

## REALITY OF SPEECH THERAPY TRAINING FROM THE PERSPECTIVE OF SPECIALIZATION PROFESSORS: BETWEEN THEORETICAL AND PRACTICAL TRAINING

Karboua Sihem<sup>1</sup>, Benostmane Abdallah<sup>2</sup>

<sup>1</sup>University Center of Tipaza, (Algeria) [karboua.sihem@cu-tipaza.dz](mailto:karboua.sihem@cu-tipaza.dz)

<sup>2</sup>University Center of Tipaza, (Algeria) [Benostmane.abdallah@cu-tipaza.dz](mailto:Benostmane.abdallah@cu-tipaza.dz)

**Received: 04/04/2024**

**Accepted: 10/07/2024**

**Published: 02/08/2024**

### Abstract:

This study aims to critically examine the reality of speech therapy training in Algeria, specifically contrasting the theoretical and practical components as evaluated by university professors specializing in this field. To achieve this, a comprehensive survey was administered to 40 professors across various Algerian universities, with the objective of collecting relevant data for a detailed analysis concerning the theme of the study.

The outcomes of this survey disclosed considerable deficiencies in both the theoretical knowledge and practical training in speech therapy, underscoring pronounced gaps in the current educational framework. Drawing from these findings and the recommendations provided by the surveyed professors, this paper proposes a set of targeted strategies intended to significantly enhance the quality of speech therapy training at Algerian universities.

**Keywords:** Speech Therapy; Training in Speech Therapy; Theoretical Training; Practical Training.

### 1. Introduction:

The discipline of speech therapy is dedicated to addressing communication disorders that can significantly affect individuals' daily interactions and overall quality of life (Nouani, 2018, p. 15). Originating as a diverse field of academic inquiry, speech therapy encompasses a variety of sub-disciplines, each offering unique perspectives and specialized knowledge critical for comprehensive research (Campolini, Tollet, & Vansteelandt, 2003, p. 5).

In Algeria, the evolution of university-level training in speech therapy has experienced several transformative stages, marked by significant pedagogical shifts and enhancements in the educational framework.

The inception of university training in speech therapy in Algeria was characterized by a notable deficiency in qualified instructors, which initially hampered the development of a robust educational structure. However, as the academic community grew, the number of qualified educators increased progressively, facilitating the transition from traditional

educational models to the more comprehensive Licence, Master, and Doctorate (LMD) system.

This system begins with a foundational year in the social sciences, followed by two years focused on speech therapy specialization to obtain a bachelor's degree, and concluding with two additional years for a master's degree in specialized areas of speech therapy, such as general speech and communication disorders or niche fields like auditory impairments.

National symposiums and academic gatherings have played a pivotal role in addressing the challenges faced in speech therapy training, providing platforms for discourse and the exchange of ideas aimed at refining both theoretical knowledge and practical skills. These forums have underscored the inseparable nature of theoretical and practical training in speech therapy, highlighting their mutual dependency for effective educational outcomes.

A notable event, the first national days of speech therapy held at Constantine University under the theme "Speech Therapy Training in Algeria and Keeping up with Societal Developments," brought to light the critical need for continuous training that bridges the gap between academic settings and societal needs. This event also addressed the prevalent societal misconceptions about speech disorders, advocating for a more informed and supportive community approach.

Despite these efforts, the academic literature reveals a scarcity of comprehensive studies on the subject. Professor Nouani Hussein (2018) has critically analyzed the disconnect between academic preparation and practical application in the field, pointing out that the current research and academic efforts often do not meet the rigorous standards required for substantive scientific inquiry. This deficiency is further exacerbated by a training system that relies heavily on material superficially adapted from French, which fails to accommodate the linguistic and cultural specifics of the Algerian context (Nouani, 2018, pp. 20-21).

Through this introduction, we aim to illuminate the current state of speech therapy training in Algeria, drawing upon empirical data gathered from a survey of university professors, aiming to identify and reveal the reality of this training in both its theoretical and practical aspects. Consequently, we pose two main questions that branch into several sub-questions:

### **1.1 First Main Question:**

- Is the theoretical training in speech therapy sufficient to academically qualify a student, from the perspective of specialization professors?

#### **1.1.1 Sub-questions:**

- \_ Is the content of the theoretical training sufficient to academically qualify a student, from the perspective of specialization professors?
- \_ Is the current educational system (LMD) suitable for speech therapy specialization, from the perspective of specialization professors?

## **1.2 Second Main Question:**

- Is there a deficiency in the practical training of students in speech therapy, from the perspective of specialization professors?

### **1.2.1 Sub-questions:**

- \_ Is the practical training in speech therapy sufficient to prepare a specialist qualified for field practice, from the perspective of specialization professors?
- \_ Is there university supervision for the field internship of students in speech therapy, from the perspective of specialization professors?

## **2. Study Hypotheses:**

### **2.1 First Main Hypothesis:**

- The theoretical training in speech therapy is not sufficient to academically qualify a student, from the perspective of specialization professors.

