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Teaching Languages Speech Sounds in Language Laboratories

–Primary School as a Sample–

تعليم الأصوات اللغوية للغات في المخابر اللغوية - المرحلة الابتدائية نموذجا –

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Abstract:

This template is used to format your p The world is witnessing a huge change on all levels, a jump that carries development in all areas of human life. Since education is the cornerstone of life and the basis of that progress, it was necessary to keep it pace with what is happening by using auxiliary means in that field: technology, laboratories, and the internet. Therefore, syllabi designers must seriously consider using these means to improve the language teaching process (Arabic and foreign languages).

Teaching languages in the early stages of education requires starting with the first level of linguistics, which is sound. Teaching sounds according to a sound curriculum is one of the first building blocks of language learning, ensuring its accuracy and laying the foundation for mastering it. This can be achieved by utilizing linguistic laboratories equipped with modern technological tools, which can play an effective role in presenting sound content in an engaging manner for elementary learners and enhancing their level.

Keywords: teaching, languages, speech sounds, language laboratories, primary School.

الملخص:

يشهد العالم نقلة نوعية على جميع الأصعدة، نقلة تحمل التطور في جميع مجالات حياة البشرية، وبما أن التعليم هو عصب الحياة، وأساس التقدم، كان لزاماً أن يواكب ما هو حاصل عن طريق الاستعانة بالوسائل المساعدة: من تكنولوجيا، ومخابر، وإنترنت، ولهذا يجدر بالقائمين على تسيير المناهج التعليمية وإصلاحها؛ التفكير الجاد في اتخاذ هذه الوسائل سبيلاً لتطوير تعليم اللغات (اللغة العربية واللغات الأجنبية). يتطلب تعليم اللغات في المراحل الأولى من التعليم؛ البدء بالمستوى الأول من مستويات اللسانيات، ألا وهو الصوت، فتعليم الأصوات وفق المنهج السليم، هو أولى لبنات تعلم اللغة، وسلامة أدائها، وأساس امتلاك ناصيتها، عن طريق استغلال المخابر اللغوية المزودة بالوسائل التكنولوجية الحديثة؛ وما يمكن أن تقوم به من دور فعال في تقديم محتوى الأصوات، بشكل مشوق للمتعلمين في المرحلة الابتدائية، والرفع من مستواهم.

الكلمات المفتاحية: تعليم – الأصوات اللغوية – المخابر اللغوية – المرحلة الابتدائية.

• INTRODUCTION

The field of language teaching in the phases before university, in our era and in a permanent manner, is knowing new ideologies to develop it. Therefore, many linguistic studies and theories have been established to achieve that goal. Additionally, a good number of practical research papers about computational linguistics, teaching technologies, and applied acoustics which is considered a branch of applied linguistics in order to enable learners to perform well in languages.

Language laboratories enable teachers to present their lessons about speech sounds and help them achieve their learning objectives through providing a clear portrayal of the characteristics, specifications, and importance of the auditory material, and its position in the educational process.

The current study attempts to solve a scientific and educational problem. It answers some fundamental sub-questions:

- ✓ How can educational syllabi use language laboratories to teach speech sounds?
- ✓ Can language laboratories employed for teaching speech sounds in primary schools achieve proficiency and mastery of multiple languages?

• THE STUDY OBJECTIVES:

- The importance of language laboratories in the field of language education and their role in alleviating the burdens on teachers.
- Utilizing language laboratories in delivering educational material (auditory material).

- Facilitating language learning to promote translation, which is considered a fundamental factor in transferring knowledge amidst the cognitive explosion witnessed globally.
- Language laboratories as a means to learn multiple languages after mastering their linguistic sounds.
- Addressing language learning challenges, whether in Arabic or foreign languages.
- Achieving the principle of learning through technology.

• IMPORTANCE OF THE STUDY:

- The various needs of the recent era make it necessary to control languages in order to face difficulties.
- The importance of providing language laboratories at schools.
- Language laboratories are of the essential educational means in the field of speech sounds teaching.
- Improving linguistic skills among primary school teachers and being able to utilize ICTs.
- The importance of language laboratories which is considered to be one of the primary elements to help learners acquire the subject.

