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## NAVIGATING CHALLENGES IN ARABIC PEDAGOGY: INTERROGATING THE ROLE OF SCIENCE AND TECHNOLOGY

By

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**Abstract:** Arabic plays a crucial role on the global stage, being deemed indispensable. Within the United Nations, three languages are officially recognised: Arabic, French, and English. However, unlike its counterparts, Arabic receives limited support from the Nigerian government. Despite being a subject offered at both Junior and Senior Secondary School levels, the approach to teaching Arabic needs enhancement to captivate and stimulate the learners' interest. This study delves into the traditional methods employed by Arabic teachers in the past, which have inadvertently discouraged students from selecting Arabic for their professional development. The paper explores how incorporating science and technology can serve as a remedy to make Arabic more appealing and interesting to students. Furthermore, the introduction of new ideas, innovations, techniques, and scientific and technological instructional materials is considered to be a potential solution for effective teaching and learning of Arabic literature

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## INTRDOUCTION

The motivation behind this paper stems from the necessity to position science and technology as a remedy for the challenges encountered in the teaching and learning of Arabic literature, particularly considering the perceived difficulty of the language. Despite the distinction between language and literature as separate subjects at the senior secondary and tertiary levels, their inherent connection remains uncontroversial, given that language serves as the conventional medium for literature. The integration of science and technology is envisioned as a viable approach to address the perceived difficulty and enhance the appeal of Arabic language literature as a subject for students. This encompasses the adaptability of the Arabic language to encompass emerging issues, whether in a less affluent society grappling with developmental initiatives or in a fully developed economy striving to sustain and improve upon its matured economic gains.

## RESULT AND DISCUSSION

### A Brief Overview of the Early Stages of Arabic Education in Nigeria.

Originally, the introduction of Arabic education to Nigeria was intertwined with the

spread of Islam to West Africa, beginning as early as the 11th Century C.E. However, this introduction lacked structure, with minimal interaction between native Arabic speakers and Nigerian learners. The initial cohort of Arabic teachers comprised traders, primarily engaged in commerce in West Africa and itinerant mallams.

Given the voluntary nature of these teachers, there was a lack of standardized methods to make Arabic instruction engaging and effective (Mohammed, 2023). This combination of factors contributed to a widely held perception, as documented by scholars like Hakim (1965), Hunwick (1965), and Fafunwa (1972). Their collective findings suggest that the perceived difficulty of learning Arabic in West Africa, particularly in the Nigerian context, can be attributed to factors such as a shortage of trained teachers, inadequate teaching materials, the prevailing belief that Arabic primarily held spiritual value, and a failure to recognise its practical utility. To enhance proficiency among Arabic learners, the author recommends incorporating science and technology as a solution to improve the teaching and learning of Arabic literature, among other measures.

#### **New Ideas and Terminology for Groundbreaking Creations.**

Arabic has been embraced as one of the operational languages within the African Union (AU) and the United Nations (UN). From a technical standpoint, the scientific and technological aspects of Arabic are evident in its ability to incorporate contemporary terminology while also offering suitable vocabulary and expressions for modern inventions. Arabic, being both adaptable and linguistically rich, proves itself capable of serving as a medium for scientific discourse, journalism, and administrative communication. The following table exemplifies the linguistic quality of Arabic in these contexts.

**Table1. Modern Terminologies/Inventions and their Arabic Equivalent**

	English Terminologies	Arabic Equivalent
i	Methodology	المنهجية
ii	Space shuttle	مركبة فضائية
iii	Astronaut	رائد فضاء
iv	Psychology	علم النفس
v	United Nations	الأمم المتحدة
vi	World Court	المحكمة العالمية
vii	Telephone	هاتف
viii	Astrology	علم التنجيم
ix	Science	علوم
x	Technology	التقنية
xi	Scientist	الجنس البشري
xii	Technologist	التقني
xiii	Daily Exercise	التمرين اليومي
xiv	Computer	العقل الالكتروني
xv	Constitutional Conference	المؤتمر الدستوري
xvi	Sterilisation	تعقيم
xvii	Strategy	إستراتيجية
xviii	Cloning	استنساخ
xix	Constitutional Rights	الحقوق الدستورية

xx	Family Planning	تنظيم الأسرة
xxi	Engineering	الهندسة
xxii	Engineer	المهندس

**Source:** Fieldwork

The application of the science and technology approach as a solution for instructing Arabic literature can be expanded to the classroom setting, as evident in the teachability of Arabic across all education levels. At the secondary school level, adequate literature resources are accessible. The linguistic richness of Arabic offers secondary textbook writers an abundance of materials, enabling them to present content in a manner that is not intimidating to the end users. For instance, Arabic expressions for casual greetings, light conversational models for classroom use, Arabic folk tales, and prominent compilations like "A Thousand Nights and a Night" serve as excellent content for school textbook writers.

