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**Faculty of Letters and Languages**  
**Department of English**

**The Communicative Competence Development of  
Individuals with Down Syndrome: Case of Balsam  
Association for the Inclusion of People with Down  
Syndrome, Maghnia, Tlemcen (Algeria)**

**Extended Essay Submitted to the Department of English as a Partial  
Fulfilment of the Requirements for the Master's Degree in Language Studies.**

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## **Statement of Originality**

I hereby affirm that this submission is entirely my original work and does not contain any previously published or already written material. I additionally guarantee that the present work is original and free of any instances of plagiarism, and is the result of my own investigation unless otherwise stated.

**Ms. Djihane KAFNEMER**

## **Dedication**

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving parents, for their unconditional support for the past 18 years of education. I also dedicate this dissertation to my adorable sister, and my loving brothers, as well as my friends who have supported me throughout the process.

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## **Abstract**

Down syndrome is a genetic disorder that causes the appearance of numerous physical and mental changes, creating health issues and cognitive development problems, affecting speech and language development, which in turn affects communicative competence. The purpose of this work is, then, to explore the communicative competence development of individuals with Down syndrome, and to reach this end, a case study research is conducted with seven participants of different ages enrolled in 'Balsam Association for the Inclusion of People with Down Syndrome' in Maghnia, Tlemcen (Algeria). This study relies on a number of sources and research tools for data collection, including observation and an observation test for individuals with Down syndrome, in addition to an interview with the association's speech therapist and psychologist. Afterwards, the data collected from these research instruments were analysed quantitatively and qualitatively. The triangulation of the results revealed that the majority of the participants face several difficulties in communicating, their speech is not smooth, and they are unable to perform several conversational actions, due to their low level of intelligence. Moreover, they are not fully intelligible in the sense that their sentences are not rich and are less structured. This actually affects the participants' communication, especially the younger participants as their level of communicative competence is lower than the older ones. Accordingly, this work emphasises that both the age and learning factors have a complementary role in developing the communicative competence of people with Down syndrome, since early access to speech therapy, psychological care, and educational support positively affect and boost the individuals' communicative competence development.

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## **List of Abbreviations and Acronyms**

ACC: Accuracy.

APP: Appropriacy

Chr: Chromosomes

COMP: Comprehension

FLU: Fluency

INTL: Intelligibility

KIN: Kinesics

PROS: Prosodics

PROX: Proxemics

RNG: Range

## List of Arabic Phonetic Symbols

Arabic letter	IPA transcription	Symbols used in IVAr	Dialectal Arabic Example (Tlemcen)	English Gloss
أ	ʔ	2	2alb	heart
ب	b	b	batata	potato
ت	t	t	tmer	dates
ث	θ	th	thawm	garlic
ج	ʒ	j	jbel	mountain
ح	ħ	H	Hmer	red
خ	x	x	ximar	scarf
د	d	d	djaj	chicken
ذ	ð	dh	hadha	this
ر	r	r	rwah	come
ز	z	z	zreq	blue
س	s	s	sa3a	watch
ش	ʃ	sh	shbab	nice
ص	s <sup>ʕ</sup>	S	Sak	bag
ط	t <sup>ʕ</sup>	T	TomaTich	tomato
ض	d <sup>ʕ</sup>	D	Darwek	now
ظ	ð <sup>ʕ</sup>	DH	DHohr	midday
ع	ʕ	3	3amar	Fill in
غ	ɣ	gh	ghedwa	tomorrow
ف	f	f	fertetou	butterfly
ق	q	q	qawqaw	peanuts
ك	k	k	kra3	foot
گ	g	g	gamra	moon
ل	l	l	li:m	lemon
م	m	m	mo3ali:m	teacher
ن	n	n	namousiya	bed
ه	h	h	hadra	A talk
و	w	w	warda	A flower
ي	j	y	yemchi	He goes

# **GENERAL INTRODUCTION**

## General Introduction

Increasing interest in the field of core linguistic competencies has heightened the need of widening the scope to other grounds related to the aforementioned field. Psycholinguists and sociolinguists have long tried to dig deep into shedding linguistic competence, one of the most important topics that aroused the interest of researchers. In this respect, various researches have been conducted to study the communicative competence of humans, where researchers were attempting to give an idea about its development in general, and with people who were diagnosed with mental disabilities in specific. To emphasize, one of the linguistic disabilities that were spread across different societies, is individuals with Down syndrome's linguistic disability, where there was a lack of studies dealing with their communicative competence. Therefore, shedding light on this topic is a must, along with a precise investigation of the developmental phase of communicative competence of people with Down syndrome.