• THE PROCEDURAL DEFINITION OF SPEECH SOUNDS TUTORING:

The auditory material represents a set of activities, and the educational process represents the procedures through which this material is presented, occurring within the linguistic laboratory, with the aim of imparting to learners the skill of performing sounds in multiple languages, both Arabic and foreign. The entire process requires a comprehensive cognitive system composed of:

- Learners in need of mastering languages.
- Processing the auditory material before presentation.
- Organizing previous and subsequent information, understanding it, establishing relationships between them, and linking them together.
- Ensuring the graduation of competent learners proficient in performing various sounds and languages.

• **DEFINING LANGUAGE LABORATORIES:**

The language laboratory is defined as a room specially designed for language teaching. It represents the physical and structural framework of the educational process in educational technology. Linguistic laboratories are «facilities consisting of rooms and chambers used for language teaching in its various linguistic systems. They contain advanced devices and tools that handle sounds, contribute to the presentation of sound and speech, clarify the learning process for letters, and various linguistic performances. Their primary goal is to achieve language proficiency among learners.»(Tolba 2010, 16.)

Learners sit each in a small compartment, separated from each other by walls or noise-blocking glass, so that each learner cannot hear the neighboring one. This allows them to practice speaking the language they are learning without disturbing others or being disturbed by them, enabling all learners to practice simultaneously.

At the forefront of the laboratory, there is a platform for the teacher, facing the learners' compartments, equipped with a

computer, a headset worn by the teacher, and a microphone to enable hearing and speaking with all learners collectively or individually using control keys on the teacher's console, which also includes a screen for displaying lessons.(Al-Qasimi 1970, 72)

• **THE THEORETICAL BASIS FOR THE LANGUAGE LABORATORY:**

Languages are perceived as a set of auditory habits, acquired through imitation and repetition. Therefore, language teaching in linguistic laboratories requires providing the appropriate environment for forming these linguistic habits. It offers the required linguistic material on one hand and provides the necessary time for training on the other hand. All learners can practice during the entire lesson hour without one affecting the other, enabling them to acquire the habit of using the language.(Al-Qasimi 1970, 85)

On the other hand, psychological theory emphasizes the importance of the sequential development of the four known skills: listening, speaking, reading, and writing when learning a language, starting with listening, then practicing speaking. This is attributed to:

-Training the ear to hear the language facilitates speaking it.

-Focusing on one skill at a time facilitates the learning process.

Therefore, the function of the linguistic laboratory is to assist the learner in conscious and effective listening, enabling them to listen to letters, then words, then sentences several times.

- **THE PRACTICAL BASIS OF THE LANGUAGE LABORATORY:**

The practical basis of the language laboratory relies on what is known as the 'programmed teaching method,' which allows each learner to work according to their ability and pace. In the language laboratory, the learner listens to the recorded material/lesson/content as many times as needed, then proceeds at a speed that suits their abilities. They conduct their exercises safely, without the embarrassment of making mistakes in front of their peers. (Al-Qasimi 1970, 85)

- **CHARACTERISTICS OF LANGUAGE LABORATORY:**

Some of the features that distinguish language laboratories include: (Ali Fawzi, Attia Salem 2014, 18)

- ❖ Facilitating conversation in the target language, overseen by the teacher who supervises conversation groups.
- ❖ Regular interactive relationships between the teacher and the learner, as well as among learners within groups.
- ❖ Recording and distribution of voices.
- ❖ Availability of multimedia resources for computer devices in language laboratories.
- ❖ Ability to transmit voices.

- **ACTIVATING THE ROLE OF LANGUAGE LABORATORIES:**

In order for linguistic laboratories to facilitate the task of teaching sounds for different languages and assist teachers in their educational role, they must be activated by:

- Conducting training courses for teachers to equip them with the skills needed to work in the laboratories.
- Providing linguistic laboratories with modern devices, prescribed materials, and electronic applications.
- Activating the role of online education within the laboratories to cover any deficiencies in materials and equipment.
- Utilizing modern strategies and methods in the teaching process and in assessing learners.
- Considering the rapid developments happening worldwide, whether in devices, teaching methods, or modern curricula.
- Considering scientific experiments to mitigate any shortcomings.