### **Showcasing Science and Technology Through Educational Resources**

An instructor who conducts lessons without the aid of instructional materials, neglecting active engagement with students, not only violates the National Policy on Education but also expends energy with minimal impact. Richmond, as cited in Adeleye, succinctly underscores the importance of this approach, asserting that it imbues learning with greater meaning, capturing pupils' interest and attention, stimulating learning, encouraging expression, facilitating visualization, and providing a sensory connection with realities (Haleem, Javaid, Qadri & Suman, 2022).

For an Arabic teacher, the use of instructional materials represents a decisive departure from antiquated teaching methods. Employing such materials as a supplement contributes to the improvement of quick and creative thinking, sharpens students' imagination, and fosters spontaneity and enthusiasm. This shift away from rote learning aligns with the nature of Arabic studies, where learners are oriented towards seeing, hearing, touching, feeling, and experiencing.

The advent of educational technology has transformed the conventional roles of Arabic teachers by equipping them with skills, resources, and methods that enhance learners' ability to grasp concepts more effectively, comprehend more deeply, retain information longer, and apply knowledge more accurately compared to traditional approaches. The significance of instructional materials in the teaching and learning of Arabic literature is immeasurable, actively supporting learners in the accurate application of acquired knowledge. The era when a teacher relied solely on their voice, a chalkboard, chalk, and extensive sets of books is long gone, and Arabic teachers should adapt to these evolving challenges.

**Table 2. Showing Samples of Arabic instructional materials suitable for use in the teaching and learning of Arabic literature.**

	English Terminologies	Arabic Equivalent
i	Instructional Materials	المواد التعليمية
ii	Stationary Picture	المسجلات مختبر
iii	Recorder	المعينات
iv	Language Laboratory	مختبر اللغة
v	Talking films	افلام ناطقة
vi	Television	التلفاز
vii	Video	الحاكي
viii	Cards	البطاقات

ix	Gramophone	الحاكي
x	Illustrative Drawing	الرسم التوضيحي
xi	Hardware	الادوات المعدنية
xii	Software	منسوخات
xiii	Slides	الشرائح
xiv	Audio-visual	سمعية وبصرية

Adeleye (1973) underscores the transformative potential of media in education, asserting that its proper use can render the presentation of learning events more vivid, lively, and captivating, ultimately facilitating a deeper mastery of content. However, this powerful tool comes with a caveat: users, particularly teachers, must exercise ethical considerations to prevent the overreliance of students on instructional materials at the expense of traditional note-taking practices.

In the realm of Arabic education, where nuances of language and script are paramount, instructors play a pivotal role in striking a balance between modern instructional methods and foundational practices. It is crucial to recognize that while instructional materials can enhance the learning experience, they should not replace fundamental skills such as note writing, which remains a cornerstone in the educational process. Adeleye's emphasis on the vivid and engaging presentation of learning events resonates strongly with the evolving landscape of education, where multimedia elements have become integral. The incorporation of various media formats, including visuals, audio, and interactive tools, has the potential to bring lessons to life, catering to diverse learning styles and preferences. This dynamic approach not only captures students' interest but also creates an immersive learning environment conducive to content mastery.

Nevertheless, a cautious approach is warranted to prevent the misuse of these educational resources. Teachers must avoid creating an environment where students rely solely on instructional materials, overlooking the valuable practice of note-writing. In the context of Arabic language learning, the traditional method of writing on the chalkboard remains indispensable. This practice not only allows students to copy essential information but also emphasizes the importance of writing in the Arabic language learning process. Writing in Arabic holds a distinct significance, as the script itself is an essential aspect of the language. Arabic learners need to develop proficiency in reading and reproducing the script accurately. The chalkboard serves as a tangible medium for students to observe and practice the intricate strokes and shapes of Arabic letters, fostering a hands-on learning experience that contributes to script mastery.

Moreover, the traditional practice of writing on the chalkboard aligns with the ethos of Arabic education, where the oral and written components are intricately woven together. Students benefit not only from seeing the written form of the language during class but also from having a tangible resource to consult later. This dual reinforcement, through auditory and written means, reinforces the learning process, aiding students in retaining and comprehending the material more effectively. As students leave the classroom, armed with notes copied from the chalkboard, they carry a piece of the lesson with them. The act of writing itself is a cognitive process that enhances understanding and retention. When students revisit their notes at home, they engage in a process of active recall, reinforcing the

concepts learned in the classroom. This practice goes beyond mere rote memorization; it encourages a deeper understanding and internalization of the subject matter.

