

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
Ministry of Higher Education and Scientific Research
Belhadj Bouchaib University – Ain Temouchent



Faculty of Letters, Languages and Social Sciences
Department of Letters and English Language

**Difficulties of Deaf and Hard of Hearing Pupils in Learning
Foreign Languages.**

**The Case of: Boussaid Aicha and Fatima Rahmania middle
schools in Ain Temouchent.**

*An Extended Essay Submitted in Partial Fulfillment of the Requirement for
Master's Degree in Didactics and Applied Linguistics*

Submitted by:

Miss. Fatiha Selma ZAHAF

Mr. Tayeb BERKANE KRACHAI

Supervised by:

Dr. Amina KERKEB

Board of Examiners

President:	MCA	Dr. Chahrazed HAMZAOU
Supervisor:	MCA	Dr. Amina KERKEB
Examiner:	MCB	Mr. Boubkeur BENGUERFI

Academic Year: 2022/2023

Dedication

To my amazing family, especially my incredible pretty sister Yousra, and to my
dear friends.

Your love and support have brought me so much happiness and strength.

I want to dedicate my achievements to all of you and express my eternal gratitude
for the strong bond we have.

Thank you from the bottom of my heart.

[ZAHAF Fatiha Selma]

Dedication

In loving memory of my father, whose unwavering support carried me from the beginning until his last day. I yearn for your presence to witness this moment and share in the joy of success.

To my incredible family, especially my devoted mother who sacrificed sleep to care for and support me, and to my brother BKJ.

Gratitude extends to my friends, including my dear partner.

Thank you all after Allah for playing a part in bringing me to this point of achievement.

[BERKANE KRACHAI Tayeb]

Acknowledgements

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah the most Compassionate, the most Merciful

We would like to express our heartfelt appreciation to our supervisor, Dr. KERKEB Amina, for her invaluable guidance and support throughout our research. She has been an exceptional teacher and mentor, and we are truly grateful for her dedication and expertise.

We would also like to extend our sincere thanks to the members of the jury, Dr. HAMZAOUI Chahrazed and Mr. BENGUERFI Boubkeur for generously offering their time to read and evaluate our work. Their valuable insights and feedback have greatly contributed to the improvement of our study.

We would like to express our gratitude to the teachers and deaf and hard of hearing (DHH) pupils from Ain Temouchent who participated in our study. Their valuable experiences and insights have enhanced our research. Special thanks to psychologist Kibir Hanane for being a skilled interpreter, and facilitating communication with the pupils and teachers.

Finally, we would like to thank our former teachers, whose names are too numerous to mention individually. They have played a significant role in inspiring us to embark on this academic journey and instilling in us a passion for learning and sharing knowledge with others.

Once again, we extend our sincere appreciation to everyone who has contributed to the success of this research. Your support and assistance have been instrumental, and we are deeply grateful for your invaluable contributions.

Abstract

Deaf and hard of hearing (DHH) pupils in Ain Temouchent, Algeria, face difficulties in learning foreign languages. This study aims to identify these difficulties and gather more information that can help or shed light on the importance of improving the educational system for deaf and hard of hearing learners in Algeria. To achieve the research objectives, a mixed-method approach was employed, using both qualitative and quantitative methods which leads to the use of two research tools: a questionnaire addressed to deaf and hard of hearing pupils in integrated classes of middle schools in Ain Temouchent, and interviews conducted with three foreign languages teachers. The objective of the questionnaire and the interview is to gather insights on deaf and hard of hearing pupils' education, including hearing loss, device use, language acquisition, communication methods, challenges, motivation, and effective teaching techniques. The results, underscore the need for specialized teacher training in sign language and effective communication to support deaf and hard of hearing learners in acquiring languages and accessing quality education.

List of Tables

List of Tables

Table 3.1: The Degrees of Hearing Loss	35
Table 3.2: Hearing Devices	36
Table 3.3: First Language	37
Table 3.4: Communication Methods	37
Table 3.5: FL Proficiency Level	38
Table 3.6: Hearing Loss Effect on Learning FL	39
Table 3.7: DHH Challenges in Learning FL	40
Table 3.8: Teaching Experience	42

List of Figures and pie charts

Figure 1.1: Anatomy of the Human Entire Ear.....11

Pie Chart 3.1: Classroom Communication Methods38

Pie Chart 3.2: FL Learning Motivation40

Pie Chart 3.3: Teaching Methods41

List of Abbreviations and Acronyms

List of Abbreviations and Acronyms

ASL: American Sign Language

Auslan: Australian Sign Language

BSL: British Sign Language

DB: Decibels

DHH: Deaf and Hard of Hearing

FL: Foreign Languages

FM: Frequency Modulated

Hz: Hertz

ICT: Information and Communication Technology

IDEA: Individuals with Disabilities Education Act

JSL: Japanese Sign Language

LSF: French Sign Language

NIDCD: National Institute on Deafness and Other Communication Disorders

SL: Sign Language

SN: Special Needs

US: United States

WHO: World Health Organization

Table of Content

Table of Content

Dedications	I
Acknowledgments.....	III
Abstract	IV
List of Tables.....	V
List of Figures and Pie Charts.....	VI
List of Abbreviations and Acronyms	VII
Table of Content.....	VIII
General Introduction.....	1

Chapter One: Literature Review

1.1 Introduction.....	6
1.2 Hearing Loss	Error! Bookmark not defined.
1.2.1 Deafness	7
1.2.2 Hard of Hearing.....	7
1.2.3 Deaf-mute.....	8
1.3 Types of Hearing Loss.....	9
1.3.1 Conductive Hearing Loss.....	9
1.2.2 Sensor-neural Hearing Loss.....	9

Table of Content

1.2.3 Mixed Hearing Loss.....	10
1.4 DHH Communication Methods	9
1.5 Assistive Devices.....	16
1.6 Special Education.....	17
1.6.1 Special Education in Algeria	18
1.7 Methods of Teaching Deaf and Hard of Hearing	19
1.8 Bilingualism and Multilingualism for DHH Individuals	21
1.9 Foreign Languages and Deafness.....	22
1.10 Challenges of Learning Foreign Languages for DHH Pupils	22
1.11 Conclusion.....	24

Chapter Two: Research Methodology

2.1 Introduction.....	27
2.2 Research Methods	27
2.2.1 Quantitative Method.....	27
2.2.2 Qualitative Method.....	28
2.2.3 Mixed Method	28
2.3 Aims of the Study.....	29
2.4 Instruments of Research.....	30
2.4.1 The Questionnaire.....	31
2.4.1.1 The Description of the Questionnaire.....	31

Table of Content

2.4.2 The Interview	32
2.4.2.1 The Description of the Interview.....	32
2.5 Population and Sampling	33
2.6 Conclusion.....	33

Chapter Three: Data Analysis and Interpretation

3.1 Introduction	35
3.2 Pupils' Questionnaire Analysis.....	35
3.3 Teachers' Interview Analysis.....	42
3.4 Discussion and Interpretation of the Results.....	46
3.4.1 The Discussion and Interpretation of the Questionnaire Results.....	47
3.4.2 The Discussion and Interpretation of the Interview Results.....	49
3.5 Conclusion.....	51

Chapter Four: Recommendations and Limitations

4.1 Introduction	53
4.2 Teacher Training.....	53
4.3 The Authorities' Support	55
4.4 The Use of ICT	57
4.5 Limitations of the Study	58
4.6 Conclusion.....	60

Table of Content

General Conclusion.....	61
Bibiliography	64
Appendices.....	69
Appendix A: Pupils' Questionnaire.....	70
Appendix B: Pupils' Questionnaire Arabic Version	74
Appendix C: Teachers' Interview Questions.....	78

General Introduction

General Introduction

General Introduction

Living in the age of globalization, we are surrounded by a dynamic landscape shaped by the profound web of connections and dependencies between individuals, communities, and nations, as defined by the World Health Organization (WHO) through the concept of ‘increased interconnectedness and interdependence of peoples and countries. As globalization has progressed, the world has become more intertwined which resulted in the rise of various hurdles and different needs for society, the necessity of learning foreign languages (FL) being one. The benefits of learning a second language have grown which led bilingualism and Multilingualism to evolve into the ideal 21st-century competence or it is now perhaps the most useful real-world skill to ever exist, with every person vying for it including deaf and hard of hearing (DHH) persons.

Promoting equality and ensuring universal access to opportunities are vital elements for a fair and inclusive society. While DHH individuals may face additional challenges in certain areas, they are still active participants in the labor force and socioeconomic contexts, just like anyone else. They have the right to pursue their goals and aspirations, and their contributions should be valued and recognized.

One significant aspect that affects DHH individuals is their access to information. Communication and receiving information orally can be challenging for them, which may impact their ability to learn a foreign language. Learning a new language is already a complex endeavor, requiring a deep understanding of vocabulary, grammar, and cultural nuances. For DHH pupils, this task can be even more difficult due to their unique communication needs.

Hearing loss profoundly affects individuals by limiting their ability to communicate effectively, impeding their access to orally provided information, and hindering their independent

General Introduction

functioning. However, technological advancements, such as cochlear implants, have significantly transformed the lives of people with hearing loss. Cochlear implants can provide a sense of sound to individuals with severe to profound hearing loss, allowing them to perceive speech and environmental sounds to varying degrees.

With the help of cochlear implants and other assistive technologies, DHH individuals can enhance their ability to hear and communicate, which in turn supports their language learning journey. Additionally, there are various accommodations and strategies that can be employed to facilitate language learning for DHH pupils. These may include sign language (SL) interpretation, captioning, visual aids, and adaptive teaching methods that cater to their specific needs.

It is crucial for educators, employers, and society as a whole to recognize and accommodate the unique challenges faced by DHH individuals. By providing equal access to education, employment opportunities, and inclusive environments, we can create a more inclusive society that embraces diversity and empowers individuals with special needs (SN). Everyone deserves an equal chance to succeed, and by fostering an inclusive environment, we can enable DHH individuals to thrive and contribute their talents and skills to society.

There are several methods that can assist a pupil in the classroom to learn effectively. Special needs education has garnered significant attention globally in recent decades (UNESCO, 1994; United Nations, 2007). However, DHH pupils continue to get low-quality education in Algeria. Due to the shortage of research that investigated the situation of SN pupils' education in Algeria specifically the deaf and hard of hearing pupils, this study aims to help gather more information that can help or shed light on the importance of improving the educational system for deaf and hard of hearing learners in Ain Temouchent, Algeria. This study will focus on identifying

General Introduction

the challenges and issues that DHH learners face while learning foreign languages in middle schools.

Therefore, the present research aims to address this gap by investigating the challenges and issues faced by DHH learners in middle schools in Ain Temouchent, Algeria, particularly concerning the learning of foreign languages. The study seeks to answer two main research questions:

1. What challenges do DHH pupils face when learning a foreign language?
2. What solutions could help address these challenges and improve the effectiveness of learning a foreign language for DHH learners?

Based on these research questions, the study proposes two hypotheses:

1. The challenges experienced by DHH pupils include difficulties in communication with teachers due to a lack of knowledge in sign language and challenges in adapting to the curriculum.
2. Solutions to address these challenges may involve offering tactile and visual methods of learning, creating a positive and supportive learning environment, and providing comprehensive training for teachers, including learning sign language, to better communicate with their pupils.