Thus, this research is an attempt to explore the linguistic abilities of people with Down syndrome, with a focus on their communicative competence and its development, specifically in one of the Algerian Down syndrome associations. In other words, this work could contribute to the improvement of people with Down syndrome's communicative competence by setting two goals. First, it aims to investigate the level of people with Down syndrome's communicative competence, with giving a comparison between the newly enrolled members, and the advanced (old) members, who have been exposed to special teaching in the association. Then, and based on that investigation, some solutions will be suggested in relation to the goal of elevating the communicative competence level of people with Down syndrome.

Consequently, the researcher strives to answer the following questions:

1. What is the difference between the new and advanced group of Down syndrome individuals in regard to their communicative competence level?

2. Does the age factor or the learning factor have a greater role in the communicative competence development of individual with Down syndrome?

The above-mentioned questions led to formulate two hypotheses:

1. The new group of the individuals with Down syndrome's level of communicative competence is lower than the advanced group.
2. Both of the age and learning factors share the same importance, and have a complementary role in developing the communicative competence of the individuals with Down syndrome.

In fact, the eagerness to reach the previously set objectives drives the researcher to design an exploratory case study research dealing with seven individuals with Down syndrome in the 'Balsam Association for the Inclusion of People with Down Syndrome' (Maghnia- Tlemcen). This case study will collect qualitative and quantitative data from different sources relying on a set of research instruments including observation, observation test for the individuals, and an interview with the association's speech therapist, in addition to its psychologist. The results will be analysed and triangulated on the basis of a mixed approach combining both qualitative and quantitative methods.

To carry out this case study research, the present work is purposefully divided into two interrelated chapters. The first chapter reviews the literature on two topics, the first one on communicative competence in general, and the second one on individuals with Down syndrome and their linguistic characteristics. It seeks to draw a clear description of the communicative competence with a focus on people with Down syndrome. The second chapter deals with the research design and methodology through a detailed description of the data collection procedures, the research instruments, and the analysis and interpretation of the gathered data. Furthermore, the second chapter seeks to answer the research questions by confirming or disconfirming the research hypotheses, using the research results, preceded by some general guidelines and suggestions that help in improving the communicative competence of

the individuals with Down syndrome, and it highlights some important pieces of advice for the parents to speed the improvement process of the communicative competence. Moreover, these suggestions seek to ensure that the individuals with Down syndrome are being exposed to the right interventions for better results.



**1 CHAPTER ONE: LITERATURE  
REVIEW**



## **1.1 Introduction**

Communicative competence has been the focus of several studies and researches, besides the linguistic challenges faced by individuals with Down syndrome. Within this chapter, precisely in the first part, the notion and the emergence of communicative competence will be tackled, along with its parameters presented by Dell Hymes, and its different models presented by Canale and Swain (1980, 1983), Bachman (1990), Celce-Murcia, Dornyei, and Thurrell (1995), and Littlewood (2011), in addition to definitions of some key terms. While in the second part, the aetiology of Down syndrome disorder and its characteristics will be explored, as well as its effect on speech and language development, and on the communicative competence.

## **1.2 Part One: Communicative Competence**

Effective communication is the cornerstone of human interaction. Therefore, in this part, the realm of communicative competence will be delved in, providing more information about it.

### **1.2.1 Language Acquisition vs. Language Learning**

language is the primary tool for expression and communication, which includes the use of four skills; listening, speaking, reading and writing. This set of four capabilities allows the individual to comprehend and produce language, namely acquiring and learning a language. Language acquisition is a universal process, and according to Limacher (2018), it occurs when human beings acquire their first language through an innate subconscious procedure with a complete unawareness of grammar rules. In an early age, humans start building up their vocabulary and establishing the language rules via natural communication with their carers, including the family members or the caregivers, who transmit their language through verbal communication which refers to the use of words, and nonverbal communication such as body language and gestures, leading the child to acquire his/her environment's language.

