An Electronic Program for Enhancing the Writing Performance of Non-Native Arabic Learners

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Abstract

This study investigates the development of written linguistic performance among advanced-level non-native Arabic learners, achieved through the implementation of an electronic program. A comprehensive list of functional writing skills was developed, encompassing areas such as summarization, correspondence, and curriculum vitae writing. The research employed an experimental design, wherein a single study group was selected, and pre- and post-tests were conducted utilizing specific research tools. The results indicate a significant improvement in the writing performance of the participants following the use of the electronic program. The study recommends the enhancement of writing course content for non-native Arabic learners and the integration of electronic programs into the instructional process, particularly for those learning Arabic as a foreign language.

Keywords: Electronic Program, Writing Performance

Introduction

Language functions as an indispensable medium for communication and understanding, holding immense significance in both individual and collective dimensions of society. It acts as the primary conduit through which a society's cultural heritage is transmitted, encapsulating both historical legacies and contemporary experiences. Moreover, language serves as a vehicle for individuals to articulate their thoughts, emotions, aspirations, and ambitions, imbuing them with symbols that confer meaning. It is also the principal tool of cognition, where the refinement and advancement of language are intrinsically linked to the progression of thought. Consequently, the advancement of nations can often be measured by the sophistication of their language and its ability to adapt and evolve.

For learners of Arabic as a foreign language, achieving effective linguistic communication necessitates mastering the requisite skills that enable them to meet their learning objectives. Institutions dedicated to teaching Arabic to non-native speakers aim to cultivate foundational language competencies, progressively enhancing learners'

proficiency across the four principal language domains: listening, speaking, reading, and writing.

Writing, in particular, plays a vital role in the learner's linguistic development. It is not only a tool for expressing ideas but also serves as a catalyst for intellectual growth, fostering critical thinking, reflection, and linguistic precision. As noted by Al-Busayis (2011), writing is a critical medium through which learners convey their thoughts, feelings, and needs. Beyond its communicative function, writing stimulates the intellectual faculties, requiring learners to make informed choices regarding syntactical structures, select precise vocabulary, and organize their ideas coherently, all of which contribute to refining their style.

In this context, writing can be categorized into two main types: creative and functional expression. According to Ali et al. (2017), functional writing, which serves practical purposes in real-world contexts, is of paramount importance. Such skills are not innate but must be cultivated through deliberate training and practice, utilizing diverse methodologies to foster proficiency. This is especially crucial for learners of Arabic as a foreign language, as the acquisition of functional writing skills provides them with the autonomy to engage in varied social communications and address their needs independently.

Numerous studies underscore the importance of developing writing skills within Arabic language instruction. A recurrent theme in these studies is the identification of significant deficiencies in the writing proficiency of non-native Arabic learners. These deficiencies are noted in the studies of Lieman (2017), Shahat, Ibrahim, and Heman (2020), Al-Mohammadi (2018), Haddad (2019), Al-Hudaibi and Al-Hajouri (2019), and Al-Harbi (2020).

Functional written expression is pivotal in language acquisition, serving as a primary mode of written communication. Its importance in Arabic instruction for non-native speakers is heightened by its relevance to the learner's lived experiences. This aligns with contemporary language acquisition theories, which advocate for instruction that connects learners with their social contexts, fostering self-confidence and facilitating the assimilation of additional linguistic competencies. As Al-Harbi (2020) articulates, functional written expression is integral to language learning for non-native Arabic speakers for several reasons:

1. It acts as a vital channel of communication with the target society, enhancing social connections.

2. It empowers learners to address challenges independently, reducing reliance on external assistance.

3. It facilitates the expansion of the learner's linguistic repertoire while nurturing an appreciation for aesthetic language use.

4. It fosters self-assurance, enabling learners to express themselves confidently in their new socio-cultural contexts.

5. It contributes to the accurate and effective deployment of language, ensuring syntactical integrity, thematic coherence, and proper punctuation.