#### **2.1.1 Sub-hypotheses:**

- \_ The content of the theoretical training is not sufficient to academically qualify a student, from the perspective of specialization professors.
- \_ The educational system currently in place (LMD) is not suitable for the speech therapy specialization, from the perspective of specialization professors.

### **2.2 Second Main Hypothesis:**

- There is a deficiency in the practical training of students in speech therapy, from the perspective of specialization professors.

#### **2.2.1 Sub-hypotheses:**

- \_ The practical training in speech therapy is not sufficient to prepare a specialist qualified for field practice, from the perspective of specialization professors.
- \_ There is no university supervision for the field internship of students in speech therapy, from the perspective of specialization professors.

## **3. Importance and Objectives of the Study:**

The significance of this study is to meticulously examine the structure and efficacy of speech therapy training in Algerian universities, focusing on the dichotomy between theoretical academic training and practical hands-on experience acquired through internships in various clinical settings.

This research endeavors to uncover the specific deficiencies and challenges encountered in the training process, as articulated by professors specializing in this field. By understanding these issues, the study seeks to propose actionable solutions and

recommendations aimed at enhancing and refining the quality of speech therapy education in Algeria.

Our research objectives are as follows:

- To rigorously evaluate the extent and depth of theoretical training provided to students in the field of speech therapy, assessing its comprehensiveness and relevance to contemporary practices.
- To pinpoint and detail the shortcomings and gaps present in the practical training experiences of students during their internships, particularly focusing on how these experiences prepare them for real-world applications.
- To analyze the alignment and coherence between the theoretical knowledge acquired by students and its application in practical settings, evaluating how effectively educational content translates into clinical competence.

#### **4. Theoretical Framework of the Study:**

##### **4.1 Overview of Speech Therapy:**

Speech therapy, known variably across different regions, reflects a diverse terminological landscape. In France and Canada, the discipline is termed "Orthophonie," a word derived from the Greek "Ortho" (correct or right) and "Phonie" (voice), indicating the correction or treatment of voice disorders. Meanwhile, in Belgium, the term "Logopédie" is used, whereas the term "Speech Therapy" is prevalent in Anglo-Saxon countries and is similarly adopted in Arab Eastern countries, including Algeria, where it serves as a direct translation from the Latin (French) term (Driouche, 2013, p. 175).

The Dictionary of Psychology defines speech therapy as encompassing a broad spectrum of interventions aimed at rectifying voice, and spoken and written language disorders. A specialist in this field is equipped to address a myriad of language issues in children, particularly those with hearing impairments, as well as adults who suffer from speech disruptions due to neurological damage or vocal disturbances (Sillamy, 1998).

Furthermore, the Medical Dictionary describes speech therapy as a discipline focused on the study and remediation of oral and written linguistic disorders. These include disruptions in voice transmission and language-related challenges, as well as difficulties associated with learning to read and write.

The application of speech therapy is extensive, covering children and adults affected by various conditions, ranging from surgical interventions on the larynx to neurological disorders, deafness, congenital anomalies, or delayed language development (Driouche, 2013, p. 176).

Complementing these definitions, Rakza and Janan (2018) offer a detailed characterization of speech therapy as a scientific study of both typical and pathological linguistic and non-linguistic communication in children and adults. Its principal objective is to

diagnose and treat voice, speech, and language disorders through specialized methods and tools, employed by trained speech therapists in collaboration with medical, psychological, educational, and social professionals.

Additionally, speech therapy also invests in understanding normal language development, which plays a crucial role in predicting and thereby preventing language disorders (Rakza& Janan, 2018, p. 7).

The exploration of speech and its associated challenges spans centuries, yet significant strides in addressing these complexities emerged notably in the eighteenth century. It was during this period that medical professionals began delving deeper into various language disorders, spurred by their increasing prevalence and diversity. The early focus centered on deafness, with dedicated efforts to teach speech to deaf individuals and foster linguistic rehabilitation (Driouche, 2013, pp. 176-177).

Noteworthy advancements emerged in the nineteenth century, particularly with Dr. Colombat's pioneering work on stuttering, leading to the establishment of the Institute of Speech Therapy in Paris in 1829, marking a pivotal moment in the formal recognition of speech therapy (Qadri, 2014, p. 18).

The aftermath of World War II witnessed a surge in brain injuries associated with speech and language impairments, prompting a broader research scope encompassing neurological language disorders alongside traditional areas such as deafness and stuttering. The late nineteenth century also witnessed a growing awareness of learning difficulties in reading and writing among schoolchildren, despite their physical well-being (Driouche, 2013, p. 177).

The twentieth century ushered in significant advancements in medical and surgical interventions, epitomized by Dr. Veau's groundbreaking surgeries on children with cleft palates. However, observations revealed persistent speech challenges post-surgery, prompting collaboration with Suzanne Borel-Maisonney, a trailblazer in modern speech therapy and phonetic linguistics.

Borel-Maisonney's pioneering research and therapeutic innovations expanded to include deaf children, culminating in the establishment of specialized rehabilitation centers and her leadership role in the Speech Therapy department of a Paris hospital in 1946. Her contributions, including diagnostic tools, therapeutic techniques, and scholarly publications, significantly enriched the field (Rekza& Jenan, 2018, pp. 8-12).