- **LANGUAGE LABORATORIES FUNCTIONS:**

Educational curricula stand at the forefront of teaching elementary learners the correct pronunciation of linguistic sounds, a process that is not limited to language education but extends to all subjects. The field of language learning is intricately linked to the complexities and psychological and social structures of this age group. It emphasizes the importance of addressing learners' needs, which is the primary goal of teaching them multiple languages. Applied linguistics should be careful in selecting materials related to teaching linguistic sounds. In this context, the impact of sounds from the learners' native language on learning foreign language sounds should not be overlooked.

- The laboratories work on enhancing phonetic skills and increasing

confidence in communication and writing.

- Linguistic laboratory courses are distinguished by their high quality, exceptional content, and carefully designed educational materials to meet the needs of learners and enhance their understanding of multiple languages.
- Learning starts with sounds, then moves on to vocabulary, sentences, and structures, providing learners with the pronunciation skills needed to communicate confidently in different languages.
- Improving listening, speaking, reading, and writing skills through practical practice and overcoming various challenges.

Language laboratories are considered machines like any other; if used properly, they achieve their intended purpose, but if misused, they can waste time, money, and effort. Several conditions are necessary for the success of a language laboratory in fulfilling its mission:

First: Proper preparation of the teacher.

Second: Preparing the learner to use the laboratory, which requires understanding the nature of the language laboratory and comprehending its purpose.

Third: The learner should develop good listening skills.

Fourth: The learner should develop self-criticism to be able to identify their mistakes.

Fifth: Preparation of linguistic material containing suitable audio lessons for the learners' level.

Sixth: Directing attention to linguistic laboratories because they are beneficial in the early stages of language learning, which rely on listening and repetition, both of which are better facilitated by laboratories.

• **TEACHING SPEECH SOUNDS IN LANGUAGE LABORATORIES AT PRIMARY SCHOOLS:**

Passing from one level to another in teaching speech sounds for multiple languages doesn't happen overnight, nor is it tied to the end of one academic year and the beginning of another. It's not determined by the number of hours allocated for transitioning from one level to another. Rather, it's a process influenced by various factors such as the teacher, the time dedicated to teaching, activation, and practice, the learner and their skills, the curriculum, and the learning environment. All these factors play a significant role in moving from a lower to an intermediate level, and eventually reaching a level of proficiency. Therefore, emphasis should be placed on the elementary stage.

Teaching speech sounds holds immense importance in the primary phase because they represent the backbone, structure, and core of language. There's a close relationship between teaching linguistic sounds and language instruction. Teaching sounds is primarily the responsibility of the teacher, while language instruction is a collective responsibility shared by the entire community, including families, mosques, schools, streets, and various institutions. In order to achieve the goal of teaching linguistic sounds for languages, schools need careful planning from curriculum developers, program

designers, and educational document creators, as well as qualified teachers capable of teaching these sounds effectively, and the utilization of appropriate tools to facilitate their learning.

The reason for emphasizing the importance of careful planning lies in the significance of language itself. «Language represents the cultural identity that constructs a nation, safeguards its entity and glory. It comprises a set of phonological, morphological, lexical, and syntactic systems that integrate to produce expressions and sentences with meaning and significance within a specific group. Moreover, it serves as an expressive system reflecting human thoughts, expressing life needs, feelings, emotions, thoughts, and creativity through phonetic units and meaningful words that can be articulated.» (Abdelkader Ali 2002, 100) By understanding the methods of each language, learners can effectively express themselves and communicate with individuals and communities using these phonetic units and verbal expressions.

Teaching the skill of correct pronunciation requires significant attention, especially in the early stages of language learning, particularly after the inclusion of languages in official decisions in primary schools. Since 2005, the Ministry of Education decided to include the Amazigh language in the curricula of primary sections, starting from the fourth year. Additionally, there has been an urgent implementation of the presidential decision to teach the English language in the primary stage, starting from the academic year 2022-2023. Instructions were given to the directorates of education to implement the decision before the start of the academic

year. This is in addition to the presence of the Arabic language as an official language and the French language as a foreign language in primary educational curricula since independence. The combination of these languages in primary education requires thorough teaching and the application of technology in language labs.