As such, the domains of functional writing skills that are pertinent to advanced-level learners of Arabic include reports, note-taking, advertisements, form-filling, invitations, meeting minutes, summaries, letters, and curricula vitae. Based on feedback from expert reviewers, the researcher has identified summarization, letter writing, and CV writing as particularly significant for learners of Arabic as a foreign language.

Summarization is defined as the process of rephrasing the core ideas from an original text in a condensed form, preserving the meaning while eliminating unnecessary details. The primary goal is to convey the essential points concisely without distorting the original message. According to Abdel-Bari (2010), summarization requires the ability to identify the general idea of the text, accurately convey key points, and present the summary in a shorter form.

Letter Writing is another essential skill within functional writing, encompassing both official and personal communication. Official letters often deal with matters of state, economy, and social life, addressed to governmental or institutional entities. Personal letters, on the other hand, express emotions and sentiments, traditionally conveyed through prose rather than poetry. Abdullah (2018) highlights the skills required for both types of letter writing, including the clear structuring of content and appropriate tone for personal letters, and accuracy and clarity for official correspondence.

Curriculum Vitae (CV) Writing has gained increasing importance in modern society, serving as a tool for individuals to present their qualifications and experiences. Writing a CV requires an understanding of how to effectively highlight personal data, academic qualifications, work experience, and relevant skills. Metwally (2013) emphasizes the need for honesty and precision in presenting an individual's life story, aligning

with the educational standards set by the Ministry of Education, Saudi Arabia (1445).

The integration of technological innovations in education, particularly in language learning, has proven to be transformative. Numerous studies have highlighted the benefits of incorporating electronic resources into the teaching of Arabic. Technological tools, including interactive platforms, multimedia, and web-based applications, offer dynamic learning environments that enhance both engagement and skill acquisition. Studies by Saad (2020), Fahim (2020), Zaid (2020), Al-Surahi (2020), Saleh (2020), Al-Badawi (2021), Mohammed (2021), and Al-Shabasi (2024) underscore the efficacy of these tools in improving language learning outcomes.

The motivation for this study arises from several key observations:

1. **Direct Observation:** The researcher's extensive teaching experience revealed significant weaknesses in the written performance of Arabic learners, particularly in summarization, letter writing, and CV composition.

2. **Interviews with Teachers:** Conversations with Arabic language instructors further corroborated the existence of these deficiencies, emphasizing the need for targeted interventions.

3. **Literature Review:** A review of existing research confirmed these challenges while underscoring the positive impact of technological innovations on language learning outcomes.

In light of these findings, the present study aims to address the observed weaknesses in the writing performance of non-native Arabic learners. The research problem is articulated as: **How can an electronic program be designed to enhance the writing performance of non-native Arabic learners?**

Subsequent research questions include:

1. What are the appropriate domains of functional writing for advanced-level non-native Arabic learners?

2. What specific writing skills are necessary for these learners?

3. What is the current level of writing performance in these skills among non-native Arabic learners?

4. What instructional design is suitable for an electronic program aimed at improving writing skills in these learners?

5. What is the effectiveness of such an electronic program in enhancing their writing performance?

Scope and limits of the study

The present study was constrained within specific parameters to ensure a focused and rigorous investigation. The scope of the research was delineated as follows:

1. **Participants' Level**
   The study targeted advanced-level learners of Arabic as a foreign language. This level was chosen because such learners possess the requisite proficiency to engage with Arabic texts—both written and spoken—on a relatively natural level. These participants have developed foundational skills in the language, enabling them to critically interact with more complex linguistic structures and content.

2. **Writing Skills**
   this study was specifically concerned with functional writing performance, focusing on the core skills deemed essential for these learners. A specialized list of functional writing domains was curated for the study, with emphasis placed on summarization, letter writing, and curriculum vitae (CV) composition. These skills were identified based on their relevance to real-world language use and their importance in facilitating effective communication for non-native speakers of Arabic.

3. **Sampling**
   The sample consisted of non-native Arabic learners enrolled at the Nile Center for Teaching Arabic as a Foreign Language, located in Cairo. This center was selected due to its diverse student body and its reputation for offering well-established and structured programs in teaching Arabic as a second language. The learners at this institution represent a broad spectrum of linguistic and cultural backgrounds, thus ensuring the inclusion of a variety of perspectives and learning experiences.

