with the reader's capabilities, inclinations, and interests to effectively fulfill its roles in knowledge and value acquisition, as well as in attitude and interest development.

Therefore, readability is vital for successful reading experiences, enabling comprehension, enjoyment, and the derivation of benefits from the text to satisfy the reader's needs (Elhachemi & Attiya, 2014, p.132).

To gain a deeper understanding of readability's significance, it's essential to consider various definitions. Richards and others define it as the extent to which written materials can be read and understood, influenced by factors like average sentence length, the incidence of new words, and the grammatical complexity of the language. Harry McLaghlin, creator of the SMOG readability formula, characterized readability as the level at which a particular group

of people perceives a certain reading material as engaging and understandable. (Zamanian & Heydari, 2012, 43)

To deepen our understanding of readability, it's necessary to define it clearly. According to Richards and colleagues (1992, p. 306), readability refers to "how easily written materials can be read and understood," depending on factors like the average length of sentences, the inclusion of new vocabulary, and the grammatical complexity of the language used. Harry McLaglin, known for the SMOG readability formula, described readability as "the degree to which a particular group of individuals finds certain reading material engaging and clear."

George Klare views readability as the ease of understanding or comprehension due to the writing style. This definition highlights the writing style independently from the content and structure of the text (Dupay, 2004, p. 3).

Readability has emerged as a crucial educational topic, attracting substantial attention from researchers who emphasize the need for readability assessment in textbooks. This assessment aids designers and curriculum developers in creating content that meets the cognitive, mental, and psychological requirements of learners.

Among these research efforts, Momeni and Al-Momeni (2011) investigated the readability of the Arabic language textbook for fourth graders in Jordan, examining how gender influences readability levels. Their study revealed that student performance on the Cloze test was predominantly in the frustration level across all texts, with significant differences in the readability of two texts favoring female students, while the third text showed no gender-specific readability differences.

Dahlan (2014) focused on the readability of the Arabic language textbook for ninth graders in Palestine, analyzing the effects of gender and text type on readability. The results demonstrated a high readability level, with an overall rate of 62.32% straddling the independent and instructional levels, and no notable differences in readability due to gender or text type.

Jowarna (2008) assessed the readability of the social and national education textbook for fourth graders in Jordan, considering gender impacts on readability and the text arrangement within the book based on readability levels. Findings indicated that the book's readability for students was at the frustration level, with significant gender-related readability differences favoring females. The study also observed that the book's texts were not arranged according to their readability levels.

Brickit (2015) evaluated the readability of the "My Eternal Language" textbook for the first intermediate grade, aiming to identify gender-related differences in text readability. The study concluded that male students' readability level was predominantly at the frustration level, while female students achieved the independent level. Overall, the sample's readability level was at the independent level, with significant differences favoring female students.

Al-Dulaimi (2018) measured the readability of the reading and textbook for the first intermediate grade in Iraq, exploring the effects of gender and text type on readability. The

study indicated a high readability level for the texts, with an overall readability rate of 57.5% across the independent and instructional levels, and found no significant gender or text type-related readability differences.

Al-Issawi (2020) aimed to determine the readability level of the Islamic education textbook for the first intermediate grade in Iraq, assessing differences in readability based on gender and lesson type (Quran and Islamic education). Using a descriptive approach and the Cloze test, the study found a 64.90% readability level for the sample, categorized within the independent level. It also noted significant social gender-based differences in book readability, favoring males.

Problematic:

During interviews with some teachers about the appropriateness of the textbook for student levels, noticeable dissatisfaction was reported concerning both the students' capabilities and the textbook's content. Teachers expressed concerns over the textbook's dense information, which students find challenging to fully understand.

Considering the critical role of the fourth year of middle school in Algeria as a transitional phase to secondary education, and the pivotal nature of the Arabic language subject in this key year, it was deemed essential to undertake a study focused on evaluating the Arabic language textbook.

This investigation aims to determine its appropriateness for the cognitive and linguistic levels of the students, guiding the research to answer the pivotal question: What is the readability level of the Arabic language textbook for the fourth-year middle school students in Algeria?

Study Questions:

- _ What is the readability level of the Arabic language textbook for the fourth year of middle school in Algeria?
- _ Are there any differences in the readability level of the Arabic language textbook related to gender?

Study Significance:

The significance of this study stems from its focus on the Arabic language textbook for the fourth year of middle school, aiming to reassess the content of the Arabic language textbook in terms of its appropriateness for students' levels.