The academic formalization of speech therapy commenced in 1955, initially culminating in a Certificate of Competence before evolving into a university-level subject by 1964 (Kadri, 2015, pp. 19-20). In Algeria, the journey of speech therapy education began in 1973, initially mirroring the French model. Advocacy from Algerian specialists and researchers led to the transition to a bachelor's degree program, a milestone achieved in 1987 (Rekza& Jenan, 2018, p. 20).

## 4.2 Training in Speech Therapy:

Training in speech therapy is intricately linked to various scientific disciplines, particularly the medical sciences that delve into the anatomy and physiology of the language systems (as previously referenced). Additionally, it draws heavily from psychology, specifically cognitive psychology, as language encompasses both behavioral and cognitive processes that are intricately intertwined with psychological aspects.

This multidisciplinary approach encompasses fields such as linguistics, including phonetics (both general and functional), and psychology, particularly psycholinguistics, which delves into the psychological processes and contexts governing linguistic expression and comprehension (Houla, 2008, p. 14).

Speech therapy education equips students with a comprehensive understanding of language and communication disorders, integrating insights from diverse scientific domains. The increasing demand to address these disorders, coupled with the unique niche filled by speech therapy, prompted its establishment in Algeria. However, being a relatively new field, it requires continuous academic nurturing and practical exposure to bridge theoretical knowledge with real-world applications effectively.

The training in speech therapy comprises two pivotal components: theoretical training and practical training, each playing a crucial role in preparing students for professional practice. Here's a detailed breakdown of each component:

- **Theoretical Training:** Theoretical training encompasses classroom-based learning facilitated by specialization professors. This includes a spectrum of courses, study days, and scientific conferences aimed at imparting theoretical knowledge and understanding. The university serves as a rich resource hub, providing educational materials and platforms tailored to the specialty's nuances.
- **Practical Training:** Practical or field training constitutes hands-on experiences gained through field internships. These internships, including directed internships for thesis completion at the bachelor's and master's levels, offer invaluable exposure to real-world scenarios. The university supplements this practical training with tools, resources, and specialized field training courses, ensuring a well-rounded educational experience.

This integrated approach ensures that students not only grasp theoretical concepts but also develop practical skills essential for effective diagnosis and treatment of speech and language disorders. The symbiotic relationship between theoretical learning and practical application is fundamental to their professional growth and competence in the field.

## 3.4 Developmental Pathway of Speech Therapy Training in Algeria:

The inception of speech therapy as an academic discipline within Algerian universities dates back to 1973, marked by the issuance of decree number (44-73) on February 28, 1973, alongside subsequent amendments. This pioneering initiative was spearheaded by Professor Abdel Rahman Haj Saleh (1927-2017) at the Institute of Linguistics and Phonetics within the University of Algiers.

The responsibility was later entrusted to Professor "Zvobada Jacqueline" starting from 1971. Upon formal accreditation, Professor Jacqueline strategically positioned the discipline within the Institute of Psychology, recognizing the profound interplay between psychological and linguistic elements crucial for comprehensive speech therapy training (Nouani, 2018, p. 16).

The landscape of higher education underwent significant transformations with the advent of the LMD (Licence-Master-Doctorate) system, leading to the integration of speech therapy as a specialized field of study. The inaugural cohort under this system commenced in 2007, marking a pivotal milestone.

Formal recognition and availability of training were solidified through decision number (386) dated June 3, 2013 (Rekza& Jenan, 2018, p. 21). Presently, speech therapy is housed within the Faculty of Social Sciences, specifically within the Department of Psychology and Educational Sciences, Speech Therapy, at the University of Algiers 2, having recently evolved into its own department.

The educational journey in speech therapy unfolds through a structured curriculum. Following a foundational year encompassing a common trunk of social sciences, students transition into specialized tracks, such as speech therapy, which spans two years of focused training. The direction towards this specialization is guided by predetermined criteria established in collaboration with academic departments and training teams.

Field internships constitute a crucial component of the curriculum, typically undertaken during the third year, culminating in practical experiences integral for professional growth. These internships span various public and private sector institutions, including schools, healthcare units, hospitals, disability centers, private clinics, and nurseries.

The pursuit of a Master's degree in speech therapy is contingent upon stringent selection criteria and the availability of pedagogical resources, varying across universities. Noteworthy specializations within this domain include language and communication disorders, hearing impairment, and clinical neurolinguistics.

## **5. Field Study Procedures:**

### **5.1 Study Methodology:**

In our research methodology, we adopted the descriptive-analytical approach, aligning with the study's objectives. This methodological framework is employed in scientific inquiries aimed at collecting, categorizing, analyzing, and interpreting data pertaining to specific phenomena or issues. Our study utilizes this approach to meticulously describe and evaluate the landscape of speech therapy training in Algerian universities, elucidating deficiencies in both theoretical and practical realms from the vantage point of specialization professors (Harizi & Gharbi, 2013, p. 26).