4. **Methodology**
   A mixed-methods approach was employed, integrating both descriptive and quasi-experimental research designs:
   o **Descriptive Method**: This method was utilized to identify and categorize the specific functional writing skills that are necessary for the target group. Through this approach, the study aimed to provide a detailed understanding of the core areas that require attention and

development in the learners' writing abilities.

- o **Quasi-Experimental Method**: A pre-test and post-test design was implemented to assess the impact of the electronic program on the participants' writing performance. The pre-test served as a baseline measure of participants' existing writing proficiency, while the post-test allowed for the evaluation of improvements in functional writing skills following the intervention.

5. **Study Tools**

The primary research tools employed in this study were as follows:

- o **Checklist of Functional Writing Skills**: A specialized checklist was developed to assess the key writing competencies necessary for non-native Arabic learners. This checklist focused on the skills pertinent to summarization, letter writing, and CV composition.
- o **Functional Writing Test**: A test was designed to evaluate the learners' abilities in the targeted writing domains. The test was structured to measure proficiency in functional writing tasks, ensuring that the assessment was aligned with the specific goals of the study.

Terminology of the Study

The following operational definitions were established to ensure clarity and consistency throughout the study:

- **Electronic Program (Operational Definition)**: A structured series of interactive activities, visual aids, diagrams, auditory stimuli, and evaluative techniques aimed at improving functional writing performance. The program was designed to increase learner engagement, promote independent learning, and provide targeted support in the acquisition of functional writing skills.
- **Non-Native Arabic Learners (Operational Definition)**: Individuals participating in Arabic language programs aimed at developing their listening, speaking, reading, and writing skills. These learners may be enrolled in either domestic or international programs, where they focus on acquiring the phonetic, grammatical, and lexical

aspects of Arabic, with the ultimate goal of achieving fluency and proficiency in the language's functional and cultural dimensions.

Procedures of the Study

The following procedural steps were undertaken to ensure the systematic investigation of the research objectives:

1. **Identifying the appropriate domains of functional writing for advanced nonnative Arabic learners**

To identify the appropriate domains of functional writing for advanced learners of Arabic as a second language, the researcher initially compiled a list encompassing twenty distinct areas of functional writing. This preliminary list was subsequently submitted for evaluation by expert reviewers. The relative importance of each functional writing domain was then assessed. The researcher excluded any domain that did not attain an importance rating of 80% or higher based on the cumulative feedback from the reviewers. The expert evaluations ultimately identified three essential and suitable domains for advanced learners of Arabic as a second language: summarization, correspondence (letters), and the writing of résumés.

2. **Development of Writing Performance Skills List**

To determine the requisite writing performance skills for advanced learners of Arabic as a foreign language in pertinent functional areas, the researcher initially developed a comprehensive list of writing performance skills for learners at the advanced level. This list was then presented to a panel of experts for review, during which they were invited to suggest additions, deletions, or modifications to the content. Upon analyzing the feedback from the expert reviewers, the skills that received an agreement rate exceeding 80% were retained for further consideration. The finalized list of writing performance skills included the following categories:

   a. **Six skills** related to writing letters.
   b. **Four skills** associated with summarization.
   c. **Four skills** pertaining to curriculum vitae composition.

3. **Assessment of Writing Performance Levels**

To evaluate the level of writing performance among advanced learners of Arabic in the identified functional areas, the researcher designed an assessment instrument comprising three questions. These questions were tailored to assess learners' proficiency in functional writing tasks. The assessment was intended to measure the learners' abilities in the specified writing domains, and was followed by instruction using

an integrative electronic program. After the program's implementation, learners were reassessed to evaluate any improvements in their writing performance. The validity of the assessment was established through expert reviewers. The initial version of the test was presented to a panel of experts to ensure its relevance and appropriateness in measuring the targeted skills. The experts assessed the comprehensiveness of the test items, the linguistic suitability of the vocabulary relative to the learners' level, and the clarity of the instructions. The feedback indicated unanimous agreement on the clarity and appropriateness of the test content. However, certain modifications were suggested for some questions, which were subsequently incorporated into the final version of the test.