The language teaching process in language labs requires technological devices, which refer to educational devices used by teachers to facilitate the teaching and learning process. This contributes to achieving educational objectives, helps diversify teaching methods to address individual differences among learners, increases positive participation in acquiring educational experiences, and enhances the ability to reflect and observe accurately.

Diversifying educational resources is a means to build and form concepts properly by embodying abstract concepts through tangible means. It helps overcome the problem of differences in the meaning of words as understood by the teacher versus the learner. It also aids in increasing the learner's attention, breaking the monotony of educational situations, and contributes to building the learner's educational experiences, making them more prepared to acquire further knowledge. Additionally, it reduces the learner's error rate. (Khasir 2016, 10)

The use of technology in language labs is one of the modern teaching methods, represented by “**Educational Technology**,” a term that emerged after the introduction of technological means in education and other fields. The term "Educational Technology" overlaps with many other terms, «including “Educational Techniques,” “Instructional Media,” “Illustrative Tools,” “Assistive

Devices,” and "Educational Media." These terms are used interchangeably with the term “Educational Technology” despite their different connotations and meanings.» (Sabri 2009, 17) The term “Educational Technology” has become common to refer to its meaning, which signifies «the scientific applied study (...) or the science of applying knowledge for scientific purposes in an organized manner.» (Sabri 2009, 18)

Educational Technology is the development of systems, technology, aids, and tools to enhance the human learning process. The term became widespread with the advent of the internet, technological devices, adopted applications, and electronic media, all of which contribute to information transfer and the exchange of files and information among users. This means that Educational Technology requires «organized interaction between the human element involved in the teaching process, the educational devices, machines, and tools, and the educational materials, with the aim of achieving educational objectives or solving educational problems.» (Sabri 2009, 19)

The integration of technology and devices has enabled the adaptation of the field of education and training to deliver content to learners. Galbraith referred to it as a way of thinking or a method of working, and a problem-solving approach; it relies on the systems approach to achieve its specified goals and is based on research findings in all human and applied fields to achieve goals with the highest degree of efficiency and cost-effectiveness.

• THE METHODOLOGIES FOLLOWED IN TEACHING

SPEECH SOUNDS IN LANGUAGE LABORATORIES:

Teaching phonetic sounds of languages in language labs relies on the methodology of listening, then pronunciation. To enhance the educational process in teaching phonetics to beginners, language labs are equipped with various technological tools, making the process more efficient and capable of achieving desired learning outcomes. Among these tools are audiovisual aids such as short films, application programs, and audio recordings, which «have the potential to be effectively used in teaching large numbers of learners. Using such tools, it is possible, even partially, to overcome the problem of lengthy curricula, as well as to overcome some of the difficulties faced by teachers in teaching phonetic sounds.» (Markoun 2021, 72)

The process of teaching linguistic sounds in language labs begins with the learner spending a period listening to and speaking the language without being exposed to any written form of its letters, sounds, vocabulary, or structures, whether written in Arabic or in foreign/Latin letters. The educational process at this stage includes presenting a set of images and drawings that help develop specific auditory skills.

This method of teaching linguistic sounds is based on the premise that «language is a set of sound symbols governed by a specific system, which members of a community recognize their meaning in order to achieve communication among each other.» (Kazim, Jaber D.T, 10-11)

Therefore, enabling the learner to master the sounds of a language/languages in terms of letters, vocabulary, and

structures allows them to effectively communicate with others. Starting with the phonetic level in the elementary stages affirms that language is fundamentally a sound system, and that writing is a system derived from it.

During the process of teaching linguistic sounds at this stage, there are two parties involved: a speaker and a listener. Speaking and listening hold a special place among language skills and arts. One writer illustrated the relationship between language skills and individual practice by saying: «An ordinary person listens to what equals a book every month and writes what equals a book every year.» (Taima 1981, 163) This statement underscores the importance of reinforcing sound skills among learners, which, at the same time, serves as a catalyst for learning other linguistic skills.