## 5.2 Study Sample:

The study sample was intentionally selected from a primary population consisting of all permanent speech therapy professors across universities in the country that have a speech therapy department.

The study sample comprised 40 speech therapy professors who teach at faculties and institutes of social sciences within various Algerian universities. Below are the key characteristics of the sample:

- **Sample Characteristics:**

- A. Distribution of Sample Members by Degree:**

**Table 1: Distribution of Sample Members by Degree**

Degree	Frequency	Percentage
Master's	8	20%
PhD in Sciences	11	27.5%
PhD LMD	21	52.5%
Total	40	100%

Source: Prepared by the researchers

- B. Distribution of Sample Members by Specialization**

**Table 2: Distribution of Sample Members by Specialization**

Specialization	Frequency	Percentage
Speech Therapy	13	32.5%
Language and Communication Disorders	11	27.5%
Cognitive Psycholinguistics	6	15%
Cognitive and Neural Sciences	10	25%
Total	40	100%

Source: Prepared by the researchers

- C. Distribution of Sample Members by Academic Rank**

**Table 3: Distribution of Sample Members by Academic Rank**

Rank	Frequency	Percentage
Temporary Professor	7	17.5%

<b>Assistant Professor B</b>	7	17.5%
<b>Assistant Professor A</b>	8	20%
<b>Lecturer B</b>	9	22.5%
<b>Lecturer A</b>	6	15%
<b>Full Professor</b>	3	7.5%
<b>Total</b>	40	100%

Source: Prepared by the researchers

#### D. Distribution of Sample Members by Years of Teaching Experience

Table 4: Distribution of Sample Members by Years of Teaching Experience

<b>Years of Teaching Experience</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1-5 years</b>	16	40%
<b>6-10 years</b>	9	22.5%
<b>11-15 years</b>	7	17.5%
<b>16-20 years</b>	6	15%
<b>More than 20 years</b>	2	5%
<b>Total</b>	40	100%

Source: Prepared by the researchers

- **Commentary on Sample Characteristics:**

The study sample consisted of 40 university professors, both male and female, holding advanced degrees in speech therapy. These degrees ranged from Master's to PhD in Sciences and PhD (LMD), indicating that the research sample included all the qualifications necessary for the position of university professor.

The specializations of these professors cover a wide array of areas essential for postgraduate training in speech therapy, including Speech Therapy, Language and Communication Disorders, Cognitive Psycholinguistics, and Cognitive and Neural Sciences. Furthermore, the academic ranks of the study participants encompassed all possible university professorial ranks, from Assistant Professor B to Full Professor, in addition to temporary professors. These professors were affiliated with a variety of universities and university centers. Regarding their teaching experience, it ranged from one to over 20 years.

It is important to note that the choice to limit the sample to this number of participants was due to the difficulties encountered in securing the cooperation of sample members with the requirements of our study.

### 5.3 Study Limitations:

The preliminary and primary phases of our study were conducted throughout the academic year 2021/2022, with data processing continuing until the second quarter of 2023. This extended timeline was necessitated by the comprehensive nature of our study, which involved diverse sample groups, and by certain challenges encountered in securing responses from our study participants.

Our survey distribution methodology initially embraced an electronic format, thereby eliminating geographical constraints typically associated with traditional survey methods. We meticulously disseminated electronic surveys to individuals within the target community, leveraging email communications and social media platforms.

However, the initial response rate was modest, with only 12 surveys returned, rendering the sample size insufficient for robust analysis. In response, we launched a secondary wave of survey distributions using alternative channels, ultimately yielding 40 completed surveys from representatives across 7 universities nationwide. The distribution of study participants based on university affiliation is outlined in the following table:

**Table 5: Distribution of Study Sample Members by University Affiliation**

University Affiliation	Frequency	Percentage
Setif 2	5	12.5%
Batna 1	2	5%
Algiers 2	12	30%
University Center of Tipaza	7	17.5%
Blida 2	9	22.5%
Oran 2	2	5%
Mostaganem	3	7.5%
<b>Total</b>	<b>40</b>	<b>100%</b>

**Source:** Prepared by the researchers

From the frequencies and percentages detailed in Table 5, it is apparent that our sample participants span various regions in the northern part of the country, encompassing the East, Central, and West regions, distributed across 7 universities nationwide.

### 5.4 Study Tools:

In terms of methodology, we designed a questionnaire tailored specifically for our sample members, a commonly employed tool in psychological, educational, and social research due to its cost-effectiveness, simplicity, and ease of data processing (Abou Allam, 2011). The questionnaire serves as a structured instrument comprising questions aimed at gathering targeted information on the subject under investigation.

Our data collection process leveraged an electronic questionnaire format, featuring questions with binary response options ('yes' or 'no'), complemented by open-ended questions at the end of each section. These open-ended queries encouraged participants to provide qualitative insights, comments, and suggestions, enriching the interpretive depth of our findings and facilitating the formulation of comprehensive recommendations and suggestions upon study conclusion.

It's noteworthy that the questionnaire initially formed part of a broader set intended for diverse sample groups, a design subsequently refined into distinct surveys tailored for independent studies.