Through this research, we hope to contribute valuable insights into the experiences of DHH learners in foreign language education, ultimately advocating for improvements in the educational system and promoting a more inclusive and equitable society for all.

General Introduction

In order to address the research questions and hypotheses outlined above, this study is organised into four chapters. The first chapter establishes a foundation by defining hearing loss terms, exploring types of hearing loss, and discussing communication methods and special education in Algeria for DHH individuals.

Building upon this groundwork, the second chapter explains the research methodology, using a mixed-method approach with a questionnaire and interviews to gather data from DHH pupils and their foreign language teachers.

Subsequently, the third chapter analyzes the data, revealing challenges faced by DHH pupils in learning foreign languages, including grammar, vocabulary, and communication difficulties. The existing educational program was found to be inadequate, but visual aids and interactive activities showed promise. Revision and repetition were effective strategies.

In the final chapter, recommendations are made: a specialized educational program for DHH pupils, sign language training for teachers, and the use of information technology to improve comprehension and engagement.

Chapter One: Literature

Review

1.1 Introduction

This first chapter introduces definitions of different concepts related to the topic of this research. As we aim to identify if deaf and hard of hearing pupils in Ain Temouchent middle schools face some difficulties learning foreign languages and try to identify these challenges and search whether we can find any solutions to fix or overcome them, it is necessary to be aware of some facts and to understand the context and the important concepts related to the deaf community, such as the different terms used to refer to this category of people, their communication methods, types of hearing loss as well as the methods for teaching deaf and hard of hearing individuals.

1.2. Hearing Loss

Hearing loss affects over 20% of the present world population, and this figure is rising over time. Hearing can be defined as the ability to identify and perceive sound waves coming from outside. Hearing is one of the five human senses that enable us to receive information from our environment through our auditory system. The body reaches the auditory system in the form of vibrating motion, through environmental media such as air, liquids, and solids.

The importance of hearing lies in the possibility of communication between individuals in society and nature. People with normal hearing can hear sounds between 20 and 20,000 Hz and between 0 and 130 decibels (dB). Hertz (Hz) is a frequency unit that measures the number of sound vibrations per second. This refers to how low- or high-pitched something is in everyday life. Decibels measure sound intensity (amplitude), i.e., sounds' pressure or forcefulness. The greater the amplitude of a sound, the louder it is. In everyday life, it is referred to as volume.

Hearing loss is defined by a decrease in sensitivity to regularly heard noises. The increase in the volume necessary before the listener can sense it determines the severity of a hearing loss. Hearing impaired are those who have a relative insensitivity to sound under the speaking frequencies. Hearing loss can manifest itself in a variety of ways and at a variety of frequencies. Hearing impairment is often characterized by difficulty interpreting speech and hearing noises and suffering from hearing loss between (35-69 dB).

1.2.2 Deafness

The term deaf generally refers to someone who has very little or no functional hearing and communicates primarily via SL. Deaf persons have trouble processing linguistic information through hearing, with or without amplification, and are unable to acquire spoken language adequately without amplification. Deaf people have difficulty processing linguistic information through hearing, with or without amplification, and are unable to acquire spoken language properly without the aid of amplification and depend mostly on vision. In severe deafness, even the loudest noises produced by an audiometer (a device used to assess hearing) may not be noticed. Deafness is a hearing loss of more than 81 decibels.

1.2.3 Hard of Hearing

According to WHO 'Hard of hearing refers to people with hearing loss ranging from mild to severe. People who are hard of hearing usually communicate through spoken language and can benefit from hearing aids, cochlear implants, and other assistive devices as well as captioning'. Hard of hearing is a hearing disability that can sometimes be acquired in late childhood or adulthood and can be permanent. Hard of hearing people have varying degrees of hearing loss that can be mild (21-40 dB), moderate (41-70 dB), or severe (71-95 dB).

Some of the symptoms of being hard of hearing can be having problems hearing other people, especially in busy environments or having to turn up the volume on your TV or headphones, and needing to ask others to repeat themselves or to speak more loudly.

1.2.4 Deaf-mute

The phrase “deaf-mute” is deemed derogatory and outmoded since it is stigmatizing and does not truly reflect the different experiences of people who are deaf or hard of hearing. Historically, “deaf-mute” was used to describe those who were unable to hear or talk, and it maintained the concept that deafness was a tragedy or a fault that needed to be “fixed” or “cured.” Today, however, there is a far better understanding of deafness and the various ways that persons with hearing impairments communicate.

Many deaf persons do not consider themselves “mute” since they can communicate via sign language, written language, or other ways. Sign language, in particular, has a rich tradition and history, and many deaf people regard it to be their first language. In addition, many deaf people see their deafness as a distinct identity and community, rather than a handicap or medical condition.

The Deaf community is a dynamic and diverse collection of individuals who share a language, culture, and history and who frequently have different opinions and experiences than hearing people. To summarize, it is critical to acknowledge that language has a significant influence on how people think about and treat others and that adopting polite and inclusive language is critical for establishing a more equal and compassionate society.

1.3 Types of Hearing Loss

Hearing loss is a condition that affects millions of people worldwide. It can range from mild to severe and can range from a single frequency to a complete loss of hearing. It is important to understand the different types of hearing loss, each with its own causes, effects, and treatments. The following sub-titles will provide an overview of the different types of hearing loss and what can be done to minimize its effects.

1.3.1 Conductive Hearing Loss

A conductive hearing loss is caused by any disorder or condition that obstructs sound from traveling through the outer and middle ear to the inner ear. This type of hearing loss means that the intensity of sound is reduced or decreased by the time it reaches the inner ear, resulting in a need for louder sound in order for the person to hear. Generally, the cause of the hearing loss can be identified and treated, usually leading to either a partial or complete improvement in hearing. For any residual hearing loss, hearing aids are an effective solution.

1.3.2 Sensor-neural Hearing Loss

Sensor-neural hearing loss is a condition that arises from dysfunction in the inner ear or auditory nerve. The sensory element may be due to harm to the Corti organ, the incapability of the hair cells to activate the hearing nerves, or a metabolic issue in the inner ear fluids. The neural or retro cochlear component may be caused by serious damage to the Corti organ resulting in the hearing nerves degenerating, or it can be the incapability of the hearing nerves to transfer neuro-chemical information through the central auditory pathways.

Sometimes the cause of sensor-neural hearing loss is not determinable, and it generally does not respond well to medical treatment. It is generally considered to be a permanent,

irreversible condition. As with conductive hearing loss, sensor-neural hearing loss reduces the volume of sound, but it may also introduce a component of distortion, making sounds unclear even when they are loud enough. Once any treatable medical conditions have been eliminated, individuals with sensor-neural hearing loss can be fitted with hearing aids to provide them access to speech and other important sounds.

1.3.3 Mixed Hearing Loss

People with mixed hearing loss have a combination of two types of hearing difficulties sensor-neural hearing loss and conductive hearing loss. Individuals with a mixed hearing loss have an inner ear or auditory nerve disorder resulting in some irreversible hearing loss, as well as a dysfunction of their middle ear mechanism which can make their hearing worse than the sensor-neural loss alone.

This type of hearing loss is made up of two components: sensor-neural component, which cannot be reversed, and a conductive component which may be amenable to medical treatment. Hearing aids can be beneficial for people with a mixed hearing loss; however, care must be taken if the conductive component is due to an active infection.

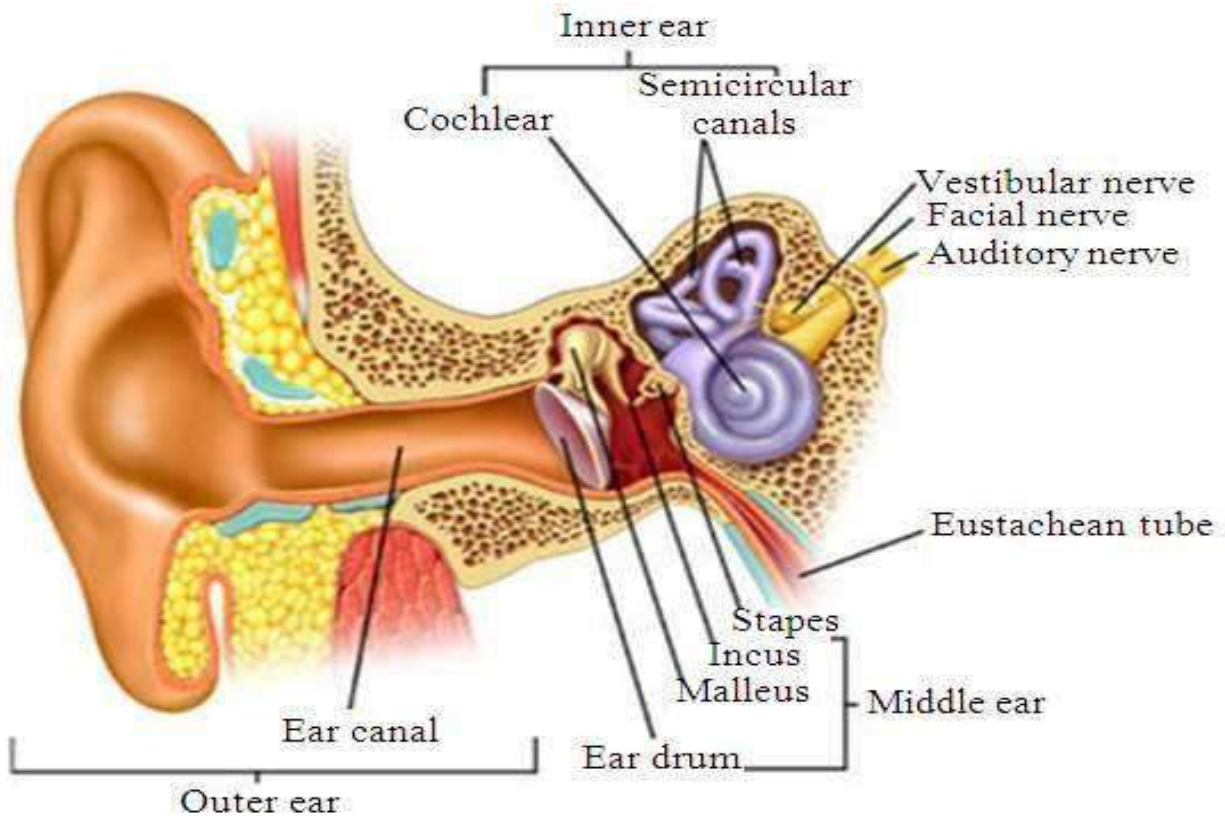


Figure 1.1: Anatomy of the human entire ear. Adapted from (Khamiss Masaoud S. Algabary et al. / Journal of Computer Science 10 (3): 477-483, 2014)

1.4 DHH Communication Methods

DHH individuals may use a variety of communication methods depending on their level of hearing loss, personal preferences, and the context of the communication. Here are some common means of communication:

1.4.1 Sign Language

Sign language is a full language system that conveys meaning using visual gestures, facial expressions, and body language. It is a complicated and rich language with its grammar, syntax,

and vocabulary. Unlike spoken language, SL conveys information through space and movement, allowing for a broad spectrum of nuance and emotion. SL is the first language and major mode of communication for many DHH people. It enables individuals to completely express themselves and engage in discussions, social events, and other elements of life that would be more difficult or impossible to do otherwise.