4. **Assessing Test Reliability**
    To assess the reliability of the assessment instrument, the test was administered to a sample of 30 advanced learners, who were distinct from the research participants. Cronbach's alpha coefficient was utilized to measure the internal consistency of the test. The resulting reliability coefficient of 0.80 indicated a satisfactory level of consistency, thus confirming the test's reliability for future applications.

5. **Designing the Electronic Program to Enhance Writing Performance Skills**
    For the design of the electronic program aimed at improving writing performance skills in functional areas, the researcher adopted Al-Far's model (2012:145), which was chosen for its clarity and simplicity, making it particularly suitable for non-native Arabic learners. This model consists of five essential stages:
    Stage 1: Identification and Analysis The identification and analysis phase involved several key steps:
    a. **Target Group Identification**: The target group was defined as advanced learners of Arabic as a foreign language.
    b. **Defining the Program Objective**: The objective of the program was explicitly outlined as the development of functional writing performance skills among advanced learners of Arabic.
    c. **identification and Formulation of Skills Behavioral Objectives**: The specific

behavioral objectives for the targeted writing skills were as follows:
    i.   The learner will be able to summarize a topic effectively while adhering to the fundamental principles of summarization.
    ii.   The learner will be capable of fulfilling the technical requirements necessary for writing a letter.
    iii. The learner will be able to fulfill the technical elements required for composing a curriculum vitae.

4. Content Identification and Consolidation
The content for the electronic program was meticulously developed and organized with the following guiding principles:
- Use of clear and accessible language to facilitate understanding.
- Application of distinctive and engaging presentation methods.
- Inclusion of scientifically accurate, precise, and relevant content.
- Ensuring content is free from grammatical and spelling errors to maintain academic rigor.
- Effective use of fonts, colors, and visual elements to enhance the content's presentation.
- Integration of hyperlinks to external resources and websites relevant to the lesson content, thereby enriching the learning experience.
- Collection and organization of the theoretical knowledge required for each skill, forming the foundational framework for instruction.
- Systematic presentation and discussion of each skill individually, where feasible, to ensure focused and comprehensive learning.
- Compilation of exercises and activities that align with and reinforce the program's objectives, allowing learners to practice the targeted skills.

5. Identifying the Educational Tools Used in the Program
A diverse range of educational tools and resources was employed throughout the program, including:
- Textbooks and educational references that provide foundational knowledge.
- Illustrative images and diagrams that support the visual understanding of content.
- A selection of educational videos that are directly linked to the specific skills targeted for development in the program.

6. Identifying the Teaching Strategy Employed

The teaching strategy integrated a combination of pedagogical approaches to foster an interactive and self-guided learning environment:

- **Cooperative Learning**: Encouraging collaboration and peer interaction to facilitate collective problem-solving.
- **Dialogue and Discussion**: Engaging learners in discussions to encourage critical thinking and active participation.
- **Self-Directed Learning**: Promoting independent learning, wherein learners take responsibility for their educational progress.

7. Identifying the Evaluation Methods

The evaluation process was structured in three distinct stages to measure the learners' progress and the effectiveness of the program:

- **Preliminary Assessment (Pre-Assessment)**: Administered prior to the instructional phase, this assessment measured learners' initial functional writing skills.
- **Formative Assessment (During Program Assessment)**: This ongoing evaluation occurred throughout the program. It involved oral questions during discussions, as well as the completion of activities at the end of each unit to track learners' development.
- **Summative Assessment (Post-Assessment)**: At the conclusion of the program, a post-test was administered to assess the overall improvement in learners' functional writing performance.

(2) Design Stage

The design stage consisted of several essential components:

A. Defining the Educational Objectives

In alignment with the overall goals of teaching functional writing skills to advanced learners of Arabic as a foreign language, the researcher delineated clear, measurable educational objectives to guide the program's development.