The questionnaire was structured into two primary sections:

1. **Theoretical Training Section:** This segment encompassed two dimensions, with the first dimension comprising six statements and the second dimension featuring five statements.
2. **Practical Training Section:** Similarly, this section was bifurcated into two dimensions, with the first dimension comprising five statements and the second dimension consisting of six statements. The delineation of axes and dimensions within the questionnaire is outlined in the following table:

**Table 6: Axes and Dimensions of the Questionnaire Prepared for the Study**

<b>Axes</b>	<b>Dimensions</b>
<b>Theoretical Training</b>	Content of Theoretical Training
	Appropriateness of the LMD Educational System
<b>Practical Training</b>	Sufficiency of Practical Training
	University Supervision of Field Internship

Source: Prepared by the researchers

- **Psychometric Properties of the Study Tool:**

- **Judges Validity:**

The questionnaire was reviewed by a group of professors in speech therapy and psychometrics for validation. Some statements were discarded, others were rewritten, and in the constrained questions, only two options "yes" and "no" were provided. Here are some examples of key modifications:

- The statement "Do you think the Arabic language is suitable for academic training in speech therapy?" was discarded because, according to a group of judges, the language used is not crucial in training and rehabilitation.

Subsequently, a preliminary application of the questionnaire in its paper format was conducted on a limited sample in a direct manner to assess the clarity of the questions and the time taken to respond to the items.

### 5.5 Statistical Methods:

For data analysis, we used frequencies and percentages to analyze the responses obtained.

## 6. Presentation and Analysis of Results and Their Discussion:

### 6.1 Presentation, Analysis of Results, and Discussion According to the First Main Hypothesis:

The first main hypothesis stated: **"The theoretical training in speech therapy is not sufficient to academically qualify a student, from the perspective of specialization professors."** Below is the analysis of the results for its sub-hypotheses.

#### 6.1.1 Presentation, Analysis of Results, and Discussion According to the First Sub-Hypothesis:

The first sub-hypothesis stated: **"The content of the theoretical training is not sufficient to academically qualify a student, from the perspective of specialization professors."** The following table illustrates its results:

**Table 7: Results of the Content of Theoretical Training Dimension**

Statements	Probability	Frequency	Percentage	Attitude
1. Do the basic modules taught during the undergraduate years cover all language disorders and methods of care?	Yes	12	30%	No
	No	28	70%	
2. Are there any inappropriate modules that should be deleted or modified?	Yes	36	90%	Yes
	No	4	10%	
3. Do you follow training project programs in your specialization when preparing lectures?	Yes	34	85%	Yes
	No	6	15%	
4. Are the programs and contents of lessons and lectures standardized according to training projects?	Yes	16	40%	No
	No	24	60%	
5. Is the content of lectures subject to evaluation and approval by the pedagogical training team of the specialization?	Yes	2	5%	No
	No	38	95%	
6. Does the university library have references in speech therapy?	Yes	10	25%	No
	No	30	75%	

**Source:** Prepared by the researchers

We will now delve into the analysis of Table 7, which encapsulates the sample's responses to the statements within the first dimension (theoretical training content) of the questionnaire's first axis (theoretical training).

The initial statement garnered a predominant "No" response at 70%, signifying the consensus among specialty professors regarding the inadequacy of undergraduate metrics in encompassing all language disorders and their respective management methods. This consensus persists despite the fact that graduates are certified speech therapists, theoretically equipped to handle such disorders.

Moving on to the second statement, responses leaned heavily towards "Yes," constituting 90% of the total responses. This significant agreement underscores the acknowledgment by specialty professors regarding the inadequacy of certain metrics, advocating for their deletion or modification.

The third statement elicited a strong "Yes" response at 85%, indicating a complete adherence by professors to the content of training projects at both the bachelor's and master's levels, despite their dissatisfaction with existing metrics and programs.

In contrast, the fourth statement yielded a "No" response at 60%, revealing a divergence in professors' viewpoints regarding the standardization of lesson contents based on training projects. This disparity is attributed to variations in work methodologies among universities and training teams.

Regarding the fifth statement, an overwhelming "No" response at 95% highlighted the variability in lecture content among professors, coupled with the absence of evaluation or monitoring by the specialty's pedagogical training team.

Lastly, the sixth statement, with a majority "No" response at 75%, underscores the acknowledgment by sample members of the lack of university resources specifically tailored for students in speech therapy. This underscores a significant gap in theoretical training, with a predominant reliance on official lectures or non-credible online resources.

Our analysis of the results pertaining to theoretical training content within the first dimension leads us to conclude that the first sub-hypothesis is validated. This indicates that the theoretical training content in speech therapy falls short of academically qualifying students, as perceived by specialty professors.

