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The Arabic Language and Education Digitalization: Horizons and Challenges

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Abstract
This research paper aims to identify the most significant modern technologies adopted by educational curricula in the approach to teaching the Arabic language. It specifically focuses on audiovisual curricula and tools used to grasp the cognitive and methodological structure of Arabic, given its nature as a predominantly auditory language. The study seeks to explore the latest advancements in educational technology within the field of audiovisual instruction and its importance in constructing linguistic knowledge among learners. The rapid technological advancement since the beginning of the twentieth century has compelled all fields of knowledge to integrate technology into their practices. Perhaps the most significant field in this regard is education, which has greatly benefited from modern technologies in facilitating learning pathways for students across various educational levels. Technology offers new opportunities for developing both teaching and learning processes, and it helps enhance educational outcomes through the optimal utilization of modern techniques.

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Introduction:

Educational technology is defined as "an analytical approach to planning and a systematic method of design, encompassing a set of elements that facilitate the achievement of desired objectives." It can also be described as "a science based on theoretical and applied frameworks that derive concepts, relationships, and applications from other disciplines to employ and utilize teaching and learning resources at a proficient level of theory and practice." In other words, modern technologies refer to "the integration of all contemporary information revolution applications and modern technologies into the learning process—including advanced equipment and innovative instructional

methods—aiming to support the educational process, resolve its challenges, and achieve its pedagogical and training goals."

Furthermore, ***Saleh Belaid*** defines it as: "Any medium that intervenes to assist the learner in achieving educational and pedagogical purposes during direct interaction with the subject matter on one hand, and with the educator on the other. These means may vary according to the educational situation and the underlying pedagogical necessity."

Based on these definitions, it can be concluded that: Educational technology is fundamentally concerned with the cultivation of an effective, distinguished, and creative human being. Modern technologies aim to facilitate learning pathways and improve the quality of educational outcomes. They also enhance the performance of professionals in the educational field—including teachers, supervisors, and administrators—thereby ensuring distinguished productivity among all members of the educational community.

The importance of this technology is demonstrated through the following:

- Promoting Student Engagement: It helps students participate positively in education by diversifying lesson delivery through new mechanisms and tools.
- Advancing Instructional Methods: Educational technology enables teachers to use sophisticated methods for presenting curriculum materials, thereby facilitating students' information acquisition.
- Increasing Educational Productivity: It contributes to raising the productivity of the educational system both qualitatively and quantitatively. The qualitative aspect involves selecting curricula with real-life utility, while the quantitative aspect relates to the volume of information that can be acquired.
- Enhancing Retention and Recall: Educational technology works to prevent the loss of information and accelerate memory recall through engaging and stimulating instructional aids.

Types of Educational Media: Educational media are classified into several types, including:

- **Visual Aids:** These include tools and instruments that rely on sight, such as slides, opaque projections, filmstrips, motion pictures, chalkboards (whiteboards), charts and graphs, flashcards, posters and boards, globes, maps, specimens, models, museums, and exhibitions.
- **Audio Aids:** These encompass tools that rely solely on hearing, such as school public address (PA) systems, radio broadcasts, and audio recording devices.
- **Audiovisual Aids:** These include materials and tools that engage both the senses of hearing and sight, such as sound films, animated movies, filmstrips accompanied by audio recordings, television, and video.
- **Museums, Field Trips, and Educational Exhibitions:** These are considered among the most effective instructional methods that help deliver information and knowledge to students in an easy and simple manner. Examples include displaying various student activities, such as 3D models, assembly kits, and figures that convey specific objectives and information in a practical and simplified way.

These aids have diversified to meet indispensable needs. Throughout the ages, educators have realized that verbal discourse alone is often insufficient for conveying facts and information to students, let alone enabling them to attain a correct perception of such knowledge. Consequently, thinkers advocated for the utilization of alternative media; the earliest of these were drawings and images, initially termed 'Illustrative Pictures' and subsequently referred to as 'Teaching Aids'."

Characteristics of Educational Media: Educational media are characterized by a set of objective conditions that must be met to achieve the desired purpose, as follows:

- **Educational Effectiveness:** An effective educational aid is one capable of creating a positive impact and significant change in the learner's behavior toward the subject matter or educational activity.
- **Simplicity and Clarity:** The elements of simplicity and clarity are crucial for enabling learners to acquire and consolidate knowledge. Complex tools inevitably lead to complex understanding.
- **Quality and Technical Precision:** Adherence to high quality and precision in technical design is essential, while considering the learners' characteristics and accounting for their age group.