However, sign language is not a universal language. There are several sign languages in use across the world, each with its distinctive traits and qualities. American Sign Language (ASL), for example, is used in the United States and Canada, but British Sign Language (BSL) is used in the United Kingdom. Australian Sign Language (Auslan), French Sign Language (LSF), Japanese Sign Language (JSL), and many more are examples of sign languages. Despite their diversity, all sign languages have basic traits. They all, for example, transmit meaning through a combination of hand gestures, facial expressions, and body language. They also have their grammar and syntax, which may differ from that of spoken language. For both hearing and deaf people, learning sign language may be a joyful experience. Learning SL may help hearing people communicate more successfully with DHH people, as well as contribute to a more inclusive and accessible society.

Learning SL may assist non-hearing people develop a sense of community and identity, as well as give a means for them to express themselves and interact with others. Overall, SL is a vital tool for encouraging communication, understanding, and inclusion in society, and it plays a significant part in the lives of many DHH people.

1.4.2 Lip Reading

Lip reading is an intricate method that entails not only studying the motions of the lips but also paying attention to other visual signals such as facial expressions and gestures. Lip readers

must be able to comprehend the tiny changes in lip movements that identify distinct sounds and words, as well as deduce context and meaning from these motions.

Lip reading is a useful skill, but it is not a flawless form of communication. Lip readers must rely extensively on context and other visual signals to comprehend what is being said, and even the most adept lip readers may only grasp a part of what is being said. Furthermore, accents, facial hair, and the pace and clarity of speech can all have a significant impact on lip reading accuracy. Lip reading, despite its limits, maybe a useful technique for persons who are deaf or hard of hearing, as well as those who want to enhance their communication skills in noisy or crowded circumstances.

Lip reading can be combined with other means of communication, such as sign language or written text, to improve communication. Individuals must practice often to become familiar with the motions and forms of various sounds and words in order to master lip reading. For people who wish to enhance their lip reading abilities, there are additional courses and resources accessible, such as online tutorials, workshops, and specialized training programs. It is crucial to note, however, that not all deaf or hard of hearing people use or can utilize lip reading because it is a difficult talent to learn.

1.4.3 Writing and Reading

For DHH people, writing and reading are crucial modes of communication. These individuals frequently rely on written communication, whether by pen and paper, text messages, or digital communication technologies such as email, instant messaging, and video conferencing. Written communication is an effective means for persons who are deaf or hard of hearing to

transmit their thoughts, ideas, and feelings without the use of an interpreter. It also enables individuals to communicate with people who may not comprehend speech or sign language.

Reading is also a crucial ability for DHH people since it allows them to access written information and participate in society. This includes reading video and movie subtitles, directions, and other textual materials. For DHH people, technology has made written communication more accessible. Mobile devices and computers, for example, offer a variety of capabilities that allow them to communicate more effectively, such as text-to-speech software and video chat platforms that support SL interpretation.

1.4.4 Fingerspelling

Fingerspelling is a way of communication in which DHH people use hand movements to spell out words. Each letter of the alphabet is represented by a different hand form in fingerspelling, allowing the user to spell out words letter by letter. It is a necessary ability for DHH people, especially in settings when sign language interpretation is unavailable. In a school or corporate situation, for example, a DHH person may use finger spelling to communicate with their hearing classmates or coworkers.

Learning finger spelling involves practice and patience since mastering the various hand forms and movements necessary to spell out words effectively can take time. However, if acquired, fingerspelling may be a helpful communication technique, especially in settings when textual communication is impractical or unavailable. Fingerspelling can also be used in tandem with sign language to communicate more complicated thoughts and concepts.

A DHH individual, for example, may use sign language to express a statement or concept and then utilize finger spelling to spell out specific words within that sentence. Overall,

fingerspelling is an important communication tool for DHH people, and acquiring it may substantially increase their capacity to communicate successfully in a range of situations.

1.4.5 Auditory Oral

The auditory-oral approach is based on the fundamental premise that acquiring competence in spoken language, both receptively and expressively, is a realistic goal for children who are deaf or hard of hearing. Further, this ability is best developed in an environment in which spoken communication is used exclusively. This environment includes both the home and the classroom. (Adams, et al, 1990; Stone, 1988).

The auditory oral method fosters and teaches infants and young children to use their hearing and speaking in the development of spoken language for learning and engagement. This approach allows DHH persons to utilize their hearing ability in addition to hearing aids and/or cochlear implants. Furthermore, it employs gestures that are typical in regular conversation but does not involve any signs. What makes this strategy beneficial is the capacity to talk directly with a wide variety of individuals; it gives possibilities for jobs, education, and social life to this group of people.

1.4.6 Cued Speech

The cued speech was invented in 1966 by Dr. Cornet R. Orin in the United States (US). At the time, he was the Director of Higher Education at the Office of Education in the US, and he found that deaf and hard of hearing pupils had poor reading abilities in comparison to their classmates. As he claimed ‘A few months of study convinced me that the underlying cause of their

reading problem was the lack of any reasonable way to learn spoken language, without which they could not use speech for communication, become good lip readers, or learn to read’.

Cued Speech is a visual style of communication in which traditional spoken language sounds (phonemes) are transformed by mixing spoken language lip gestures with « cues ». Cueing allows users, including the deaf, hard of hearing, and others with communication or language impairments, to access the essential, core qualities of spoken languages through the use of visuals. In this style, consonant phonemes are represented by hand forms, whereas vowel phonemes are represented by the four spots close to the mouth. Following that, the individual begins cueing the vowels and consonants in connection with spoken lip actions, and it is not necessary to talk loudly to be heard. Even if he cannot hear a sound or cannot hear it at all, a deaf or hard of hearing person may see exactly what is being spoken with remarkable accuracy.

Cued Speech does not involve any use of speech or hearing; all that is necessary is that the user displays the mouth motions that match the cues. Although cued speech is a communication medium, it may also be used to aid with speech articulation, literacy development, and auditory rehabilitation. Cued speech can be adapted to more than 50 different languages and dialects, however, it is unknown how many of them are in use.

1.5 Assistive Devices

According to the National Institute on Deafness and Other Communication Disorders (NIDCD), some effective assistive devices for individuals who are deaf or hard of hearing include:

Hearing aids: are tiny electrical devices that enhance sounds and improve speech intelligibility for those who have hearing loss.

Cochlear implants: are surgically implanted devices that stimulate the auditory nerve directly rather than bypassing damaged sections of the inner ear.

FM systems: are wireless devices that send sound directly to a person's hearing aid or cochlear implant, making it easier to hear in loud situations or from a distance.

Captioning and subtitling services: These services give text-based versions of audio or video content, allowing those who are deaf or hard of hearing to read along with the spoken words.

Video relay services: These services provide sign language interpretation for phone conversations and video chats, allowing deaf people to connect in real time with hearing people.

Alerting devices: employ flashing lights, vibrations, or loud noises to notify people of critical sounds or occurrences, such as doorbells, phone calls, or smoke alarms.

Text-to-speech software: These are programs that transform written text into spoken words, allowing DHH people to access information from websites, documents, or other written materials more easily. It should be noted that the precise assistive equipment required will be determined by the individual's amount and kind of hearing loss, as well as their communication preferences and needs. Consultation with a hearing healthcare specialist can assist in determining which devices are most suited to an individual's requirements.

1.6 Special Education

Special education is a type of education that is specifically designed to fulfill the requirements of kids with disabilities or other special needs. It is intended to provide tailored teaching, support, and services to assist pupils in meeting their educational objectives and reaching

their full potential. Accommodations and adjustments to the standard curriculum, as well as specialized instruction and support services, are examples of special education services.

Assistive technology, speech and language therapy, occupational therapy, physical therapy, counseling, and behavior intervention are all typical services. Individuals with Disabilities Education Act (IDEA) in the United States, which sets the procedures for identifying, assessing, and delivering assistance to pupils with disabilities governs special education. Other nations may have their own special education laws and regulations.

The purpose of special education is to assist children with disabilities or special needs in developing the skills and information required to fully participate in school and their communities. This may entail making concessions and changes to the standard curriculum, or it may entail offering specialist teaching and support services to meet specific learning issues. Overall, special education is critical in ensuring that all kids, regardless of ability or special needs, have access to high-quality education and the assistance they require to thrive.

1.6.1 Special Education in Algeria

Pupils with impairments, including those with physical, sensory, and intellectual problems, receive special education in Algeria. The Algerian government offers special education services in either specialized schools or conventional schools with support services. Generalizing the process of opening specialized departments in coordination with the National Education Sector, the process of caring for children with sensory disabilities (hearing impaired and blind) in integration departments in the regular school environment began during the 1990s, before the issuance of the joint ministerial decision issued on December 10, 1998, which included the opening

of special departments for the hearing impaired and blind in educational institutions in the national education sector.

The Algerian government, in addition to specialized institutions, offers support services for kids with disabilities in conventional schools. Assistive technology, classroom accommodations, and specialized education from certified instructors or aids are examples of these support services. The Algerian government has also worked to enhance school accessibility and instruction for pupils with impairments. Some schools, for example, have been renovated to accommodate wheelchairs, and braille materials are provided for pupils who are blind or visually challenged.

Despite these efforts, Algerian special education programs continue to confront obstacles, including insufficient money and resources, a dearth of certified special education instructors and support staff, and restricted access to specialist equipment and technology. Increased investment in special education programs in Algeria has been called for in recent years to improve access to education and assistance for pupils with disabilities. Some organizations and advocacy groups are also trying to increase awareness about the rights of pupils with disabilities and to encourage more inclusive and accessible educational opportunities.

1.7 Methods of Teaching Deaf and Hard of Hearing

Teaching kids who are deaf or hard of hearing might necessitate unique methods and procedures. Here are some strategies for teaching DHH pupils:

1.7.1 Sign Language

Sign language is a visual language that conveys communication through hand movements, facial expressions, and body language. Sign language is the principal mode of communication

for many DHH pupils. As a result, teaching using sign language can be an efficient technique to connect with and impart knowledge to these kids.

1.7.2 Visual Aids

Such as diagrams, drawings, and videos, can assist deaf and hard of hearing pupils in comprehending complicated concepts and ideas. Visual aids may be used by teachers to enhance spoken or signed language or as the primary mode of communication.

1.7.3 Captioning and Subtitles

Captioning and subtitles can help DHH pupils understand spoken language. Teachers can employ captioned or subtitled videos or give textual transcripts of lectures or other resources.

1.7.4 Assistive Listening Devices

Pupils with hearing loss might benefit from assistive listening equipment such as hearing aids and cochlear implants, which enhance sound. A microphone and speaker system may also be used by teachers to guarantee that their voice is heard by all pupils.

1.7.5 Peer Support

Pairing DHH pupils with hearing peers can give possibilities for social engagement and language development. In certain circumstances, hearing pupils may learn sign language to communicate with their classmates.

1.7.6 Multimodal Instruction

Using a range of teaching approaches allows for different learning styles and preferences to be accommodated. Teachers, for example, may impart knowledge using a combination of

SL, visual aids, and textual resources. It is critical to recognize that each pupils' learning requirements and preferences are distinct; therefore, it is critical to personalize education to individual pupils as much as possible to promote successful learning.