In essence, the traditional practice of writing on the chalkboard serves as a bridge between modern instructional methods and foundational learning practices. It upholds the importance of writing in Arabic education, recognizing its role as a fundamental skill intertwined with language mastery. By striking this balance, instructors ensure that students not only benefit from the dynamic presentation facilitated by instructional materials but also retain the essence of traditional practices that contribute to a comprehensive and effective learning experience. Adeleye's assertion regarding the transformative potential of media in education resonates profoundly in the context of Arabic language learning. While embracing modern instructional materials, it is imperative to maintain the ethical use of these resources and preserve traditional practices such as writing on the chalkboard. This balance ensures that students receive a holistic and enriching educational experience, where the dynamic and engaging aspects of multimedia instruction complement, rather than replace, foundational skills like note writing in the Arabic language learning process.

### **Categorisation of Educational Resources Based on Scientific and Technological Criteria**

For Arabic literature teachers to excel in the art of teaching, it is essential to appropriately employ the following instructional materials during classroom sessions.

#### **Projected and Non-Projected Materials**

The classification of Scientific and Technological Instructional Materials can be delineated into two categories: Projected and Non-Projected Materials.

**Non-Projected Materials:**

**Pictures:** Pictures are visual aids that engage the sense of sight without the need for additional lighting. They serve as non-projected materials, contributing to a deeper understanding of the subject matter. Pictures are highly accessible, easy to apply, and cost-effective to produce. Importantly, they do not require specialized machinery or equipment for display, making them a versatile and practical resource for educators.

**Charts:** Charts represent a versatile combination of pictorial, graphic, numerical, or verbal elements strategically designed to present a clear visual summary of crucial processes or relationships. Tabular charts, for example, are valuable tools for distilling complex information into a comprehensible visual format, aiding in the effective communication of concepts.

**Audio-aids:** Audio-aids encompass various teaching and learning devices that predominantly appeal to the sense of hearing. This category includes records, record players, and tape recorders. Among these, audio tapes prove especially valuable for Arabic pronunciation instruction. They offer an auditory dimension to the learning experience, enhancing language acquisition and oral proficiency.

**Visual aids:** Visual aids comprise tangible teaching and learning devices that are visible to students. This category includes real objects, maps, and other visual aids that provide a concrete and visual representation of concepts. Real objects, for instance, can offer a hands-on learning experience, promoting better understanding and retention.

**Projected Materials:**

**Audio-Visual:** The term "audio-visual" refers to instructional materials that offer learners simultaneous experiences through both audio and visual elements. This dual



sensory appeal, engaging both hearing and sight, contributes to a more immersive learning experience. This category includes multimedia presentations, videos, and other materials that leverage both auditory and visual channels for effective communication.

**Hardware:** Hardware represents the classification of all machines and equipment integral to the instructional process. This encompasses projectors, television sets, tape recorders, and other technological tools. These hardware devices play a practical role in facilitating the easy comprehension of students, enhancing the overall learning environment through technological advancements.

**Software:** In the context of instructional materials, software refers to all materials used in conjunction with hardware. These materials act as the carriers of knowledge or information. Examples include films, tapes, and transparencies, which, when combined with hardware, create a comprehensive and technologically enhanced learning experience. The software complements hardware, working together to convey educational content effectively.

#### **The Objective of Using Projected and Non-Projected Materials:**

The overarching goal of incorporating both projected and non-projected materials is to facilitate the teaching of simple facts, identification tasks, concepts, procedures, or attitudes. These materials serve as catalysts for guided study and can prompt engaging discussions through generated questions initiated by either learners or teachers. Embracing scientific and technological equipment equips Arabic teachers to familiarize themselves with modern materials, providing a fresh perspective and relevance to Arabic studies in the contemporary world (Freitas, Lupinacci & Pais 2017). This adaptation ensures that the teaching methods align with evolving educational practices and effectively meet the needs of today's learners (Bagarinao, 2019).

#### **The Purpose of Employing Projected and Non-Projected Materials**

The aim of utilizing both projected and non-projected materials is to instruct on basic facts, identification tasks, concepts, procedures, or attitudes. Guided study facilitates the generation of questions, catalyzing stimulating discussions that can be initiated by either the learners or the teacher. This scientific and technological equipment is intended to equip Arabic teachers, encouraging them to familiarize themselves with contemporary materials. This, in turn, imparts a fresh perspective to Arabic studies, rendering them more relevant to the modern world.