- _ We hope that this study will highlight the extent to which the readability of the texts in the Arabic language textbook is suitable for students' levels.
- _ It will also assist the designers of the Arabic language textbook in selecting appropriate educational content from texts and educational activities, based on their understanding of readability levels and its importance before publishing the book and presenting it to students for learning its contents.

Study Limitations:

The generalizability of this study's results is partially contingent upon the following limitations:

- **Spatial limitations:** The study was confined to the state of Touggourt, located in the southeast of Algeria, known for its preservation of Arabic heritage, customs, and traditions.
- **Temporal limitations:** The study was limited to the 2022/2023 academic year, which followed the COVID-19 crisis, a global crisis that forced most of the world's population to stay at home, leading to significant idle time and forcing them to find various ways to cope with this challenging period.
- **Human limitations:** The study was restricted to the responses of fourth-year middle school students in the state of Touggourt, Algeria.
- **Subject and methodological limitations:** The study focused on three texts from the Arabic language textbook for the fourth year of middle school for the 2022/2023 academic year. Therefore, further studies should be conducted to expand the sample of texts. The study was limited to using the cloze test (Close Test), a method commonly used by researchers, and other methods could be implemented to measure readability, such as the judgment method or readability formulas like the Dale-Chall and Flesch equations.

Terminological and Operational Definitions

➤ **Readability:**

The degree to which a student finds the text understandable and engaging, and the extent to which they can read the text at an optimal speed. Operationally, in this study, it is defined by the score that a student achieves on the prepared cloze test.

Method and Procedures

Study Population:

The study population includes:

- _ The Arabic language textbook for the fourth year of middle school in Algeria for the 2022/2023 academic year, which consists of eight educational sections containing 24 texts.
- _ All fourth-year middle school students in the Touggourt state schools for the 2022/2023 academic year.

Study Sample:

The study sample consisted of:

- **Student sample:** Comprising 173 students, distributed across eight middle schools in and around the city of Touggourt.
- **Text sample:** Randomly selected three reading texts from the Arabic language textbook for the fourth year of middle school, representing 12.5% of the total 24 texts.

Study Instrument:

Given the challenges associated with readability measurement methods such as the Flesch and Dale-Chall formulas, a new instrument for assessing readability was devised by Wilson Taylor (1953).

Taylor argued that words alone are not the best measure of difficulty and suggested using the Cloze Test to gauge an individual's comprehension of a text. The Cloze Test is based on the theory that readers can more effectively fill in omitted words as their reading skills improve (Dupay, 2004, p.27).

In this study, we employed the Cloze Test to determine the readability level of texts selected from the Arabic language textbook for the fourth year of middle school in Algeria. The Cloze Test, tailored for this study, consisted of three texts from the Arabic language: "The Internet," "The Pottery Vessel," and "Greetings, White Algeria." The test was developed after reviewing previous studies and theoretical literature on readability, following these steps:

- Selecting the three texts from the Arabic language textbook for the fourth year of middle school in Algeria, ensuring that the students had not previously studied the chosen texts.
- Reproducing the texts exactly as they appear in the book, maintaining the same font size and style, diacritics, and punctuation marks. Then, every fifth word in each text was deleted in sequence, leaving equal spaces in place of each removed word. The first and last sentences of each text were left intact to aid students in understanding the context and meaning of the text. Words representing Quranic verses, prophetic sayings, memory-requiring content, or proper names were exempt from deletion, with the subsequent word being omitted instead.
- Printing the texts to closely resemble their appearance in the textbook.
- Including the test instructions and essential data.

Validity of the Cloze Test:

To ascertain the validity of the study instrument, it was presented to a panel of nine specialized experts for their assessment of the tool's appropriateness for its intended measurement purpose and the representativeness of the texts for gauging the readability level of the fourth-year middle school Arabic language textbook. The experts' feedback, which focused on font size, letter shapes, line color, punctuation, and diacritics adjustments, was incorporated. Each text was placed on a separate page for application to the sample.

Reliability of the Cloze Test:

To verify the reliability of the Cloze Test, it was administered to a pilot sample of 50 students from within and outside the study's population. This was done to ensure the clarity of the instructions and to determine the time required for students to respond to each text. The average time needed to complete the test (three texts) was 45 minutes, approximately 15 minutes per text. The test-retest method was used to calculate the reliability over a 21-day interval, with Pearson's correlation coefficient (after ensuring normal data distribution) yielding a reliability value of 0.79, indicating an acceptable level of stability for the Cloze Test.

Results and Discussion

Results of the First Question:

- What is the readability level of the Arabic language textbook for the fourth year of middle school in Algeria?