1.8 Bilingualism and Multilingualism for DHH Individuals:

All pupils, particularly those who are deaf or hard of hearing, have the opportunity to explore bilingualism and multilingualism. It is beneficial for them to develop excellent language abilities in both their first language, typically a signed language, and their second language, often in written or spoken form.

Bilingualism and multilingualism have been demonstrated in studies to provide several benefits for hard of hearing kids. Being proficient in both a signed and written or spoken language, for example, can boost communication skills, cognitive flexibility, and educational and professional options. Furthermore, being able to speak successfully in various languages helps increase cultural knowledge and appreciation. It is crucial to highlight, however, that acquiring bilingualism or multilingualism can be difficult for DHH pupils since they may experience extra learning and language acquisition challenges. They may, for example, lack early and regular exposure to signed and spoken languages, which might delay language development and impair their capacity to gain language fluency.

It is critical to give early and regular exposure to both signed and spoken languages DHH pupils to develop bilingualism and multilingualism. This can be accomplished through a variety of means, including bilingual education programs, sign language interpreters, and speech therapy. Furthermore, offering access to DHH role models who are proficient in many languages can serve to encourage and motivate kids to seek bilingualism and multilingualism.

1.9 Foreign Languages and Deafness

Deafness does not necessarily prevent someone from learning and using FL, but it can present some unique challenges. One of the most significant challenges is accessing spoken language. For people who are deaf or hard of hearing, spoken language is not always accessible, and they may need to rely on other forms of communication, such as sign language, written language, or visual aids, to learn and use a foreign language.

For those who use sign language, there may be different sign languages used in different countries, and some sign languages maybe more closely related to spoken languages than others. In some cases, it may be necessary to learn both the sign language and the spoken language of a country in order to fully communicate with people who are deaf or hard of hearing. Written language can also be a challenge for some people who are deaf or hard of hearing, especially if they have difficulty with literacy or with processing written information. However, written language can also be a useful tool for language learning, as it allows learners to study grammar, vocabulary, and other aspects of the language in a visual format.

Overall, the challenges faced by people who are deaf or hard of hearing in learning and using foreign languages can be overcome with the right tools, resources, and support. With determination and hard work, people with hearing loss can become proficient in multiple languages and communicate effectively with people from around the world.

1.10 Challenges of Learning Foreign Languages for DHH Pupils:

Learning a second language may be a pleasant experience, but it can also be a difficult endeavor, especially for deaf pupils. While there are several advantages to learning a foreign language, such as improved communication skills, higher cognitive capacities, and more cultural

awareness, deaf pupils confront certain particular hurdles that can make the process more challenging. One of the most major difficulties that deaf pupils encounter is a lack of access to auditory information. They may struggle to learn new vocabulary and grasp the sounds of the language they are learning since they are unable to hear spoken language. This can also make picking up on subtleties and variances in pronunciation, intonation, and rhythm challenging.

Another difficulty that deaf pupils may have when studying a foreign language is a lack of exposure to the language. Deaf kids, unlike hearing pupils, may have fewer opportunities to be exposed to the language they are studying, especially if they attend a school where the language is not widely spoken. This might make practicing and reinforcing their language skills challenging. Deaf pupils may also have difficulty understanding the varied grammatical structures of the foreign language they are studying. Some languages have different grammatical rules than the pupils' native language, which can make learning and applying them difficult. This can be especially problematic for deaf pupils who may not understand the grammar of their native language. Another issue that deaf pupils may experience is a lack of access to materials. If they are studying a foreign language that is not frequently taught in their nation or region, they may have trouble locating materials to practice reading and writing in the language.

Furthermore, deaf pupils may have trouble obtaining materials in an accessible manner, such as subtitles or captions. Access to language models can also be a significant barrier for deaf pupils. It might be difficult for children to practice speaking and listening comprehension if they do not have access to proficient speakers of the language they are learning. This might be especially difficult if the pupils' family and friends do not speak the language they are studying.

Finally, deaf pupils may not receive appropriate assistance from instructors or peers. Many schools are not equipped to accommodate kids with hearing impairments, making it difficult for

them to obtain the adjustments and resources they require to excel in their language studies. If their peers or instructors do not appreciate their particular needs and problems, deaf pupils may feel alone or misunderstood.

Despite these obstacles, several solutions and adjustments can assist deaf pupils in effectively learning a foreign language. To assist comprehension, one option is to employ visual aids and resources, such as films with subtitles. Deaf pupils can also practice reading and writing in the language to strengthen their abilities. Technology, such as employing speech recognition software to practice pronunciation, can also be beneficial. Deaf pupils should also have access to language models, such as online tutors or language exchange programs, to develop their speaking and listening abilities.

Additionally, schools and teachers can provide accommodations, such as interpreters or captioning, to assist deaf pupils in fully participating in language programs and activities. To summarize, studying a foreign language as a deaf pupils can be difficult, but with the proper tools, accommodations, and support, deaf pupils can effectively learn and communicate in a foreign language. Schools, instructors, and pupils may collaborate to establish an inclusive and supportive learning environment that encourages language competency and cultural understanding.

1.11 Conclusion

This chapter discussed the various aspects of hearing loss and its impact on individuals. First, we have defined major concepts related to the deaf community such as, hearing loss, deafness which is the most severe form of hearing loss, as well as hard of hearing a less severe form that ranges from mild to severe. The chapter also includes the definition of term related to hearing loss which is deaf-mute. We have also examined the different types of hearing loss including

conductive, sensor neural, and mixed hearing loss. We touched on the communication methods used by DHH individuals for instance sign language and lip reading. Next, we mentioned the assistive devices available to those with hearing loss and the special education programs available in general and in Algeria in specific. Additionally, we have discussed the teaching methods and approaches for deaf and hard of hearing learners, as well as the relationship between deafness and learning FL and its challenges. The next chapter is devoted for the research methodology.

Chapter Two:

Research Methodology

2.1 Introduction

The present chapter discusses the methodology used in our research study. This chapter focuses on the practical aspect of the study and explains the methods and instruments used, namely a mixed method which requires the use of a questionnaire and interview. In addition to providing an in-depth exploration of the practical aspect of the study and a comprehensive explanation of the questionnaire and interview methods employed, this chapter also highlights the rationale behind their selection. By thoroughly examining the methodology used in this study, readers can gain valuable insights into the process of conducting research, including the thoughtful consideration of various tools and techniques, and how they contribute to the acquisition of reliable and valid data.

2.2 Research Methodology

To achieve the research objectives, a mixed-method approach was employed, utilizing both qualitative and quantitative methods. The increasing popularity of this approach can be attributed to researchers' recognition of the distinct advantages and limitations of both qualitative and quantitative methods.

2.2.1 Quantitative Method

Quantitative research methods are based on collecting data that can be analyzed numerically. This involves the use of statistical analysis to quantify and count data, allowing for the drawing of conclusions. The results of quantitative research are typically presented using statistics, tables, and graphs. The primary objective of quantitative research is to test predetermined hypotheses and produce generalizable results. Statistical methods are used to analyze the data and either confirm or refute the hypotheses.

2.2.2 Qualitative Method

Qualitative research is a method of research used in social sciences to understand and explain social phenomena. It involves collecting and analyzing non-numerical data such as interviews, observation, and documents. The goal is to generate rich, detailed descriptions and develop theories or hypotheses that can be further tested through quantitative research methods. Qualitative research provides valuable insights into complex social issues that cannot be captured through quantitative research alone.

According to Rubin & Babbie (2001), the qualitative method pursues a deeper understanding of the human experience, especially when observations and theories cannot easily be reduced to numbers. This type of research method requires the researcher to engage in fieldwork, which involves actively participating in the social setting being studied, particularly for the purpose of observation and conducting interviews with participants related to the research topic.

2.2.3 Mixed Method

According to Creswell and Plano Clark (2011), a mixed-methods research design is a specific approach to conducting research that has its own set of beliefs and methods. It involves combining different ways of gathering and analyzing data from various sources within a single study. In simpler terms, it means using a mix of approaches to collect and analyze information in a research project, following specific principles and techniques.

By combining qualitative and quantitative data in a meaningful way, this approach enables researchers to provide comprehensive explanations of research issues. It offers several advantages, such as providing a logical foundation, methodological flexibility, and a deep understanding of

specific cases (Maxwell, 2016). In essence, mixed-methods research allows researchers to address research questions with both depth and breadth, thus facilitating the generalization of findings and implications to the broader population (Enosh, et al, 2014).

The quantitative component of a mixed-methods design enables researchers to collect data from a large number of participants, increasing the potential for generalizability. On the other hand, the qualitative component offers a more profound understanding of the investigated issue, acknowledging the perspectives and voices of the participants. Quantitative data contribute breadth to the study, while qualitative data provide depth (Fetters, 2016).

Furthermore, the results obtained from quantitative and qualitative approaches can be triangulated, allowing for a comprehensive understanding of the research problem and enhancing the validity of the findings (Carter et al., 2014). Triangulation, as a qualitative research strategy, involves using multiple methods or data sources to develop a comprehensive understanding or validate information by converging evidence from different sources.

Overall, a mixed-methods design presents an optimal opportunity to answer research questions by harnessing the strengths of both quantitative and qualitative methods, while compensating for their respective weaknesses (Johnson & Onwuegbuzie, 2004). Consequently, ‘mixed-method research designs are becoming increasingly relevant to addressing impact research questions’ (Saville, 2012, p.7).

2.3 Aims of the Present Study

This chapter is intended to examine and analyze the results obtained from investigating the type of relationship that exists between DHH individuals and foreign languages. The primary

objective of this study is to identify the difficulties that may confront Ain Temouchent middle school pupils with hearing impairments when studying foreign languages.

Additionally, this study aims to determine whether there are any effective strategies or solutions that could facilitate the foreign language learning process for DHH pupils. To achieve these research objectives, the study utilizes a combination of methods, including a questionnaire for DHH pupils and conducting interviews with teachers. These data collection methods are intended to provide valuable insights into the challenges and experiences of DHH pupils when learning foreign languages

2.4 Instruments of Research

In research, instruments refer to the various tools, techniques, or methods employed to gather data. There exists a plethora of data collection techniques, including but not limited to observation, questionnaires, and interviews. The choice of an appropriate tool or technique largely depends on the type of research design employed in the study.

In this particular study, the selection of the questionnaire as the primary tool for gathering data from pupils was motivated by its ability to efficiently collect a large volume of standardized responses. It offered a structured format that allowed for consistency and ease of data analysis. Moreover, the questionnaire ensured anonymity and minimized any potential bias in responses, promoting more candid and honest answers from the participants.

Simultaneously, interviews were chosen as a complementary method for data collection, specifically with teachers. The rationale behind this selection was to obtain a more nuanced understanding of the subject matter, as interviews provide an opportunity for in-depth exploration

and clarification. Through interviews, researchers could delve into teachers' experiences, perspectives, and insights, allowing for a richer understanding of the research topic.

By employing a combination of the questionnaire and interviews, the study aimed to leverage the strengths of both methods, maximizing the breadth and depth of the data collected.

This approach aimed to provide a comprehensive and multifaceted view of the research topic, enriching the analysis and enhancing the overall validity and reliability of the study's findings.

2.4.1 The Questionnaire

When embarking on a research project, the questionnaire is frequently among the foremost instruments contemplated for data collection. Essentially, it is a pre-determined sequence of queries designed to elicit information from individuals. The questionnaire is a widely accepted and utilized research tool in various academic disciplines, given its capacity to provide a standardized means of collecting data, allowing for the comparison of responses across respondents and facilitating statistical analysis. In this research, questionnaire have been handed to DHH pupils.