In this vein, several theories have been put forward to explain the process of language acquisition, including behaviourist, innateness, cognitive learning, and interactionist. B. F. Skinner (1957) proposed the behaviourist theory that is based on a behaviourist psychological experiment on animals that perform various tasks by encouraging habit-forming, it suggests that children imitate the language of their parents or carers, through the positive reinforcement of their correct utterances. (Cited in *Theories of language acquisition - Montsaye Academy*)

In 1959, Noam Chomsky in his review of B. F. Skinner's *Verbal Behaviour*, introduced the innateness theory, that is based on the idea that the child's brain contains special language-learning mechanisms at birth, more like an inborn faculty for language acquisition, this faculty has become known as the language acquisition device (LAD). Later on, Jean Piaget (1936, 1950) come up with a theory of cognitive development suggests that intelligence changes as children grow, and language is just one aspect of a child's overall intellectual development. He stated that children must first comprehend a notion before acquiring the language they will use to express that notion. In the 1980s, Jerome Bruner come up with the interactionist theory, in which he indicated that children learn language out of a desire to communicate with the world around them, since language exists to allow communication, and can only be learned by interaction with other people. In other words, the adults' language behaviour when talking to children, is specially adapted to assist the acquisition process, causing the appearance of the language acquisition support system.

On the other hand, Limacher (2018) stated that language learning is a conscious process of expanding the capacity of communication, that is based on clear directions of rules, it is common in formal settings like classrooms, with the guidance of a teacher who transmits his/her knowledge to the learners, including the sound system and the structure of the new language. One of the widely known theories that have been proposed to explain the process of language learning, is Stephen Krashen's Monitor theory (1981, 1982, 2003), which consists of five main hypotheses including the Acquisition Learning hypothesis that is based on the 'acquisition' and 'learning' as ways to develop the learner's capacity. The second hypothesis is the Monitor

hypothesis (1981) which shows that the main purpose of grammar rules is monitoring or controlling, these rules are used consciously to correct errors. As a result, the language learned consciously is only available as a kind of control, while acquisition results in the fluent and simple production of language. The third hypothesis is the Input hypothesis (2003) which refers to the subconscious acquisition, it is based on the idea that language is acquired through the comprehension of spoken or written language. The fourth hypothesis is the Affective Filter hypothesis (1981, 1982) which focuses on the influence of affective factors on language acquisition, including motivation, confidence and anxiety. And finally, the Natural Order hypothesis which presents the idea that linguistic rules are picked up in a regular order during the process of learning, with some coming earlier than others. (Cited in Dendane, 2020)

### **1.2.2 Competence and Performance**

In 1965, the terms ‘competence’ and ‘performance’ were introduced by Noam Chomsky in his book ‘Aspects of the Theory of Syntax’. He defines competence as the person's knowledge of his language, including the ability to recognise ambiguity and distinguishing between grammatical and ungrammatical expressions. Whereas, performance is the ability to apply the competence into speaking - hearing procedures and show personal knowledge (Chomsky 2006:103). As competence is the code, performance is the act of encoding or decoding. Widdowson (1996) mentioned that these two terms are similar to De Saussure's ‘langue’ and ‘parole’, where langue and competence are regarded as shared knowledge. According to De Saussure, language is shared through the society, and langue is a system of linguistic signs that permits one to set and choose how to employ grammar, phonology, and vocabulary. However, Chomsky sees competence as a psychological phenomenon, that relates to the person's innateness.

### **1.2.3 Linguistic Competence VS Communicative Competence**

According to Hymes (1972), there are two distinct types of competence; linguistic competence and communicative competence. linguistic competence is concerned with creating and comprehending grammatically accurate sentences. It is

related to "how language is used or acquired, and involving the linguistic acquisition, based on a universal grammar theory" (Lesenciuc & Nagy, 2009:38). As per Cook (2003), it is the speakers' correct use of the formal language system, which encompasses pronunciation, grammar, and vocabulary. While the capability to create and understanding acceptable and situation-appropriate sentences is referred to as communicative competence, which is seen by Lesenciuc & Nagy (2009) as the capacity to interact and use language effectively in a variety of circumstances. This latter, is a necessity in addition to linguistic competence for language use, since it "tells you whether an utterance is appropriate or not within a situation" (Charles Lin, 2004:01). Therefore, the production of correct grammatical sentences is not enough to communicate effectively, which highlights the need of communicative competence to produce sentences that are appropriate to the context.