To address this question, the Cloze test was administered to the study sample, and the students' scores were recorded and then converted into percentage rates. The arithmetic means and percentage rates of the sample members' scores were calculated as follows:

Table 01: Distribution of Sample Members Across Readability Levels

Readability Levels	Number of Students	Percentage
Frustration	74	42.77%
Instructional	33	19.07%
Independent	66	38.15%
Total	173	100%

The table indicates that 42.77% of the sample, or 74 students, were classified at the frustration level, meaning they are unable to read the book's texts even with the teacher's assistance. Conversely, 19.07% of the sample, or 33 students, were at the instructional level, indicating they can read the texts with the teacher's help.

Furthermore, 38.15% of the sample, or 66 students, were at the independent level, signifying they can read the book's texts without any assistance. Summing the percentages of students at the independent and instructional levels reveals a readability rate of 57.22%, an acceptable rate within the independent level, suggesting that the book's readability aligns with 57.22% of the targeted student population.

This outcome indicates that the book's contents are appropriate for the students' developmental abilities and cognitive levels. It also suggests that the textbook designers have

somewhat succeeded in meeting the set objectives for the book's content and have an understanding of its suitability for the students' cognitive and mental levels.

This might also be attributed to the students' linguistic culture and knowledge base, which enabled them to comprehend the texts and identify the missing words. This result aligns with findings from Dahlan (2014), Al-Dulaimi (2018), and Al-Issawi (2020), and diverges from Momeni and Al-Momeni (2011), Brickit (2015), and Jowarna (2008).

Results of the Second Question:

- Are there any differences in the readability level of the Arabic language textbook related to gender?

To test this question, an independent samples t-test was used, with results as shown in the following table:

Table 02: Gender Differences in Text Readability Scores

Texts	Gender	Number	Mean Score	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Total Score	Male	80	57.63	31.41	171	-1.694	0.092
	Female	93	66.31	35.33			

The data indicates that the average readability score for males was 57.63, compared to 66.31 for females. The t-value calculated was -1.694, with a significance level of 0.092, surpassing the 0.05 threshold. Consequently, this suggests that the differences in the readability levels of the Arabic textbook between genders are not statistically significant.

This lack of disparity could be attributed to the uniform educational experience received by both genders from the primary level onwards, encompassing the same educational and linguistic exposures, participation in equivalent classroom activities, utilization of identical textbooks, engagement in similar homework assignments, and exposure to the same teaching methodologies and educators.

This observation is consistent with the findings of Al-Dulaimi (2018) and Dahlan (2014), yet contrasts with the results from Brickit (2015), Jowarna (2008), Al-Issawi (2020), and Momeni and Al-Momeni (2011), where these studies identified significant gender-related differences in readability scores.

Recommendations

- It is crucial to measure the readability of school textbook texts to assess their appropriateness for students' cognitive levels.

- Studies should be conducted to measure the readability of Arabic language textbooks across different educational stages.
- Research should be carried out to gauge teachers' attitudes towards the texts of Arabic language books at various educational levels.

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Annexes

Texts Used in the Cloze Test for the Current Study

First Text: The Internet

Fill in the blanks with the appropriate words from the table below:

The (Internet) is a network of electronic networks, encompassing the entire world and allowing everyone to connect with others via computer.

The (Internet) is like a large basket that everything provided by operators of information or, through intertwined and interwoven electronic lines, some of which frighten governments and secret agencies because it is impossible to control it entirely.

A computer and a (modem) and a telephone line are sufficient for each of us to become one of the hundreds of millions who navigate through the Internet. The latest figures and statistics indicate that one and a half million users to the network every month, an increase unprecedented by any other invention.

The actual launch of the (Internet) network was in nineteen ninety-three, thanks to what is known as (the World Wide Web), an electronic network based on the principle of linking various information banks together, allowing access to diverse information banks, including, for example, the (U.S. Congress) library, to name just a, and the essential element that the growth of the Internet is actually the establishment of technical conditions and rules for using computers and information via telephone. Without standardization, the basic idea that gave birth to the Internet would have remained modest and limited.

The fundamental idea behind (the Internet) back to nineteen sixty-eight, when the Pentagon (U.S. Department of Defense) created an electronic linkage system capable of operating under all, including nuclear war. This was the of the network that currently encircles the world and allows every person, for a monthly subscription, to become one of the users of this network and to be able to voice, image, and text between him and the banks of and the rest of the users.