The main purpose of this questionnaire is to identify the difficulties that may be encountered by DHH pupils at Ain Temouchent middle schools when studying foreign languages. Moreover, this study aims to determine whether there are any effective strategies or solutions that could facilitate the foreign language learning process for DHH pupils.

2.4.1.1 The Description of the Questionnaire

Concerning the pupils' questionnaire: it consists of twelve open-ended and multiple-choices questions. We included some pictures to facilitate the understanding of some questions

that might be difficult for the DHH pupils. During the filling of the questionnaire the pupils were assisted by an interpreter of sign language to have a full understanding of the questions.

2.4.2 The Interview

The second instrument used to gather more data is an interview with teachers; interviews with teachers are useful for gathering in-depth information about FL learning classrooms from the perspectives of those who are responsible for delivering instruction. By directly engaging with teachers, researchers can gain insights into their experiences, perspectives, and pedagogical approaches.

Additionally, note-taking during the interview can capture important details and insights that might be missed otherwise. Also, conducting interviews with teachers can provide valuable information about the challenges faced by DHH pupils in learning FL. Overall, interviewing teachers can provide researchers with a rich and detailed understanding of the teaching and the learning process in the classrooms. ‘Interviews with teachers provide a rich source of data and enable researchers to investigate the beliefs and knowledge that underpin language teaching practice.’ (Nunan, 1992, p. 96).

2.4.2.1 The Description of the Interview

A semi-structured interview was conducted with three middle school foreign language teachers and one psychologist of DHH pupils in Mujahid Meloudy Muhammed the school of hearing-impaired children in Ain Temouchent. The psychologist whom helped as an interpreter in this in collecting data.

2.5 Population and Sampling

Population, as defined by Enon (1995), is a collective group of individuals from whom researchers may obtain data and information for analysis.

In this research the population sample consists of ten DHH pupils for the questionnaire, seven male pupils from Fatima Rahmania middle school and three pupils, one male and two females from Bousaid Aisha middle school. Their ages are between fifteen and eighteen years old. For the interview, the population sample consists of three teachers and one psychologist.

2.6 Conclusion

In conclusion, this chapter provides an overview of the research methodology used to investigate the challenges faced by DHH learners in learning foreign languages. It emphasizes the use of a mixed method approach, combining qualitative method using interviews with teachers and a quantitative method using questionnaire for DHH pupils. This method offers flexibility and a comprehensive understanding of the topic. The chapter described the research instruments, population, and sampling strategy in detail. The findings from this study will contribute to a better understanding of language learning difficulties among DHH pupils and inform the development of support systems.

Chapter Three:

Data Analysis and
Interpretation

3.1 Introduction

This chapter is dedicated to an in-depth analysis of the data collected through the instrument utilized in this study. The instrument employed for data collection comprises two key components: a DHH pupils' questionnaire and a semi-structured interview conducted with the teachers and the psychologist involved in the study. The information gathered from these sources, specifically the semi-structured interview with the teachers and psychologist and the questionnaire given to DHH pupils, together provides a solid basis for the in-depth interpretation and analysis of the results that are provided in this chapter for both the questionnaire and the interview.

3.2 Pupils' Questionnaire Analysis

Sample Size: 10

Male: 8 Female: 2

1. Degree of hearing loss:

Aim of the question: to figure out the pupils' degree of hearing loss.

Table 3.1: The Degrees of Hearing Loss

Answer	Pupils' Number	%
Mild	5	50%
Moderate	0	0%
Moderately Severe	1	10%
Severe	0	0%
Profound	4	40%

Half of the pupils have profound hearing loss (50%), while (40%) of them have a mild hearing loss, and only one who has moderately severe hearing loss.

2. Do you use:

- Hearing aids
- Cochlear implant/s
- Both
- None

Aim of the question: To know if DHH pupils use hearing devices and which type.

Table 3.2: Hearing Devices

Answer	Pupils' Number	%
Hearing aids	7	70%
Cochlear Implant/s	2	20%
Both	0	0%
None	1	10%

70% of the pupils wear hearing aids; while 20% have a cochlear implant and only 10% pupil does not have any assistive device.

3. What is your first language?

Aim of the question: to know the first language of the pupils.

Table 3.3: First Language

Answer	Pupils' Number	%
Sign language	3	30%
Spoken language	0	0%
Both	7	70%

The majority of pupils (70%) acquired both sign and spoken language as a first language, while 30% of them acquired only sign language.

4. Which communication method do you use?

Aim of the question: To know which method DHH pupils use to communicate.

Table 3.4: Communication Methods

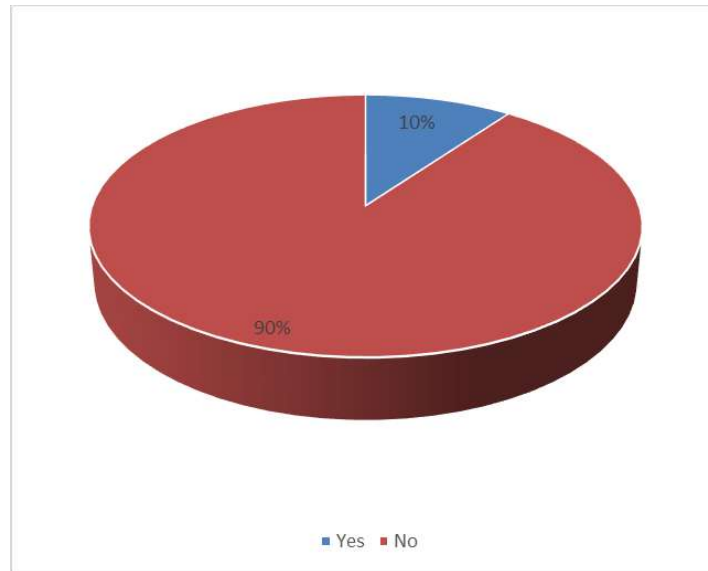
Answer	Pupils' Number	%
Sign only	3	30%
Talk only	0	0%
Sign and Talk	7	70%

Most of the pupils (70%) use both signing and talking to communicate, while 30% of them use only sign language in communication.

5. Do you use any other communication methods in class?

If yes mention them.

Aim of the question: to know if there are other methods used in class.



Pie Chart 3.1: Classroom Communication Methods

The majority of pupils (90%) do not use any other communication method in the classroom, while only one (10%) uses Lip Reading.

6. How confident are you about your current level of foreign languages proficiency?

Aim of the question: to know to which extent pupils master the FL.

Table 3.5: FL Proficiency Level

Answer	Pupils' Number	%
Bad	5	50%
Good	5	50%
Very Good	0	0%

Half of the pupils said that their proficiency level in foreign languages is good, while the other half said that their level is bad.

7. Does your degree of hearing loss have an effect on learning foreign languages?

-Explain....

Aim of the question: to examine if hearing loss has many effects on learning FL for DHH pupils.

Table 3.6: Hearing Loss Effect on Learning FL

Answer	Pupils' Number	%
Yes	10	100%
No	0	0%

All the pupils (100%) agreed that hearing loss has much effect on their learning of foreign languages.

8. What challenges have you faced while attempting to learn foreign languages?

Aim of the question: to know the challenges pupils struggle with while learning FL.

Table 3.7: DHH Challenges in Learning FL

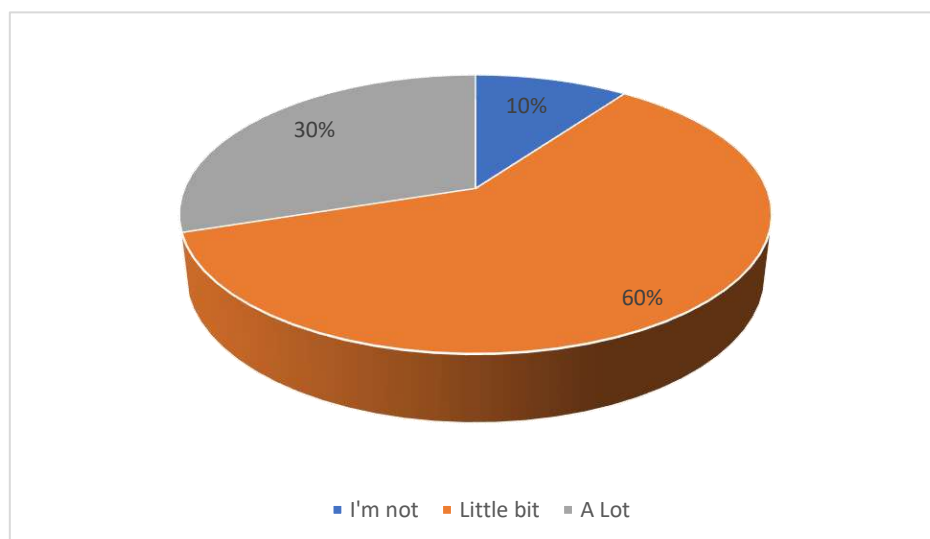
Answer	Pupils' Number	%
Lack of motivation.	1	10%
Difficulty in communication.	10	100%
Lack of practice opportunities.	10	100%

All pupils (100%) agreed that they face difficulties in communication with the teacher and they do not get many opportunities for practice, and one of them added that he has a lack of motivation to learn foreign languages.

9. How motivated are you to continue learning foreign languages?

Why?

Aim of the question: to know if pupils are motivated to learn FL.



Pie Chart 3.2: FL Learning Motivation

60% of the pupils show a modest level of motivation towards acquiring foreign languages, while A substantial 30% of the pupils demonstrate a high degree of motivation with regard to the acquisition of a foreign language. Only one pupil is not motivated.

10. What is the most difficult part of learning a language for you? (Exp: vocabulary, grammar, reading...)

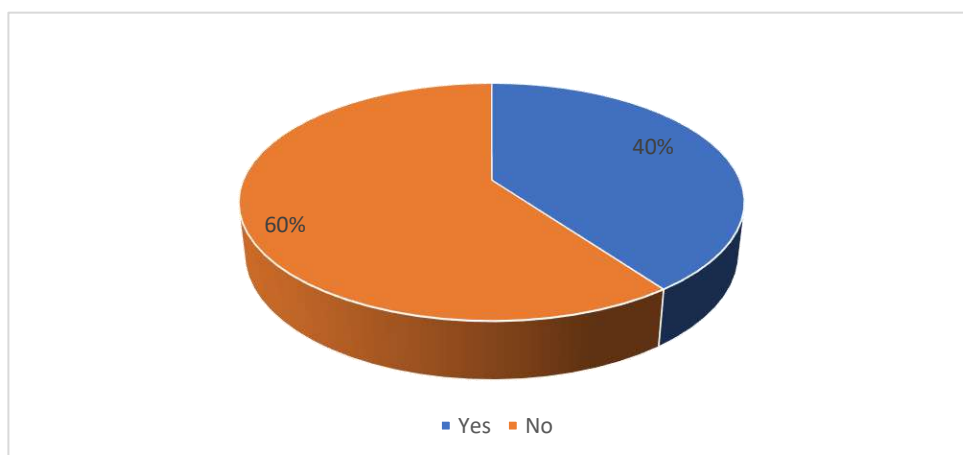
Aim of the question: to know which elements of the language are difficult in learning foreign languages.