According to Habermas' (2008) definition, linguistic competence is Chomsky's name for the mastery of an abstract set of rules, based on an innate language apparatus, regardless of how the latter is actually employed in conversation. He mentioned that the speaker must possess the fundamental skills of speech and symbolic interaction, in order to participate in ordinary discourse. Thus, mastering a perfect speech scenario is what communicative competence means. Additionally, he stated that just as linguistic competence is tied to the proper system of linguistic norms, communicative competence is related to an ideal speech situation.

#### **1.2.4 The Notion of Communicative Competence**

In 1966, the term communicative competence was coined by Dell Hymes for the first time in his lecture delivered in a conference on 'Developing the Language of the Disadvantaged Children', as a reaction against Chomsky's distinction between competence and performance. Hymes considers the Chomskyan notion of competence as overidealized and narrow, that is related only to grammatical competence, i.e., "what an ideal speaker has in grammar knowledge" (Cook & Seidlhofer, 1995:195-160). To Hymes (1971), the main purpose of communicative competence theory is to demonstrate the ways in which the systematically possible, the feasible, and the appropriate are combined to produce and interpret cultural

behaviour that is actually occurring, denoting that communicative competence has four parameters, including formal possibility, feasibility, appropriateness, and actual performance (Yano, 2003:76). Hymes defines communicative competence as "what a speaker needs to know to communicate effectively in culturally significant settings" (Rivers, 1983:14), that is the individual's capability to use both structural and functional language to effectively communicate in everyday contexts. Besides that, he emphasized on the idea that the assessment of sentences should include the context, and not only the grammatical and psychological factors as Chomsky have mentioned. In this vein, Cook states that "there would be a kind of social monster producing grammatical sentences unconnected to the situation in which they occur" (Cook, 2003:42). Furthermore, Dittmar (1976) explains that communicative competence relates to the person's capability of communication with others in circumstantial and normative conditions with a linguistic, psychological, social and pragmatic nature. Additionally, Savignon (1972, 1983) refers to communicative competence as the capacity or the competence in a communicative situation, which means that paralinguistic ability and linguistic competence must adjust in a dynamic exchange to produce the input of one or more speakers (Bagaric&Djigunovic, 2007:96). Moreover, in the context of language teaching, Canale and Swain (1980) describe communicative competence as the development of knowledge of fundamental grammatical principles, by knowing how language is used in social context to carry out communicative tasks, and how to integrate utterances and communicative function in accordance with discourse principles (Yano, 2003:76).

### **1.2.5 Hymes' Parameters of Communicative Competence**

Hymes (1972), proposed that possibility, feasibility, appropriateness, and attestedness are the four parameters that are required for an efficient communication (Cook, 2003: 42). The aforementioned parameters stand in opposition to Noam Chomsky's linguistic competence since, according to Hymes, effective communication requires social context in addition to linguistic competence.

#### **1.2.5.1 Possibility**

Concerning the first parameter ‘possibility’, Hymes (1972) contends that a speaker who is skilled in communication is aware of what is formally possible in a language. In other words, whether a particular instance complies with the grammar and pronunciation rules (Cook, 2003). It can be said that the knowledge of possibility aids in determining whether or not a particular occurrence complies with language rules. According to Hymes (1972: 284), Despite being aware of these rules, speakers who are proficient in communication wilfully break them. Therefore, grammaticality is the core of possibility. (Cited in *The representation of communicative competence in the second year secondary*, 2021)

#### **1.2.5.2 Feasibility**

The second parameter is ‘feasibility’, and it concerns whether or not something is feasible. It is a part of Chomsky's definition of performance. It alludes to "a psychological concept concerned with limitation to what can be processed by the mind" (Cook, 2003:43). For instance, in English grammar rules, a noun phrase can be expanded and made more specific by inserting a relative clause. Furthermore, to make this parameter understandable, Canale and Swain (1980) utilised Chomsky's example, where he mentioned that the sentence "the cheese was green" is feasible and processed easily, while the sentence "the cheese the rat that the cat the dog saw chased ate was green" is hardly processed, even if it is grammatically correct (Cook, 2003:43).