Steps for Utilizing Educational Aids: Prior to using any instructional aid, a set of pedagogical measures must be implemented to effectively achieve educational objectives. These are as follows:

- **Defining the Learning Objective or Competency:** Identifying the specific goal or competency intended to be achieved through the lesson or educational content.

- **Determining the Purpose of the Instructional Aid:** Every tool has a specific aim and function; aids vary according to their sources and intended outcomes.

- **Considering Learners' Psychological and Cognitive Aspects:** The aid must align with the educational purpose in a way that corresponds to the learners' competencies and their intellectual and cognitive abilities.

- **Strategic Implementation of the Aid:** Applying the aid according to a well-studied plan. The teacher should not display the aid before the lesson begins, but rather keep it concealed until it is needed. In doing so, the teacher ensures an element of surprise and stimulates students' interest and curiosity.

- **1. Utilizing Modern Technologies in Language Teaching during Early Years:**
- During their early years, children are predisposed to acquire language—or rather, the linguistic system. While they possess innate linguistic competence and faculty, this faculty needs to be channeled in alignment with the formal linguistic system (Al-Fusha). Therefore, it is essential to teach them phonological and grammatical rules using methods that guarantee the acquisition of the Formal Arabic system. This enables them to employ language skills according to their societal needs, based on the linguistic repertoire acquired through situational interactions within their immediate community.
- The primary faculty that must be nurtured is the **auditory faculty**, which is the most potent of linguistic faculties. As noted: "An Arab speaker, when the Arabic linguistic faculty was inherently present, would hear the speech of their contemporaries, their methods of discourse, and their ways of expressing intentions; just as a child hears the use of vocabulary in its respective meanings... and this auditory exposure is continuously renewed at every moment." This text indicates that children acquire language predominantly through the auditory channel and through linguistic immersion within an eloquent speaking community. From this environment, they learn how to express their needs and become familiar with the various styles and arts of Arabic discourse across different contexts and situations.
- **Audiovisual Aids:**
- They can be defined as "those tools that rely on the senses of hearing and sight; examples include sound motion pictures (animated films), filmstrips accompanied by audio recordings, educational television, dramatic sound performances, and field trips."

Alternatively, they can also be described as: "those media that encompass all elements relying on both auditory and visual senses to receive their content, such as sound films, video, television, transparent slide projectors accompanied by audio recordings, and still image projectors accompanied by sound recordings."

The Role of Audiovisual Aids in Teaching the Arabic Language:

Instructional aids generally contribute to enhancing the quality of the educational process, and specifically, audiovisual aids improve educational productivity through:

- **Transforming the Teacher's Role:** Shifting from a mere transmitter and lecturer of knowledge to a planner, implementer, and evaluator of the educational process.

- **Enhancing Content Delivery:** Assisting the teacher in improving the presentation and mastery of scientific material.

- **Efficiency:** Saving the time and effort expended in explaining curriculum subject matter.

- **Promoting Active Participation:** Encouraging learners to engage effectively in extracurricular activities, such as visiting exhibitions, museums, and scientific clubs.

This impact is manifested through various dimensions:

- **The Cognitive Dimension:** Audiovisual aids facilitate the acquisition of concepts, facts, principles, laws, and theories in less time than verbal methods. They aid comprehension by clarifying the meanings of abstract words when linked to tangible objects. Since words are merely symbols for experiences or things, they hold no meaning unless associated with direct experience, vicarious experience, or the object itself.

- **The Psychomotor Dimension (Skills):** Skill is defined as performing a task with speed and proficiency through continuous training and repetitive practice. Audiovisual aids play a vital role in skill acquisition by providing practical demonstrations of the target skill and supplying the necessary training tools.
- **The Affective Dimension:** These aids help increase learners' motivation toward learning. Students may occasionally experience lethargy or boredom from purely verbal instruction; however, employing diverse media and audiovisual materials stimulates attention and breaks educational monotony. This enhances student productivity regarding the subject matter. Furthermore, these tools bolster learners' self-confidence when facing educational situations, as they are characterized by interaction and reinforcement. Consequently, they lead to correct responses by satisfying learners' scientific needs through the simultaneous engagement of two senses: hearing and sight.
- **Retention and Learning Impact:** Studies have indicated that students typically forget 50% of memorized information one year after studying it, a figure that rises to 70% after two years. In contrast, research in the field of audiovisual media has demonstrated that these technologies possess significant potential for consolidating learning, reducing forgetfulness, and making learning more enduring. Studies conducted in the United States on ninth-grade students revealed that those who studied science using educational films increased their acquisition of facts by 20% compared to peers who relied solely on textbooks and traditional methods. After six weeks, the information retained by the film-using group was 30% higher than that of their classmates in traditional settings.