All of the pupils mentioned that they find difficulty in almost all elements but especially with vocabulary and grammar.

11. Have you ever had a teacher whose methods of teaching helped you learn more effectively?

-If yes mention those methods.

Aim of the question: to figure out the effective methods used by teachers for DHH pupils.



Pie Chart 3.3: Teaching Methods

In the surveyed group of pupils, 60% of the pupils claim that they received no specific methods that they found effective and suitable for their FL learning experience, whereas the remaining 40% were fortunate to be taught by teachers who employed effective methods to facilitate foreign language learning such as the use of illustrations, videos, and games.

12. Are there any particular foreign language learning techniques that have been particularly helpful for you?

Aim of the question: to be seeking information about effective personal language learning techniques for DHH pupils.

All pupils have written the same answer, that using pictures and videos in learning helps them understand easily and more effectively.

3.3 Teachers' Interview Analysis

Q1: How long have you been teaching DHH pupils?

Aim of the question: This information helps provide context and insight into the teacher's level of expertise and familiarity with the unique needs and challenges of DHH learners.

Table 3.8: Teaching Experience

Teacher 1	Teacher 2	Teacher 3
4 years	5 years	10 years

Teacher 3 has the most experience in teaching DHH pupils, having taught them for 10 years. Teacher 2 has intermediate experience with 5 years, while Teacher 1 has the least experience with 4 years

Q2: Have you received any special training before teaching DHH pupils? Does it include sign language?

The aim of this question is to inquire about the teacher's special training, including sign language, which is relevant for teaching pupils who are deaf or hard of hearing.

Teacher 1: Have not received any training yet.

Teacher 2: Received fifteen days of training including different modules related to special needs learners but no module of sign language.

Teacher 3: 'I have received training at the level of the training center of the Ministry of Solidarity. The program consists of a number of modules including sign language

Teacher 3 has received training that specifically includes sign language, which is highly beneficial for teaching DHH pupils. However, both other teachers did not learn sign language before teaching.

Q3: How is your pupils' level in foreign languages?

The aim of this question is to understand the level of proficiency in foreign languages among the DHH pupils.

The three teachers assessed their pupils' foreign language proficiency levels, describing them as ranging from fairly decent to good.

Q4: What challenges do you think your pupils struggle with while learning a foreign language?

The aim of this question is to identify the specific challenges faced by DHH pupils when learning a foreign language.

The responses of the teachers to this question can be summarized as follows:

- Challenges mainly related to expression
- Vocabulary
- The difficulty of the program

The teachers identified several challenges faced by DHH pupils when learning a foreign language, including difficulties with expression, vocabulary, and the overall difficulty of the program.

Q5: What strategies do you use to help DHH pupils acquire a foreign language?

The aim of this question is to gather information about the strategies used by the teacher to assist DHH pupils in acquiring a foreign language.

The strategies used by teachers to help their DHH pupils are:

- The use of visual aids such as pictures, illustrations, videos, and drawings.
- Playing educational games.
- Doing exercises and repetition of the lectures.

The strategies used by the teachers to help DHH pupils acquire a foreign language include the use of visual aids such as pictures, illustrations, videos, and drawings, playing educational games, and doing exercises and repetition of the lectures. These strategies aim to enhance comprehension and engagement.

Q6: How do you address communication difficulties in the classroom for DHH pupils?

The aim of this question is to understand the specific approaches and methods employed by the teacher to effectively manage and overcome communication challenges in the classroom.

Teacher1: ‘Sometimes the pupils, who can understand well which are usually the ones with a mild hearing loss, help transmit the information or instructions to their classmates’

Teacher 2: The teacher employs visual aids, such as pictures or direct referencing to the relevant objects, to enhance communication and facilitate understanding.

Teacher 3: ‘By the use of the first language of the pupils: sign language that makes the task easier and better to understand’

The teachers employ various approaches to address communication difficulties in the classroom, such as utilizing classmates as intermediaries, sign language, and visual aids. These methods aim to improve communication and ensure that DHH pupils can effectively understand and participate in the classroom.

Q7: Are there any frustrations due to poor working conditions?

The aim of this question is to understand if there are any specific difficulties or frustrations the teacher encounters in their teaching environment, which can provide insights into potential obstacles that may impact the teaching and learning experience for DHH pupils.

All teachers claim that there are no major frustrations and the working condition is fine.

According to the teachers, there are no major frustrations due to poor working conditions. This indicates that the working conditions are generally satisfactory and do not significantly hinder the teaching and learning experience for DHH pupils.

Q8: Do you think the authorities are providing enough support to the DHH learners’ educational system?

The aim of this question is to gather the teacher's perspective on whether authorities provide sufficient support to the educational system for DHH learners.

All the teachers agreed that the authority needs to do more effort to support DHH pupils and mainly to create a special program suitable for the DHH learners' educational system.

All the teachers agreed that the authorities need to provide more support to the DHH learners' educational system. This suggests that there is a perceived lack of sufficient support from the authorities, and the teachers believe that more effort should be made to create a specialized program suitable for DHH learners.

3.4 Discussion and Interpretation of the Results

The main goal of the questionnaire was to gather a comprehensive set of information regarding the process of learning a foreign language for pupils who are deaf or hard of hearing in middle school. The collected data from the questionnaire provided crucial insights and valuable information pertaining to this specific topic. Additionally, interviews were conducted with FL teachers who teach DHH pupils to supplement the findings obtained from the questionnaire.

These interviews provided further valuable perspectives and insights into the teaching methodologies and challenges faced by teachers when instructing DHH pupils in learning a foreign language. The combination of the questionnaire and the teacher interviews offered a well-rounded understanding of the learning experiences of DHH pupils in middle school and the strategies employed by teachers to facilitate their language acquisition journey.

3.4.1 Discussion and Interpretation of the Questionnaire Results

Firstly, the questionnaire was administered to pupils who are deaf or hard of hearing. In general, the participants' ages ranged between 15 and 18 years old. It was important to consider the age of the respondents as it provides valuable insights into their learning capacities. While it may seem unusual to have an 18-year-old pupil in middle school, it is more common for individuals with hearing loss according to their psychologist due to the following factors:

- Delayed school entry.
- Lack of knowledge about specialized schools for DHH.

Therefore, it is important to consider these factors when analyzing the age range of DHH pupils in middle school, as they often experience educational trajectories that differ from their hearing peers.

The questionnaire aimed to gather information about various aspects related to DHH pupils, including the degree of hearing loss, the use of hearing devices, language acquisition, communication methods, challenges in learning foreign languages, motivation levels, and effective teaching techniques.

The data reveals that (50%) of the pupils have profound hearing loss, 40% have mild hearing loss, and one pupil has moderately severe hearing loss. This indicates a range of hearing impairments among the surveyed pupils. The majority of pupils (70%) use hearing aids, (20%) have cochlear implants, and (10%) do not use any assistive devices. This highlights the prevalence of hearing aids and cochlear implants among DHH pupils.

In terms of language acquisition, (70%) of pupils acquired both sign and spoken language as their first language, while (30%) acquired sign language alone. This reflects a diverse language background among DHH pupils.

Regarding communication methods, (70%) of pupils use both signing and talking, while (30%) rely solely on sign language. This indicates a preference for either a bilingual or sign language-only communication approach.

Most pupils (90%) do not use any additional communication methods in the classroom, while one pupil (10%) mentioned using lip-reading. This suggests that the primary modes of communication are sufficient for the majority of DHH pupils.

When it comes to foreign language proficiency, half of the pupils perceive their proficiency level as good, while the other half consider it to be bad. This highlights a mixed perception of language proficiency among DHH pupils.

All pupils agreed that their degree of hearing loss significantly affects their ability to learn foreign languages. This underscores the impact of hearing loss on language acquisition and emphasizes the need for additional support for DHH pupils in foreign language learning.

Challenges faced by the pupils include difficulties in communication with teachers, lack of practice opportunities, and some pupils mentioning a lack of motivation. These challenges indicate barriers to language learning for DHH pupils.

In terms of motivation, (60%) of pupils exhibit a modest level of motivation, (30%) demonstrate a high degree of motivation, and one pupil expressed a lack of motivation. This highlights the varying levels of motivation among DHH pupils.

Finally, all pupils mentioned that using pictures and videos helps them understand foreign languages more effectively. This emphasizes the importance of visual aids in facilitating language learning for DHH pupils.

Overall, the data from the questionnaire provides insights into the degree of hearing loss, use of assistive devices, language acquisition, communication methods, challenges, motivation, and effective teaching techniques for DHH pupils. These findings can inform the development of targeted support strategies to enhance language learning experiences for DHH pupils.

3.4.2 The Discussion and Interpretation of the Interview Results

The findings acquired from the in-depth analysis of the data collected during the extensive interview process reveal a multitude of significant insights regarding the education of pupils with a hearing impairment DHH. One of the revelations is the alarming lack of sufficient training received by the majority of teachers who work with DHH pupils. It became evident that these educators had either undergone a brief and limited period of training or, in some cases, received no training at all in the specialized field of teaching DHH pupils. What is even more concerning is that many of these training programs do not even include a module on sign language, a vital mode of communication for DHH individuals. As a result, the teachers find themselves facing immense challenges when attempting to effectively communicate with their DHH pupils in the classroom. During one of the interviews, a teacher shared her initial experience of teaching DHH pupils. She candidly says that she struggled to communicate using sign language, leading her pupils with mild hearing loss to step in and assist by explaining her words to their classmates. Over time, this act not only helped the teacher bridge the communication gap but also enabled her to learn sign language herself. This inspiring anecdote sheds light on the resilience and adaptability

of both teachers and pupils, as they find innovative ways to overcome obstacles in their educational journey.

From the teachers' perspective, it became apparent that DHH pupils often encounter difficulties primarily in the realm of expression. These pupils frequently face challenges when trying to articulate coherent and clear sentences, often resorting to using simple words to convey complex meanings. Moreover, vocabulary acquisition and the learning of new words pose significant hurdles for DHH pupils, mainly due to the lack of practice and repetition outside the classroom. This issue can be attributed to various factors, such as parental ignorance regarding the specific needs of DHH children or a lack of parental involvement and encouragement in their learning process.

Furthermore, the interviewed teachers unanimously agreed that the existing educational program designed for DHH pupils is highly demanding and fails to adequately cater to their unique requirements. They firmly advocated for the implementation of a specialized program specifically tailored to meet the needs of DHH education. This program should differ substantially from the standard curriculum and be carefully designed to address the specific challenges faced by DHH pupils.

In terms of instructional strategies employed within the classroom, all the interviewed teachers demonstrated a strong commitment to utilizing various visual aids to enhance their lessons and facilitate the effective transmission of information. Illustrations and pictures were commonly used to supplement verbal explanations, ensuring that the DHH learners could grasp the content more easily. Additionally, incorporating educational games into the teaching process emerged as a valuable technique to engage the pupils actively and foster a sense of motivation and enthusiasm in their learning journey.

In conclusion, the analysis of the data collected from the interviews with teachers working with DHH pupils has shed light on the pressing issues and challenges faced within the realm of DHH education. The findings emphasize the urgent need for comprehensive and specialized training for teachers, including modules on sign language and effective communication techniques.