B. Organizing and Structuring the Educational Content

The content was logically organized, ensuring a coherent progression of lessons. The researcher adhered to established curricula for teaching Arabic as a foreign language, ensuring the sequence of lessons aligned with learners' expected language proficiency and writing development.

C. Developing the Scenario

A comprehensive scenario was devised, wherein the targeted functional writing skills were translated into detailed instructional procedures. This scenario included texts, images, and videos, which were then converted into a digital format for the program. Key steps in this phase included:

- Identification of primary and secondary skills.
- Selection of written and reading texts aligned with each targeted skill.
- Determination of images and diagrams, including their size, color, and placement on the screen.
- Specification of multimedia components, such as presentations, audio clips, or videos.
- Definition of navigation pathways within the digital tools and pages.
- Identification of evaluation and assessment methods for tracking learner progress.
- Determination of feedback mechanisms and definitions for interactive activities.

(3) Implementation Stage

The implementation phase was executed through the following steps:

A. Pre-Implementation of Study Tools

- The pre-assessment test for measuring functional writing performance skills was administered electronically to establish a baseline.

B. Application of the Experimental Treatment (Learning Using the Electronic Program)

- Learners participated in the learning process facilitated by the electronic program, aimed at developing functional writing skills.

C. Post-Implementation of Research Tools

- The post-assessment test for measuring the learners' functional writing performance was administered electronically to gauge the impact of the program on learners' progress.

(4) Evaluation Stage

The evaluation stage enabled the researcher to assess whether the objectives of the program were achieved. During this stage, the effectiveness of the electronic program in enhancing writing performance skills was evaluated using the post-assessment tools. The post-test results were analyzed to determine the degree to which the program succeeded in improving learners' functional writing abilities

(5) Development Stage

Following the administration of the electronic program and subsequent evaluation from learners and experts, necessary adjustments were made to refine the program. These modifications were based on feedback regarding its

effectiveness, content delivery, and user experience. The revisions aimed to improve the clarity, engagement, and overall quality of the program, ensuring that it met the specific needs of advanced non-native Arabic learners in the targeted functional writing domains.

Results

To assess the effectiveness of the electronic program in enhancing functional writing skills among advanced non-native Arabic learners, the researcher employed the **Paired Samples T-Test**. This statistical method was chosen to compare the pre-test and post-test scores of participants across three key areas of functional writing: summarization, letter writing, and curriculum vitae composition.

The results of the T-test, as shown in the table below, provide a quantitative analysis of the program's impact on learners' performance in these domains.

Table (1) T-Test Results for Comparing the Study Participants' Mean Scores on the Pre- and Post-Administration of the Writing Performance Test ("Qualitative Domains")

Writing Skill	Test Phase	Sample Size (N)	Mean (M)	Standard Deviation (SD)	Degrees Of Freedom (DF)	T-Value (T)	Significance Level (Sig)	Stal Sig
Summarization	Pre-Test	30	4.23	0.50	29	41.85	0.05	Sig
	Post-Test	30	11.63	0.76				
Letter Writing	Pre-Test	30	6.63	0.85	29	39.28	0.05	Sig
	Post-Test	30	17.40	1.10				
Curriculum Vitae	Pre-Test	30	4.53	0.63	29	43.29	0.05	Sig
	Post-Test	30	11.57	0.73				

Discussion and Interpretation of the Results

The results of the study indicate a significant enhancement in the writing performance skills of advanced non-native Arabic learners, as evidenced by the substantial increase in their mean scores in the post-test compared to the pre-test. The T-values for the functional writing areas of summarization (41.85), letter writing (39.28), and curriculum vitae (43.29) clearly surpass the critical threshold of statistical significance at the 0.05 level, indicating that the observed improvements are not due to chance but reflect the true effectiveness of the electronic program in enhancing learners' writing skills.