### **6.1.2 Presentation, Analysis, and Discussion of Results According to the Second Sub-hypothesis:**

The second sub-hypothesis stated: **"The educational system currently in place (LMD) is not suitable for the speech therapy specialization, from the perspective of specialization professors."** The following table displays the results for this hypothesis:

**Table 8: Results of the suitability of the current educational system (LMD)Dimension**

Statement	Probability	Frequency	Percentage	Attitude
1. Do you think that having a first year as a common trunk in social sciences is suitable for training in speech therapy?	Yes	8	20%	No
	No	32	80%	
2. Do you think the duration of theoretical training in the bachelor's degree is sufficient to prepare a qualified student?	Yes	6	15%	No
	No	34	85%	
3. Do you believe that bachelor's training is insufficient and requires a master's degree for supplementary training?	Yes	40	100%	Yes
	No	0	0%	
4. Are the available master's specializations in speech therapy suitable for covering current field requirements?	Yes	20	50%	Balanced
	No	20	50%	
5. Do you conduct training courses and study days for students?	Yes	22	55%	Yes
	No	18	45%	

**Source:** Prepared by the researchers

Upon analyzing the results presented in Table 8, focusing on the second dimension (suitability of the current educational system) within the first axis (theoretical training), several noteworthy trends emerge.

In the initial statement, there was a notable inclination towards "No" responses at 80%, indicating a significant portion of the sample does not endorse the inclusion of a common trunk year within social sciences. This sentiment stems from the perception that such inclusion is inappropriate for speech therapy training, potentially due to its perceived reduction of specialized training years.

Moving on to the second statement, responses leaned towards "No" at 85%, signaling that the duration of theoretical training in the bachelor's program, as perceived by the study sample, falls short in adequately preparing students for fieldwork. This inadequacy is attributed to the training system where a speech therapy student typically engages with the specialty for only two years, encompassing internships and thesis completion.

All responses to the third statement were unanimously "Yes," at 100%, underscoring the consensus among sample members that bachelor's training alone is insufficient, necessitating complementary training at the master's level. This unanimous agreement points towards existing gaps in bachelor's training, as perceived by the professors involved in the study sample.

Regarding the fourth statement, responses were evenly split at 50% for each direction. Half of the sample expressed reservations about the suitability of current master's specialties in covering field requirements, possibly due to discrepancies between universities and the limited scope of specialties in addressing all aspects of speech therapy.

Finally, responses to the fifth statement leaned towards "Yes" at 55% and "No" at 45%, indicating a nearly balanced perspective on the efficacy of conducting additional training sessions and study days outside the curriculum. This suggests that such pedagogical and scientific activities may vary significantly across universities.

Our analysis of the five statements forming the second dimension indicates that the second sub-hypothesis for the first axis has been validated. This implies that, according to the specialty's professors, the current educational system (LMD) is deemed unsuitable for the speech therapy specialty.

Moreover, our comprehensive analysis of both sub-hypotheses forming the first main hypothesis leads us to validate this hypothesis. It is evident that, from the perspective of specialty professors involved in the study sample, theoretical training in speech therapy is insufficient to adequately qualify a student.

## 6.2 Presentation, Analysis, and Discussion of Results According to the Second Main Hypothesis:

The second main hypothesis states: "**There is a deficiency in the practical training of students in speech therapy, from the perspective of specialization professors.**" We will analyze and discuss the results based on its sub-hypotheses:

### 6.2.1 Presentation, Analysis, and Discussion of Results According to the First Sub-hypothesis:

The first sub-hypothesis states: "**The practical training in speech therapy is insufficient to prepare a qualified specialist for field practice, from the perspective of specialty professors.**" The following table expresses its results:

**Table 9: Results after the adequacy of practical training**

Statements	Probability	Frequency	Percentage	Attitude
1. Is there coordination between the knowledge acquired in lectures and its application in directed lab sessions?	Yes	28	70%	Yes
	No	12	30%	
2. Is the field internship in the bachelor's program sufficient to prepare a qualified speech therapy specialist for entering the practice field after graduation?	Yes	40	100%	No
	No	40	100%	
3. Do you think the duration of the field internship (bachelor's and master's) is sufficient to prepare a thesis?	Yes	8	20%	No
	No	32	80%	
4. Does the student participate in field research within research teams or labs?	Yes	2	5%	No
	No	38	95%	
5. Does the student undertake field internships in all areas of speech therapy?	Yes	40	100%	No
	No	40	100%	

Source: Prepared by the researchers

From the insights gleaned from Table 9, which elucidates the responses of the sample concerning the first dimension (adequacy of practical training) of the second axis (practical training) of the questionnaire, a nuanced picture of practical training in speech therapy emerges.

The initial statement drew responses leaning towards "Yes" at 70%, indicating a consensus among respondents regarding the coordination between theoretical lectures and practical sessions. This consensus reflects a commitment to translating acquired knowledge and skills into practical applications. However, instances of "No" responses often stem from discrepancies in coordination between lecture and practical session instructors, as well as inconsistencies in lecture content.

In contrast, the second statement saw unanimous "No" responses, signifying a collective acknowledgment by specialty professors of the inadequacy of field internships in the bachelor's program. This consensus highlights the deficiency in preparing students adequately for professional practice post-graduation.