### **CONCLUSION**

The myriad advantages of integrating science and technology into the realm of Arabic literature education are profound and contribute significantly to the enhancement of teaching and learning experiences. This innovative approach signifies not only a departure from traditional and often outdated teaching methodologies for the Arabic language but also opens up avenues for constructive interaction between Arabic educators and their students.

The incorporation of science and technology into Arabic literature education presents a unique opportunity to strike a harmonious balance between conventional teaching practices and the transformative power of modern instructional methods. This equilibrium creates an environment that fosters a renewed interest in the subject for both Arabic teachers and students alike.

One of the key merits of employing scientific and technological instructional materials is their ability to complement and reinforce both verbal and visual messages. This multi-sensory approach engages students more deeply, accommodating diverse learning styles and preferences. The use of visuals, interactive elements, and multimedia content allows for a more comprehensive understanding of Arabic literature, transcending the limitations of traditional teaching tools.

Moreover, the integration of technology into Arabic literature education facilitates a dynamic and interactive learning environment. This departure from traditional methods promotes meaningful interactions between teachers and students, fostering a collaborative and engaging atmosphere. Through technology-enhanced activities, students are encouraged to actively participate in the learning process, leading to a more profound comprehension of Arabic literary concepts.

Motivating interest in the subject is another notable advantage of incorporating science and technology. The interactive nature of technology-based instructional materials captures students' attention, making the learning experience more enjoyable and stimulating. As a result, students are more likely to be actively engaged in the learning process, leading to a deeper understanding and retention of Arabic literary concepts.

Additionally, the use of scientific and technological instructional materials serves as a rich source of information and authority. Access to a wealth of digital resources allows both teachers and students to explore diverse perspectives, access current information, and stay updated on the latest developments in Arabic literature. This not only enriches the educational experience but also empowers students with a broader and more nuanced understanding of the subject matter.

Perhaps one of the most practical advantages is the time-saving aspect for teachers. The integration of technology streamlines the preparation process, enabling educators to access pre-designed materials, multimedia content, and interactive tools. This efficiency allows teachers to allocate more time to engaging with students, addressing individual needs, and facilitating meaningful discussions.

The incorporation of science and technology as a panacea for effective teaching and learning in Arabic literature brings about transformative benefits that extend beyond the classroom. It revitalizes the educational landscape, making the study of Arabic more dynamic, interactive, and relevant to the modern world. The advantages encompass enhanced comprehension, increased engagement, and a more efficient teaching process, ultimately contributing to the cultivation of a deeper appreciation for Arabic literature among students.

## RECOMMENDATION

The paper proposes several recommendations aimed at revolutionizing the teaching and learning of Arabic literature through the incorporation of modern science and technology. Among these recommendations is the suggestion that the Nigerian government take a proactive stance by establishing functional centres dedicated to the design, production, evaluation, storage, and retrieval of scientific and technological instructional materials. These centres would serve as hubs for innovation, ensuring the continuous improvement and accessibility of resources essential for effective Arabic literature education. Additionally, the paper advocates for the establishment of such centres at educational institutions, specifically highlighting the College of Education Ikere-Ekiti as a potential

candidate for this role. Collaborating with the Ekiti State government, renowned as the "Fountain of Knowledge," the College could spearhead the creation of a centre dedicated to the development and utilization of modern instructional materials. The College of Education Ikere-Ekiti has a commendable track record, exemplified by the establishment of the Educational Laboratory Technology (ELT) and the creation of Technical and Language Laboratories within the institution.

To ensure the success of this initiative, the provision of physical facilities and electronic equipment is deemed essential. The establishment of state-of-the-art facilities such as ultra-modern language laboratories, audio aids, and visual aids is identified as crucial in aligning with the contemporary requirements of effective teaching and learning. These facilities serve as the linchpin of the modern science and technology approach, fostering an enriched educational experience for both teachers and students engaged in the study of Arabic literature.

Furthermore, the paper emphasizes the need for Arabic language teachers to embrace modern technology actively. It underscores that utilizing contemporary technological tools is not only beneficial for the advancement of effective teaching but also instrumental in elevating the status and relevance of the Arabic language in the present millennium. By integrating modern technology into their teaching methodologies, Arabic teachers can enhance the image of the language, making it more appealing and aligned with the evolving educational landscape.

The recommendations put forth in the paper envision a comprehensive transformation of Arabic literature education in Nigeria. Establishing specialized centres for the development and dissemination of instructional materials, particularly in collaboration with educational institutions, is poised to revolutionize the landscape. The integration of cutting-edge facilities and electronic equipment further solidifies the foundation for effective teaching and learning. Ultimately, the paper encourages not only the adoption of modern technology but also the proactive involvement of educational institutions and government bodies in shaping the future of Arabic literature education in Nigeria.

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