The Internet has become a source of for some governments, if not all governments and secret agencies, which find themselves in reality incapable of this electronic means of transferring and exchanging information, and protecting it from information pirates who have repeatedly proven their ability to penetrate the computers of defense ministries and official institutions in countries around the world, including those advanced in information technology.

Appearance	Allowed	Information	Returns	Example	They are connected	Exchange
Those	This	Gathering	Diverse	Conditions	Exchange	Network
Monitoring	Line	Beginning	Many	Services	Source	

Second Text: The Pottery Vessel

Fill in the blanks with the appropriate words from the table below:

The old woman, Rahma, suffered from her thirst, heat, old age, and loneliness, and delirium was not kind to her; instead of imagining gushing springs and clear waters, she imagined her house becoming a huge oven with tongues of flame reaching great heights, and she imagined herself as a vessel among the pots she had made in the belly of the terrible oven!

'I am a vessel, I am pottery, who will buy me? I am better than all the Pottery does not and I am speaking, who will buy me? I am a vessel suitable for water, for food, for flowers, look at the fire consuming me, it melts me to beauty! I am a vessel suitable for water, for food, for flowers. You are not vessels, you are still clay, not polished by a hand like has polished me, nor melted by a fire like I am in..'

The boy, Abdelkader, had returned a while ago from and found her in a state of delirium, and if it weren't for his mother instructing him to stay with her until she arrived, he would have left immediately; because the sight of the old woman, and he feared she would die before his mother and sister arrived, and he began calling her: 'Grandma Rahma! Grandma Rahma!' She remained like that for about an hour, then calm returned to her. With the calm came awareness, she saw Abdelkader sitting beside her, she smiled at him, and gestured for him to her water, which he did.

The child was happy to see her awareness return. He informed her that his mother and sister were to spend the night with her, and that his father had sent to Malik who of her illness.

The old woman said to him in barely intelligible words: 'Why send for him, why? It will disturb him, and he may busy with his work.' The child explained to her that she was the one who that. She replied, 'I was delirious, my child,' to which the child responded,

- 'Yes, you were delirious, but when you asked about Malik, it didn't seem like you were delirious!'
- 'I don't remember, my son. You are right.'

She closed her eyes again. Despite the great effort she to keep the child company and talk to him, in the end, she succumbed to the exhaustion by the fever.

The time	Beside her	Frightened him	Almost	Speaks	The water	Coming
Took	Hands it to her	Polished me	That	Informs him	She requested	Increased
On	Which	Is	She exerted it	He exhales	Appears	

Third Text: Greetings, Oh White Algeria

Fill in the blanks with the appropriate words from the table below:

Who among us has ever felt, in times of peace and security, a sense of distance from you across the continents of the world? Even in cities dear to our Arab homeland like "Beirut," "Doha," or "the Emirates" and others? It never happened that you, the great one known as the White, symbol of and purity outwardly and inwardly, tell us about those who left you voluntarily while being safe in their bodies, souls, and livelihoods. Who that in the spaces of the world there is someone who can take your place, even those who left you – perhaps cursing or gloating – maybe in anger, their insides boiling with rage and their hearts constricted with discomfort?

No one dares to do that, no matter how much fate throws everyone into the cold of a strange distant East, because love for the homeland, "Oh White Algeria," comes from, no matter how much this homeland expands Arabically and Islamically, or narrows down to the place of birth, where the points of attraction and longing grow in like proximity.

We see you distant in the heart and close in the eyes in a word, or in a "television" image, so we yearn for, long for you, and get angry for and at you at the same time..searching for a refuge, even in the fluctuations of weather and the desert of emotions, and during that, you never us for a moment in adversity and joy, we suffer for you, wounded yet resilient, and we suffer for our own estrangement in the corners of the earth.

We see you, Oh Algeria, standing with perpetual defiance, we contemplate you in our depths, and the heart clenches and the eyes So, does the tear and the sigh get suppressed, Oh Algeria, do you hear, Oh tortured yet lofty in dignity and pride in the face of and oppressors?

Tell us, inform us - may God protect you - how we became victims displaced, foreign hands clapping in our skies, migrating from every direction like crows and owls in search of, not like the honorable fleeing in search of a refuge, they pursue us as a fate on our shoulders, in you and in our migrations and the West.

Greetings, Oh White Algeria, tortured yet standing resilient, the steadfastness of freedom and the free in every era, from me to you are greetings in your patience and defiance, and may God support you against both inside and outside.

Distance	You disappear	Her prey	Upon you	He descends	In the east	The eye
That	We became	Purity	Remains	The pure ones	Your enemies	The heart
He claims	Then you dive	Faith	Patient	Injustice	Left you	