Additionally, DHH pupils require tailored educational programs that address their unique needs, particularly in the areas of expression, vocabulary acquisition, and parental involvement. By implementing innovative instructional strategies, such as visual aids and interactive games, teachers can create a conducive learning environment that empowers DHH pupils and fosters their academic growth.

3.5 Conclusion

This chapter aimed to identify the difficulties DHH pupils face while learning foreign languages. Two research tools were used: a questionnaire addressed to DHH pupils in integrated classes of middle schools in Ain Temouchent, and interviews conducted with three FL teachers. The findings revealed that DHH pupils face difficulties in various aspects of FL learning, such as grammar, vocabulary, lack of expression, and the inadequacy of the educational program designed for DHH pupils. Visual aids such as pictures, games, and videos were recognized as valuable tools for enhancing comprehension and engagement. Other strategies, such as repetition of lessons, assigning homework and exercises, and incorporating real objects into the learning process, were also mentioned by the teachers. These findings highlighted the importance of implementing appropriate teaching strategies and educational programs to better support DHH pupils in their journey to acquire foreign languages.

Chapter Four:

Recommendations and Limitations

4.1 Introduction

Building upon the findings and discussions presented in the previous chapter, this chapter aims to provide valuable recommendations based on the analyzed data and results. In summarizing the current research, we have identified the obstacles and difficulties that DHH pupils face while learning foreign languages given these challenges, we have explored teaching and learning methods for deaf pupils, seeking suitable solutions. The primary objective of this chapter is to provide both teachers and pupils with available methods and strategies for teaching and learning FL. By implementing these recommendations, educators can better support the language learning needs of deaf and hard-of-hearing pupils.

4.2 Teacher Training

To effectively support deaf pupils, it is imperative for teachers to receive training and become proficient in sign language, acknowledging the utmost significance of meeting the educational needs and well-being of DHH pupils. This proficiency in sign language is an asset to the teachers, enabling them to provide effective information and assistance for DHH pupils' learning needs while creating a favorable educational environment for all.

Communication is the key to any learning environment, and sign language is a primary mode of communication for DHH pupils. Teachers will be able to develop direct and meaningful relationships with their DHH pupils while learning sign language, ensuring that they have equal access to information and instruction. That will allow pupils to become active participants in class discussions, have questions answered, and be engaged throughout the curriculum.

It is also important that DHH pupils feel part of the school community when communicating effectively using sign language. It makes it easy for the DHH pupils to express

their thoughts, emotions, and ideas more easily by eliminating barriers that can be encountered when they rely on only words or spoken language. It is designed to foster ties, build relationships and reduce feelings of isolation for some DHH pupils.

In addition, teachers with experience in the use of sign language may more easily see how DHH pupils have different challenges and strengths. To meet the particular learning needs of DHH pupils, they can create teaching methods and materials that will allow them to take advantage of sensory and touch strategies which increase knowledge comprehension and retention. This tailored approach takes into consideration the diversity in the DHH pupils' population and is therefore appropriate to each pupils' learning style.

Teachers who are competent in sign language may also act as advocates for their DHH pupils, contributing to efficient communication and teaching. By facilitating an open and transparent communication system, they can address the gap among DHH pupils, their families, and the wider school community. They can be of assistance in raising public awareness about the need and rights of DHH pupils and promoting inclusivity in the broader educational system.

Although specialized interpreters of sign language can be an important resource in the classroom, it offers unique advantages to have teachers who are proficient in Sign Language. Teachers are also in charge of providing emotional support and guidance to pupils, as well as teaching them about the curriculum. Direct contact with DHH pupils is beneficial to stronger teacher-pupil relationships and enables teachers to address their pupils' holistic needs more effectively.

Finally, Teachers must undergo education and training in sign language before engaging with DHH pupils. The significance of this cannot be overstated. Equipping teachers with sign language skills empowers them to facilitate effective communication, tailor lessons to individual

needs, and foster inclusivity and advocacy for DHH pupils within the education system. By investing in sign language training for teachers, we enhance the educational environment for DHH pupils and enable them to reach their maximum potential.

4.3 The Authorities' Support

During the educational journey, DHH pupils face unique challenges that need to be tackled by authorities to ensure their needs are met. These learners require special programs and services tailored to their particular needs so that they can receive equal treatment with hearing peers in the field of education. By recognizing the importance of such support and establishing dedicated initiatives, authorities can foster an inclusive educational environment that empowers deaf and hard-of-hearing pupils to thrive academically, socially, and emotionally. One of the main reasons why authorities should pay the highest attention to supporting DHH learners is to ensure equal educational opportunities for all pupils. Education is a fundamental right, and it is essential that all pupils, regardless of their hearing ability, have access to quality education. By offering a specialized program, authorities can bridge the gap that exists between the needs of these pupils and the traditional education system, empowering them to reach their full potential.

A specialized program for DHH pupils can address various aspects crucial to their learning experience. Firstly, it can provide specialized teaching methods and materials that are tailored to their specific communication needs. For example, sign language interpreters or captioning services can facilitate effective communication in classrooms. Additionally, Technological progress, such as hearing aids and assistive listening devices, can help the ability to hear, enabling them to be fully engaged in the learning process.

In addition, the Supportive and Linguistic Learning Environment may be promoted through a specialized program. The social isolation and communication barriers which can negatively affect them in terms of their self-confidence and total well-being are frequently encountered by deaf and difficult to hear pupils. The specialized program enables pupils to meet their peers who are able to reflect on their experiences, foster a sense of belonging and reduce symptoms of isolation through the collaboration of pupils dealing with these problems. In addition, in order to help them manage their journey of education successfully, qualified teachers and staff who are well acquainted with the needs of DHH learners may make appropriate emotional and societal support available.

Aside from the immediate benefits for pupils, investment in specialized programs for deaf and hard of hearing kids provides long-term benefits for society as a whole. Authorities provide these learners with the support and information they need to become engaged and productive members of society by providing them with a decent education. With the correct assistance, they may continue further education, enter the industry, and offer their unique perspectives and abilities to a variety of disciplines. Authorities can tap into the enormous potential of DHH persons and establish a more equal society by supporting inclusion and diversity.

Authorities must engage with key stakeholders, such as educators, parents, and community groups, to guarantee the success of specialized programs for deaf and hard of hearing pupils. Authorities may get insights into the individual requirements of learners by incorporating these groups and developing comprehensive programs that address their academic, social, and emotional well-being.

Finally, the assistance offered by authorities for deaf and hard of hearing pupils through specific programs is critical. Authorities can provide equitable educational opportunities for every

pupil by recognizing the particular issues that they confront and offering personalized support. Furthermore, these programs encourage inclusion, allow pupils to attain their full potential, and contribute to a more varied and equal society. Authorities must prioritize and invest in these specialized programs in order to provide a friendly and inclusive educational environment for DHH pupils.

4.4 The Use of ICT

Information and Communication Technology can be highly beneficial for teaching DHH learners. It can help enhance their learning experience, improve communication, and provide equal access to educational resources. Here are some ways ICT can be used for teaching DHH pupils:

- **Captioning and Transcription:** Use captioning and transcription tools to provide written text alongside audio and video content, allowing DHH pupils to access and understand spoken information.
- **Video Conferencing:** Use video conferencing tools with real-time captioning and transcription features, allowing DHH pupils to participate in online classes, communicate with teachers and peers, and access support remotely.
- **Interactive Whiteboards:** Display visual information, diagrams, and instructional materials on interactive whiteboards or digital screens. This visual medium aids DHH pupils in better understanding subjects.
- **Multimedia Presentations:** To supplement education, create multimedia presentations containing pictures, photographs, and videos. These can help DHH pupils understand by providing more background.

- instructional applications and Software: Investigate instructional applications and software made exclusively for DHH pupils. These tools can concentrate on sign language acquisition, literacy development, arithmetic abilities, and other curricular topics.
- Assistive Listening Devices: To improve sound quality for DHH pupils, use assistive listening devices such as FM systems or personal amplifiers. These gadgets can assist in overcoming background noise and distance constraints.
- Online Learning Platforms: Make use of online learning platforms that provide accessible features such as closed captioning, transcripts, and interactive aspects. These platforms may be tailored to meet the unique requirements of DHH pupils.
- contact technologies: To enhance contact among DHH pupils, instructors, and peers, use communication technologies such as instant messaging, email, or video chat. These tools can help to facilitate continuing conversations, queries, and explanations.
- Collaborative Learning: Promote collaborative learning by utilizing online platforms and technologies that enable DHH pupils to collaborate on projects, share ideas, and offer peer evaluation.

To guarantee effective implementation, the use of ICT for educating DHH pupils should be complemented by adequate teacher training and continuing support. Furthermore, while selecting and implementing certain technologies for DHH learners, it is critical to consider individual requirements and preferences.

4.5 Limitations of the Study

During the course of this study, we encountered some limitations that need to be acknowledged. First, the small sample size, having only (10) middle school pupils in Ain

Temouchent may limit the generalizability of the findings. With a small sample, it becomes challenging to draw robust conclusions that can be applied to a larger population.

Second, communication difficulties with DHH pupils, communicating effectively with individuals who are deaf or hard of hearing may present unique challenges, such as the need for sign language interpreters or other specialized communication methods. These communication barriers can potentially affect the accuracy and reliability of the data collected from the DHH pupils.

Third, the difficulty in written expression, the study also identified that pupils had difficulty in written expression, which in turn made it challenging for them to express all that they wanted to say while answering the questionnaire. This limitation can impact the quality and completeness of the responses obtained from the participants. The inability to fully articulate their thoughts and feelings in written form may limit the depth of the data collected.

Finally, the last limitation of the study was the translation limitation which requires the necessity to translate the questionnaire from English to Arabic due to the difficulty the pupils had in understanding the language. This translation process introduces the potential for misinterpretation or loss of nuance in the questions and responses. It may also impact the comparability of the data with other studies conducted in English-speaking populations. Relying on a translated questionnaire raises concerns about the accuracy and validity of the collected data, especially in capturing the true intent and meaning of the questions for the participants.

In light of the aforementioned limitations, it is evident that further research is needed to expand our understanding of the topic. The identified constraints provide valuable insights into the potential areas for improvement and future exploration. Future studies should aim to overcome

these limitations by employing larger sample sizes, exploring alternative communication methods and enhancing participants written expression skills. By addressing these gaps in knowledge, we can foster a more comprehensive understanding and contribute to the advancement of research in this field.

4.6 Conclusion

In conclusion, providing adequate support and specialized programs for deaf and hard of hearing learners is crucial for ensuring their equal access to quality education and empowering them to reach their full potential. This includes investing in teacher training for sign language, recognizing the importance of authorities' support, utilizing information and communication technology (ICT), and promoting a supportive and inclusive learning environment. By prioritizing and investing in these initiatives, we can tap into the enormous potential of DHH individuals and establish a more diverse and equal society.

General Conclusion

General Conclusion

General Conclusion

In conclusion, the present study aimed to comprehensively investigate the challenges encountered by deaf and hard of hearing pupils in Ain Temouchent middle schools when learning foreign languages. Additionally, it sought to explore strategies, methods, and tools that could be employed to overcome these challenges. The study endeavor spanned multiple chapters, each addressing specific aspects essential to understanding the complex dynamics involved in the challenges face by DHH pupils while learning foreign languages.