Several factors may account for these improvements:

1. **Clear Goal Setting:** The program's objectives were clearly communicated to the learners from the outset, which likely contributed to enhanced focus and motivation throughout the intervention period.
2. **Content Delivery Method:** The integration of multimedia elements such as static images, animations, and video clips played a key role in creating a dynamic and engaging learning experience, which likely fostered greater retention and comprehension.
3. **Accessibility and Convenience:** The electronic format of the program allowed learners to access content at their own pace and convenience, facilitating a flexible learning environment. This aspect of self-directed learning is crucial for fostering deeper engagement and mastery of skills.
4. **Interaction and Collaboration:** Opportunities for peer interaction, idea-sharing, and collaborative learning were embedded within the program, encouraging active participation and fostering a sense of community among learners.
5. **Diverse Perspectives:** The program benefitted from a diversity of viewpoints shared among learners, which enriched discussions and contributed to a more comprehensive understanding of the writing skills being developed. The researcher also played a vital role in maintaining learner motivation and encouraging continued engagement.
6. **Simplified Delivery:** The clear and concise organization of content, coupled with well-structured explanations of each writing skill, ensured that learners could easily follow and understand the material, facilitating the acquisition of writing skills.
7. **Introduction of Skills:** Each writing skill was introduced in a structured and systematic manner, with clear definitions, examples, and practice activities. This approach allowed learners to build a solid foundation, which positively impacted their performance in the functional writing tasks.
8. **Logical Sequencing:** The program followed a step-by-step approach, starting with simpler skills and progressively increasing in complexity. This gradual development helped maintain learner motivation and ensured that they could master foundational skills before advancing to more complex tasks.

In conclusion, the significant improvements in learners' performance across all functional writing domains underscore the effectiveness of the electronic program in enhancing the writing abilities of advanced non-native Arabic learners. These findings align with those of other research studies that have similarly affirmed the efficacy of electronic programs in educational settings, particularly in the development of language skills (Saad, 2020; Al-

Shabasy, 2024; Al-Rawi, 2020; Fahim, 2020; Zaid, 2020; Al-Sarahi, 2020; Saleh, 2020; Al-Badawi, 2021; Mohamed, 2021; Al-Zahrani & Al-Suleiman, 2023).

Recommendations of the Study

Based on the findings of the study, the following recommendations are proposed:

1. **Curriculum Enhancement:** It is imperative to revise and modernize Arabic language curricula for non-native learners to reflect current technological advancements and meet the evolving needs of learners. Incorporating functional writing skills into the curriculum, along with adapting teaching materials, will ensure that learners are equipped with the practical skills necessary for real-world application.

2. **Utilization of Skill Checklists:** The functional writing skills checklist developed in this study can serve as an invaluable tool for Arabic language instructors. It can be used to assess learners' progress and identify areas for further development, thereby enhancing the overall teaching and learning process.

3. **Analytical Assessment Tools:** The use of detailed analytical rubrics, as developed by the researcher, is recommended for assessing learners' written tasks. These rubrics provide specific, clear, and measurable indicators, enabling educators to conduct objective and consistent evaluations of learners' writing performance.

4. **Learner Autonomy:** Allowing learners the freedom to select writing topics that resonate with their interests and preferences is encouraged. This approach promotes deeper engagement, as learners are more likely to invest in tasks that are personally meaningful and relevant to their experiences.

Suggestions for Further Research

The researcher proposes several avenues for future investigation, which could build on the findings of this study:

1. **Effectiveness of Electronic Programs in Developing Listening and Speaking Skills:** Future studies could explore the impact of electronic programs in enhancing oral language skills, such as listening and speaking, among non-native Arabic learners. This would provide a more holistic understanding of the role of technology in language acquisition.

2. **Enhancement of Literary Appreciation Skills:** Further research could examine the potential of electronic programs to cultivate a deeper appreciation for Arabic literary texts among non-native learners. This would expand the scope of technological interventions in the cultural and literary dimensions of language learning.

3. **Development of Fluent Reading Skills:** Future investigations could assess the effectiveness of electronic programs in fostering fluent and expressive reading skills among non-native Arabic learners, further contributing to the broader goals of language proficiency.

In summary, the results of this study underscore the positive impact of integrating electronic programs into the teaching of functional writing skills for non-native Arabic learners. This approach not only enhances learners' writing abilities but also aligns with contemporary educational trends, which emphasize the integration of technology to foster active, engaging, and effective learning environments.

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