Audiovisual Aids:

- **The E-Book:** Electronic books support learners in general education and specifically in Arabic language acquisition. They are more fluid and interactive than printed books, saving significant time and effort. Additionally, they integrate text with audio data, static and motion pictures, and audiovisual effects, which facilitates better information consolidation and retention compared to traditional, static methods.

- **Educational Video:** Educational videos are considered highly effective instructional tools, as they simultaneously engage the senses of hearing and sight and incorporate advanced audiovisual technologies. When amplifiers and headphones are used appropriately for children, they provide a robust auditory foundation that fosters deep immersion in the linguistic context. This allows for the acquisition of the Arabic system in the most accessible, enjoyable, and beneficial manner. "Images convey lived reality, which enhances the effectiveness of language learning in classrooms through vivid topics and authentic texts that reflect real-life situations." A key characteristic of authentic educational material is that it enables learners to perceive the strong connection between their studies and their daily lives, providing opportunities to use the target language (Arabic) for communicative purposes that align with their learning styles and stimulate the activities of both the right and left hemispheres of the brain.

Audio Recording Device: The audio recorder is considered one of the most significant modern technical tools in education and is a vital technology for teaching Arabic to non-native speakers. It is an electronic device composed of a microphone, an amplifier, and a loudspeaker. It assists in the following:

- **Phonetic Recognition:** Identifying various linguistic sounds and their respective points of articulation (Makharij al-Huruf).
- **Auditory Discrimination:** Differentiating between sounds and decoding their linguistic symbols.
- **Meaning Acquisition:** Attaining the educational meaning conveyed within the lesson content.
- **Facilitating Memorization:** Assisting in the memorization of the Holy Qur'an by utilizing the auditory sense as the primary receiver of sound, as hearing is recognized as the most potent of faculties.
- **Voice Development:** Training students by recording their voices and improving the quality of their vocal performance and commentary.
- **Text-to-Speech Transformation:** Converting written text into an interactive audible format.
- **Correcting Articulation Errors:** Addressing pronunciation mistakes and linguistic solecisms (Lahn), as well as practicing the articulation of phonetically challenging words.

• **Smart Board:**

- The smart board elevates the educational process in line with contemporary demands and the learners' need for technological integration.
- **Transitioning Learning:** It shifts the learning process from a static, conventional method to an interactive approach that blends auditory and visual stimuli, enhancing learner engagement through an enjoyable experience.

- **Comprehensive Instruction:** It provides a thorough explanation of educational content by utilizing supportive media such as images, videos, and audio commentaries.

- **Efficiency and Storage:** It saves time and effort while offering the capability to store written information, which significantly reduces expenditures on printed school materials.

- **Lesson Recording:** The ability to record lessons and replay them whenever necessary.

Research Conclusion: This study concludes that technology has become an indispensable necessity across all spheres of life, particularly in education—the fundamental field that ensures the advancement of civilizations and the continuity of nations. Modern technologies in education have introduced fundamental, objective, and methodological shifts in instruction due to the following:

- **Engaging the Senses:** They address the senses—the primary gateways to learning—thereby facilitating the reception of information.

- **Skill Development:** They contribute to the advancement of the Arabic language, self-learning skills, and overall educational capacities.

- **Motivational Stimuli:** Audiovisual aids serve as a vital catalyst for learners, transitioning them from a static environment to one of engagement, excitement, and curiosity.

Despite these positive impacts, a precise scientific strategy must be established to ensure the effective management of these technological media, as technology is a double-edged sword. This perspective does not advocate for the abandonment of traditional methods; rather, it calls for an integrated approach that harmonizes the splendor and purity of the past with the creativity of the present to envision a better future.

Ethical Considerations

This study is theoretical and analytical in nature and does not involve human participants, personal data, experiments, surveys, or interviews. Therefore, ethical approval from an institutional review board was not required. The authors confirm that the research was conducted in accordance with internationally accepted standards of academic integrity, ensuring originality, proper citation of sources, and avoidance of plagiarism. All referenced materials were used solely for scholarly purposes and with appropriate acknowledgment.

Author Contributions

Both authors contributed significantly to the development of this manuscript. Dr. Medjahed Saddam Housseyn conceptualized the research idea, conducted the literature review, and drafted the initial version of the manuscript. Prof. Zeghouda Ismail contributed to the theoretical framework, critical analysis, methodological refinement, and final revision of the paper. Both authors reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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