The teacher of linguistic sounds should allocate a specific period during which the learner listens to their language or a new language and practices pronunciation. This creates familiarity with the sounds, enabling the learner to distinguish between the various sounds of the languages they are learning. As the learner receives the auditory material, they will notice relationships between the different sounds of the languages. (Taimeh, 42)

-Matching elements: The presence of linguistic sounds pronounced and written in the same way.

-Similar elements: The existence of similarities in the pronunciation of linguistic sounds across languages.

-Contrasting elements: The presence of sounds in one language that have no equivalent in another language.

Teachers aim to help learners understand the relationship between sounds in languages by training them to pronounce linguistic sounds correctly and produce them, not just develop listening skills.

• IMPROVING THE LEARNERS' LISTENING SKILLS IN LANGUAGES LABORATORIES:

Languages Laboratories can improve the learners' listening skills through the following ways:

-Identifying Speech Sounds:

Distinguishing between sounds and articulation of letters is a fundamental requirement for correct pronunciation and effective auditory comprehension. There are programs that allow learners to listen to vocabulary and then ask them to identify the word they think they heard through multiple-choice questions. They also provide learners with the opportunity to listen repeatedly and offer feedback on their performance and the errors they made. (Awarib, Abi Mouloud 2010, 89)

-Pronunciation, Intonation, and Rhythm:

There are computer programs specifically designed for language labs that help learners recognize sounds, then practice pronunciation with intonation. These programs offer exercises focused on listening and repetition using digital speech technology. They analyze various sound patterns, distinguishing between them. Learners listen to the pronunciation first, then speak it into the microphone. The sound is converted into digital form and stored on the disk. As for rhythm training, learners can speak a phrase into the

microphone, and the computer draws a graph of it, comparing it with a stored graphical representation of that phrase. Learners can then observe the differences between the two graphs. (Al-Asil, 1422 A.H, 193)

-Auditory Comprehension:

It is defined as «one of the language skills that requires listening to spoken symbols with the aim of understanding, interpreting, and critiquing them.» (El said 2011, 19) Learners listen to a text, followed by multiple-choice questions or fill-in-the-blank exercises. Learners then answer these questions and receive appropriate feedback.

-Directed Listening:

Questions or objectives are presented before listening to the text. After the teacher reads the questions, the text is listened to, and then the questions are answered. (El said 2011, 19)

-Speech:

Some programs are used to develop speech skills in learners, where learners listen to conversations between multiple individuals on various topics. Through these conversations, they learn how to ask questions to others in specific situations and how to respond if questions are asked of them. Additionally, the internet provides websites for practicing speech by communicating with learners from different locations through voice and video, exchanging opinions. (Al-Osaili, no date 193)

-Vocabulary:

Computer programs used in language labs assist in learning vocabulary by

associating words with images and sounds. When learners pronounce the letters of a word, understand its meaning, derive derivatives from it, place it in a correct context, comprehend it through listening and reading, produce it in speech and writing, and use the word in various contexts to demonstrate understanding, it can be said that they have reached a level of proficiency. Vocabulary can be presented through educational games, and there are programs that display words on the screen and then require learners to pronounce them repeatedly. (Wafiq 2016, 03)

• CONCLUSION

Learning linguistic sounds is the cornerstone of language acquisition and mastery, especially in our era marked by rapid changes in all fields. It's imperative for individuals to master their native language and other languages, enabling them to communicate with diverse communities. Mastery of multiple languages has become a norm that leads to understanding others. In conclusion, the importance of teaching linguistic sounds for multiple languages can be summarized in the following points:

- ✓ Exploring the cultures and literatures of other nations and benefiting from them.
- ✓ Expanding the limited scope of thought due to reliance on a single language.
- ✓ Exchanging opinions, ideas, and experiences.
- ✓ International convergence and understanding among peoples leading to coexistence.
- ✓ Benefiting from the civilizations of advanced nations.
- ✓ Enriching the national language at all levels.

- ✓ Eliminating narrow regional thinking, bigotry, and racial discrimination.

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