While the study provided valuable insights, it is crucial to acknowledge its limitations. The primary constraint pertained to the small sample population of DHH pupils in Ain Temouchent middle schools, which curtailed the generalizability of the findings. Moreover, communication difficulties stemming from language barriers and the limited spoken language proficiency of the DHH pupils and our lack of sign language knowledge posed challenges during data collection. Furthermore, limitations were encountered during the administration of the questionnaire, as the pupils faced difficulties expressing themselves in writing, potentially limiting the scope of data collected.

In conclusion, this study explored the multifaceted challenges faced by DHH pupils in Ain Temouchent middle schools when learning foreign languages. Based on the results, analysis, and interpretation of the data, we can assert that the first research hypothesis has been confirmed. DHH pupils encounter communication difficulties with their teachers primarily due to their limited proficiency in sign language and challenges in adapting to the curriculum. Furthermore, the second research hypothesis has also been confirmed based on the results, which indicate a clear need for the implementation of a tactile and visual learning approach.

General Conclusion

In light of these outcomes, it is recommended to provide a comprehensive reforms and interventions to create inclusive educational environments that cater to the unique needs of DHH pupils. By implementing specialized educational programs, providing training to teachers in sign language, and incorporating ICT effectively, a transformative educational experience can be fostered. This research contributes to the existing body of knowledge and calls for further investigation to ensure the equitable education of DHH pupils in mainstream educational settings.

Bibliography

Bibliography

A short history of Cued Speech – CUED Speech Europe. (2021, May 10). Adopted from:

<https://cuedspeech.eu/en/2021/05/10/a-short-history-of-cued-speech/>

Algabary, K. S., et al. (2014). Anatomy of the human entire ear. *Journal of Computer Science*, 10(3), 477-483.

American Speech-Language-Hearing Association. (2005). Guidelines for the Audiologic

Anissa, R. (2013). School integration for the hearing impaired: Algerian experience. *Academy for Social and Human Studies c/Department of Social Sciences*, 10, 45-51.

Banerjee, R., & Chavan, V. (2019). Role of Information and Communication Technology (ICT) in Inclusive Education: A Literature Review. *International Journal of Emerging Technologies in Learning*, 14(23), 4-24. doi:10.3991/ijet.v14i23.11043

Children, E. C. O. H. a. G. (n.d.). *Educating Children Who Are Deaf or Hard of Hearing: Auditory-Oral.* <https://www.hoagiesgifted.org/eric/e551.html>

ConnectHear. (2020, October 8). 3 most important ways Deaf people communicate.

ConnectHear. <https://www.connecthear.org/post/3-most-important-ways-deaf-people-communicate>

Cornett, R. O. (1966). "A few months of study convinced me that the underlying cause of their reading problem was the lack of any reasonable way to learn spoken language, without which they could not use speech for communication, become good lip readers, or learn to read." *Journal/Book Title, Volume (Issue), Page range.*

Bibliography

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Sage.

de Vos, C., & Kroos, T. (2011). The Impact of Sign Language on the Cognitive Development of Deaf Children: The Case of The Netherlands. *Journal of Deaf Studies and Deaf Education*, 16(2), 239-250. Adopted from: <https://doi.org/10.1093/deafed/enq064>

Department of Health & Human Services. (2017, April 11). *Deafness - a range of causes*. Better Health Channel. Adopted from: <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/deafness-a-range-of-causes>

Easterbrooks, S. R., & Peruzzi, D. S. (2017). *Literacy and Deafness: Listening and Spoken Language*. Plural Publishing.

erryk , C. Alico. (2021, April 22). Kindi Center for Research and Development (KCRD). *International Journal of English Language Studies (IJELS)* . Retrieved January 25, 2023, from <https://al-kindipublisher.com/>

Fingerspelling. (2023, March 30). In *Wikipedia*. Adopted from:

<https://en.wikipedia.org/wiki/Fingerspelling>

https://www.educationindiajournal.org/home_art_avi.php?path=&id=120#:~:text=According%20to%20Denzin%20and%20Lincoln,people%20bring%20to%20these%20settings

Knors, H., & Marschark, M. (2014). *Teaching Deaf Learners: Psychological and Developmental Foundations*. Oxford University Press.

Lackner, A., Hufnagel, I., & Tscherteu, M. (2018). Reading in Deaf and Hearing Adults: The Role of Working Memory. *Journal of Deaf Studies and Deaf Education*, 23(2), 135-143. Adopted from: <https://doi.org/10.1093/deafed/enx034>

Bibliography

Language and Communication. National Deaf Children's Society. (n.d.). Adopted from:

<https://www.ndcs.org.uk/information-and-support/language-and-communication/>

Management of Adult Hearing Impairment. Retrieved from:

https://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934967§ion=Key_Issues

Marschark, M., & Knoors, H. (2012). *Educating Deaf Children: Language, Cognition, and Learning*. Deafness & Education International.

Marschark, M., Lang, H. G., & Albertini, J. A. (2017). *Educating Deaf Students: From Research to Practice*. Oxford University Press.

Orfanidou, E., & Woll, B. (2012). *Language Development in Deaf Children: Theoretical and Empirical Perspectives*. Oxford University Press.

Pelgrum, W. J., & Law, N. (Eds.). (2003). *ICT and Curriculum Change*. Springer.

Peterson, R. A. (2000). *Constructing Effective Questionnaires*. Sage Publications.

QUALITATIVE RESEARCH: AN OVERVIEW. (n.d.).

Schick, B., Paul, P. V., & Marschark, M. (2008). Effective Instructional Strategies for Deaf and Hard of Hearing Students. *Journal of Deaf Studies and Deaf Education*, 13(3), 353-367.

Adopted from: <https://doi.org/10.1093/deafed/enn013>

UNESCO. (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Retrieved from http://www.unesco.org/education/pdf/SALAMA_E.PDF

United Nations. (2007). *Convention on the Rights of Persons with Disabilities*. Retrieved from <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

Voogt, J., & Knezek, G. (Eds.). (2018). *International Handbook of Information Technology in Primary and Secondary Education*. Springer.

Bibliography

Wikipedia contributors. (2023, May 21). *Sign language* - *Wikipedia*. Adopted from:

https://en.m.wikipedia.org/wiki/Sign_language

World Health Organization. (2021). Deafness and Hearing Loss. Retrieved

from <https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss>

Appendices

Appendices

Appendix A: Pupils' Questionnaire

Pupils' Questionnaire



Dear pupils,

We are conducting a survey to understand the experiences of deaf and hard of hearing (DHH) pupils in acquiring a foreign language. We would like to know what difficulties they face and what strategies they use to overcome those difficulties. Your responses will help us to gain a better understanding of the language acquisition process for DHH pupils.

Thank you for taking the time.

Questionnaire:

Age:

Gender: female  / male 

Grade:

1. Degree of hearing loss:

Mild Moderate Moderately Severe Severe Profound

Appendices

2. Do you use:

a- Hearing aids 


b- Cochlear Implant/s 

c- Both  + 

d- None 

3. What is your first language?

a- Sign language 

b- Spoken language 

4. Which communication method do you use?

a- Sign only 

b- Talk only 

c- Sign and Talk  + 

5. Do you use any other communication methods in class?

1- Yes 

2- No 

- If yes mention them

Appendices

.....

6. How confident are you about your current level of foreign languages proficiency?

a- Bad 🙄

b- Good 😊

c- Very good 😄

7. Does your degree of hearing loss has an effect on learning foreign languages?

- Yes 😊

- No 😞

- Explain

.....

8. What challenges have you faced while attempting to learn foreign languages?

- Lack of motivation. 🙋

- Difficulty in communication. 🗣️

- Lack of practice opportunities. 📚

Others:

9. How motivated are you to continue learning foreign languages?

a- I'm not 😡

b- Little bit 😞

c- A lot 😄

Why?.....

10. What is the most difficult part of learning a language for you? (Exp: vocabulary, grammar, reading...)

Appendices

.....
.....

11. Have you ever had a teacher whose methods of teaching helped you learn more effectively?

1- Yes 

2- No 

If yes mention those methods:

.....

12. Are there any particular foreign language learning techniques that have been particularly helpful for you?

.....

.....

.....

Thank You.

Appendices

Appendix B: Pupils' Questionnaire Arabic Version

استبيان التلاميذ

أيها الطلاب الأعزاء

نحن نجري استبياناً لفهم تجارب التلاميذ الصم وضعاف السمع في تعلم اللغات الأجنبية. نود أن نعرف ما هي الصعوبات التي يواجهونها وما هي الاستراتيجيات التي يستخدمونها للتغلب على تلك الصعوبات. ستساعدنا أجوبتكم على اكتساب فهم أفضل لعملية تعلم اللغة لهذه الفئة من التلاميذ.

شكراً لكم.

الاستبيان:

العمر:

ذكور /



الجنس: أنثى

المستوى:

1. درجة ضعف السمع:

حاد جدا

حاد

متوسط الى حاد

متوسط

طفيف

Appendices

2. هل تستخدم:



أ- أجهزة السمع



ب- زراعة قوقعة الأذن



ج- كلاهما



د- لا شيء

3. ما هي لغتك الأولى؟



أ- لغة الإشارة



ب- اللغة المنطوقة

4. ما هي طريقة الاتصال التي تستخدمها؟



21- الإشارة فقط



ب- حديث فقط



ج- الإشارة وتحدث

5. هل تستخدم أي وسائل اتصال أخرى في الفصل؟



1- نعم



2- لا

Appendices

..... إذا كان الجواب نعم أذكرهم

.....

6. ما مدى ثقتك في مستواك الحالي في اللغات الأجنبية؟

أ- رديء  ب- جيد  ج- جيد جدا 

7. هل تؤثر درجة ضعف السمع لديك على تعلم اللغات الأجنبية؟


- نعم  - لا 

..... اشرح

.....

8. ما هي التحديات التي واجهتها أثناء محاولتك تعلم اللغات الأجنبية؟

- عدم وجود الحافز. 

- صعوبة التواصل. 

- قلة فرص الممارسة. 

..... أخرى:

.....

9. ما مدى حماسك لمواصلة تعلم اللغات الأجنبية؟

أ- لست متحمس  ب- قليلا  د- كثيرا 

..... لماذا؟


.....

Appendices

10. ما هو أصعب جزء في تعلم اللغة بالنسبة لك؟ (مثال: المفردات، القواعد، القراءة ...)

.....
.....

11. هل سبق أن كان لديك معلم ساعدتك طرق تدريسه على التعلم بشكل أكثر فعالية؟

2- لا 

1- نعم 

إذا كانت الإجابة بنعم، اذكر هذه الطرق:

.....

12. هل هناك تقنيات معينة كانت مفيدة بشكل خاص بالنسبة لك لتعلم اللغة الأجنبية؟

.....
.....
.....

شكرا على وقتكم.

Appendices

Appendix C: Teachers' Interview Questions

Questions for teachers:

1. How long have you been teaching DHH pupils?
2. Have you received any special training before teaching DHH pupils? Does it include sign language?
3. How is your pupils' level in foreign languages?
4. What challenges do you think your pupils struggle with while learning a foreign language?
5. What strategies do you use to help DHH pupils acquire a foreign language?
6. How do you address communication difficulties in the classroom for DHH pupils?
7. Are there any frustrations due to poor working conditions?
8. Do you think the authorities are providing enough support to the DHH learners educational system? Explain?