Similarly, the third statement elicited predominantly "No" responses, with 80% of respondents expressing the belief that the duration of field internships falls short in preparing students to undertake theses at both bachelor's and master's levels. This limitation is often exacerbated by internships primarily occurring in the shorter second semester of the academic year.

The fourth statement garnered mostly "No" responses at 95%, indicating a lack of undergraduate involvement in field research within research teams or labs. This underscores a significant deficiency in practical training, primarily confined to field internships characterized by notable shortcomings, as revealed in the study.

Lastly, the fifth statement received unanimous "No" responses from all sample members, underscoring the consensus that speech therapy students do not benefit from internships encompassing all required fields. Consequently, graduates may find themselves ill-equipped to handle the diverse array of language disorders across various speech therapy domains post-graduation.

Our comprehensive analysis of all statements within the first dimension of practical training adequacy confirms the validity of the first sub-hypothesis. This affirms that practical or field training in speech therapy falls short in adequately preparing a qualified specialist for field practice, as perceived by specialty professors.

### **6.2.2 Presentation, Analysis, and Discussion of Results According to the Second Sub-hypothesis:**

The second sub-hypothesis states: **"There is no university supervision for the field internship of students in speech therapy, from the perspective of specialization professors."** The following table displays the results:

**Table 10: Results after university supervision of the field internship**

Statements	Possibility	Frequency	Percentage	Direction
1. Does the professor follow up and supervise the student's field internship?	Yes	10	25%	No
	No	30	75%	
2. Does the professor conduct field visits to oversee and monitor field internships as part of the preparation for the thesis (bachelor's/master's)?	Yes	4	10%	No
	No	36	90%	
3. Does your university institution have some of the specialized tools required for the student's field internship in speech therapy?	Yes	8	20%	No
	No	32	80%	
4. Does the training team select the internship institution for the student?	Yes	10	25%	No
	No	30	75%	
5. Are there formal agreements between your university and internship institutions?	Yes	22	55%	Yes
	No	18	45%	
6. Are the syllabus units suitable for enabling the student to conduct their field research as part of the thesis (bachelor's/master's)?	Yes	20	50%	Balanced
	No	20	50%	

**Source:** Prepared by the researchers

The detailed analysis provided further illuminates the challenges and gaps in practical training and supervision for speech therapy students, underscoring crucial areas for enhancement to better equip students for professional roles in the field of speech therapy.

Moving on to the discussion of the results for the second main hypothesis and its sub-hypotheses, as depicted in Table 10, we gain deeper insights into the dynamics of university supervision during field internships in speech therapy training.

The first statement garnered predominantly "No" responses at 75%, indicating a consensus among sample members regarding the lack of professor involvement in supervisory roles during field internships. Instead, such responsibilities often fall on professionals at the internship institutions, highlighting a gap in direct academic oversight.

Similarly, the second statement saw a majority of "No" responses at 90%, signaling that professors overseeing theses do not typically engage in field visits to guide and support students. This could be attributed to the absence of clear legal frameworks defining the roles and responsibilities of professors in this context.

Moving forward, the responses to the third statement leaned towards "No" at 80%, shedding light on the inadequate availability of essential tools for speech therapy practice within Algerian universities across various provinces.

The fourth statement also leaned towards "No" at 75%, indicating that students often independently choose their internship institutions, including private entities like clinics or daycares, without robust mechanisms to verify the depth of their engagement.

In contrast, the fifth statement revealed a nearly balanced response, with some agreements between universities and internship institutions for overseeing student field training. However, this remains limited to a few universities and predominantly public institutions, posing challenges in accommodating a larger student population effectively.

Lastly, the responses to the sixth statement showed a split between "Yes" and "No," highlighting the nuanced nature of speech therapy research methodology and its perceived inadequacies in terms of content and teaching duration, as indicated by some professors.

Our comprehensive analysis of the second dimension concerning university supervision during field internships validates the second sub-hypothesis of this axis. This underscores the absence of robust university supervision for speech therapy students during their field internships, contributing to the overall deficiency in practical training as perceived by specialty professors.

### **7. Conclusion:**

The study results have exposed numerous deficiencies in both the theoretical and practical training of speech therapy students that fail to meet field requirements. According to specialized professors, there is a deficit in theoretical training from the programs to the content of modules. Essential modules for the specialty do not cover all areas of speech therapy, and there are inappropriate modules that need to be either deleted or modified.

Additionally, the contents of the lessons are not always standardized and are not subjected to evaluation and monitoring, as each professor has autonomy in these areas. This leads to inconsistencies in training from one student to another, from one cohort to another, and from one university to another, further exacerbated by a severe lack of speech therapy resources in university libraries. Professor Nouani Hussein highlighted these issues in his discussion on the problematics of speech therapy between academic theory and field practice, acknowledging the profound weaknesses in training for both students and professors (Nouani, 2018).

Concerning the current educational system in use, the majority of specialized professors represented in the study sample do not support the use of the LMD system. They argue that it reduces the duration of training, which in turn diminishes the content. The duration of training in Algeria is shorter compared to other foreign and Arab countries, leading them to view master's training as supplementary rather than additional. Furthermore, the available specializations in the master's programs, according to them, do not cover all fields of speech therapy.

This is supported by Ben Yahia and Bourezk (2013) in their study on the effectiveness of university training for speech therapists, which notes that the university training in speech therapy has not yet settled on a clear policy; every time there is a change in the general policies of the educational system or academic content, it is done without realistic planning with the field of practice and without setting long-term future goals.

The results also reveal significant shortcomings in the practical training aspect, which is not aligned with the theoretical aspect. From the sample members' perspective, the content and duration of practical training are insufficient to prepare a qualified speech therapy specialist for professional practice after graduation.

The field internship, which they claim does not exceed 45 hours or about 15 days, is unmonitored and inadequate. Field internships do not cover all areas of speech therapy, and professors do not participate in the follow-up, guidance, or supervision of students during their internships nor do they intervene in choosing the internship locations. This is due to the lack of clear agreements between the university and internship institutions.

Additionally, the university lacks the research tools and practice materials in speech therapy that are necessary to equip students during their practical application, and the syllabus units are insufficient for enabling students to prepare a scientifically sound thesis. This aligns with discussions at the first National Days of Speech Therapy at the University of Constantine on speech therapy training in Algeria and its alignment with societal developments, where professors and researchers emphasized the need to extend training to cover the deficiencies in speech therapy practice.

In conclusion, the novelty of the speech therapy specialization in Algeria and the desire to generalize its teaching across various universities, along with the creation of many diverse specializations in undergraduate and postgraduate levels, have led to numerous deficiencies and issues in both theoretical and practical training in speech therapy. These issues are often discussed in meetings of pedagogical training teams who attempt to offer suitable solutions.

Therefore, it is time to reconsider speech therapy training in Algeria with the introduction of fundamental and significant reforms. From here, we can propose a set of recommendations and suggestions derived from the study results and also suggested by the sample members.

### **Recommendations:**

Drawing from the study results and input from survey respondents regarding potential solutions, we propose a set of recommendations and suggestions:

- Restructure the academic faculty to modernize educational pathways, including updating the modules, the duration of teaching for each module, and the sequence of taught subjects. This should align with current scientific advancements and field requirements.
- Extend the duration of theoretical training starting from the first academic year.
- Implement a gradual integration into field internships similar to theoretical training, involving observation, participation, and then application stages. This can only be achieved by expanding the scope of field internships to expose students to a wider

variety of disorders, distributing internship periods throughout the educational pathway, and not limiting them to the final year only.

- \_ Field internships should be supervised by practicing specialists through agreements that outline duties and rights, with essential direct communication between the university and field supervisors.
- \_ The supervising professor of the thesis should accompany the student during the internship to facilitate the application of theoretical knowledge to field practices.
- \_ Enhance coordination between theoretical and practical teaching aspects.
- \_ Provide necessary references and tools for training in orthophony.
- \_ Organize scientific meetings, study days, and targeted field courses for students.
- \_ Finally, we recommend conducting comprehensive studies with larger samples and involving all stakeholders in university education to more accurately identify training deficiencies and develop feasible solutions for near-term implementation.

#### References:

- Abou Allam, Raja Mahmoud. (2011). *Research Methods in Psychological and Educational Sciences*. 6th Edition. Egypt. University Publishing House.
- Ben Yahia Jamdani, Bourezk Kamel. (2013). The Effectiveness of University Training for Speech Therapy Specialists. *Social Sciences Journal*, Amar Thelidji University of Laghouat. Volume 7 (2), pages 76-91.
- Campolini, C., Tollet, F., & Vansteelandt, A. (2003). *Dictionary of Speech Therapy, the Acquired Disorders of Language, Gnosis, and Praxis*. Belgium. Louvain-la-Neuve.
- Driouche, Rima. (2013). *The Child and the Development of Language Behavior in Normal and Pathological Conditions*. Algeria. Skouli Publishing and Distribution.
- Harizi, Moussa ben Ibrahim & Gherbi, Sabrina. (2013). *A Critical Study of Some Descriptive Approaches and Topics in Social, Educational, and Psychological Research*. *Journal of Human and Social Sciences*, University of KasdiMerbah Ouargla. Issue 13.
- Houla, Mohamed. (2008). *Speech Therapy: The Science of Speech, Language, and Voice Disorders*. 2nd Edition. Algeria. Dar Houma.
- Kadri, Halima. (2015). *Introduction to Speech Therapy: Assessment of Voice, Speech, and Language Disorders*. Jordan. Dar Al-Safa for Publishing and Distribution.
- Karmer, J-M. (1999). *Language Disorders: 500 Tips from the Speech Therapist*. Paris. Edition Josette.
- Nouani, Hocine. (2018). *Speech Therapy and the Arabic Language: An Introduction to Speech Pathology*. Algeria. Dar Al-Khaldounia.

Rekza, Samira & Jenan, Amin. (2018). *Introduction to Speech Therapy*. Algeria. Jesr Publishing and Distribution.

Sillamy, N. (1998). *Dictionary of Psychology*. France. Larousse: Bordas.