#### **1.2.5.3 Appropriateness**

‘Appropriateness’ is the third parameter, and it focuses on how language or behaviour relates to context (Hymes, 1972). As Cook (2003) has mentioned, Hymes (1972) discussed the need for a mentalistic relationship between sentences and situations as stated by Chomsky. He stated that a word, a sentence, or behaviour can be inappropriate for a certain relationship, a certain type of text, or a certain circumstance (Cook, 2003: 44).

#### **1.2.5.4 Attestedness**



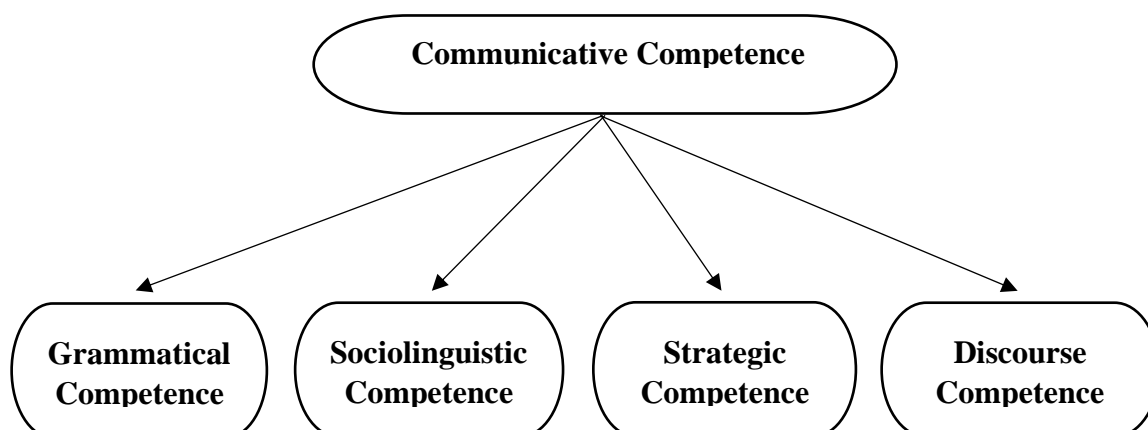
Lastly, ‘attestedness’ is the fourth parameter, and it refers to the actual occurrence of something. According to Hymes (1972), the study of communicative competence cannot just concentrate on occurrences, it also cannot neglect them. He claimed that this parameter is related to both of structural change and probability of occurrence. I.e., despite the fact that something is feasible, appropriate, and possible, it may not occur. To clarify the concept, the phrase "chips and fish," for instance, is possible from a grammatical perspective since it doesn't violate any rules, it is also feasible as it can be processed and understood right away, and appropriate as it doesn't violate any sensitive social conventions. Yet it doesn't occur as regularly as "fish and chips" (Cook, 2003: 45-46).

### **1.2.6 Communicative Competence Models**

Different models of communicative competence were presented by different scholars, including Canale and Swain (1980, 1983), Bachman (1990), Celce-Murcia, Dornyei, and Thurrell (1995), and Littlewood (2011).

#### ***1.2.6.1 Canale and Swain's (1980) and Canale's (1983) Model***

Four different elements make up the communicative competence model that Michael Canale and Merrill Swain developed (1980, 1983). The first element is ‘grammatical competence’, that is the knowledge of the language code that involves the correct usage of words and structures in the learned language utterances (Canale & Swain, 1980). The second element is ‘sociolinguistic competence’, which refers to the appropriate interpretation and production of language according to the sociolinguistic context. The third element is ‘strategic competence’, and it indicates the effective organisation of a message, and compensating techniques for communication difficulties. Three years later, Canale (1983) introduce the fourth element which is ‘discourse competence’, which is concerned with coherence and cohesion, which means the ability of learners to comprehend and create spoken or written texts. (Cited in Eghtesadi, 2017).

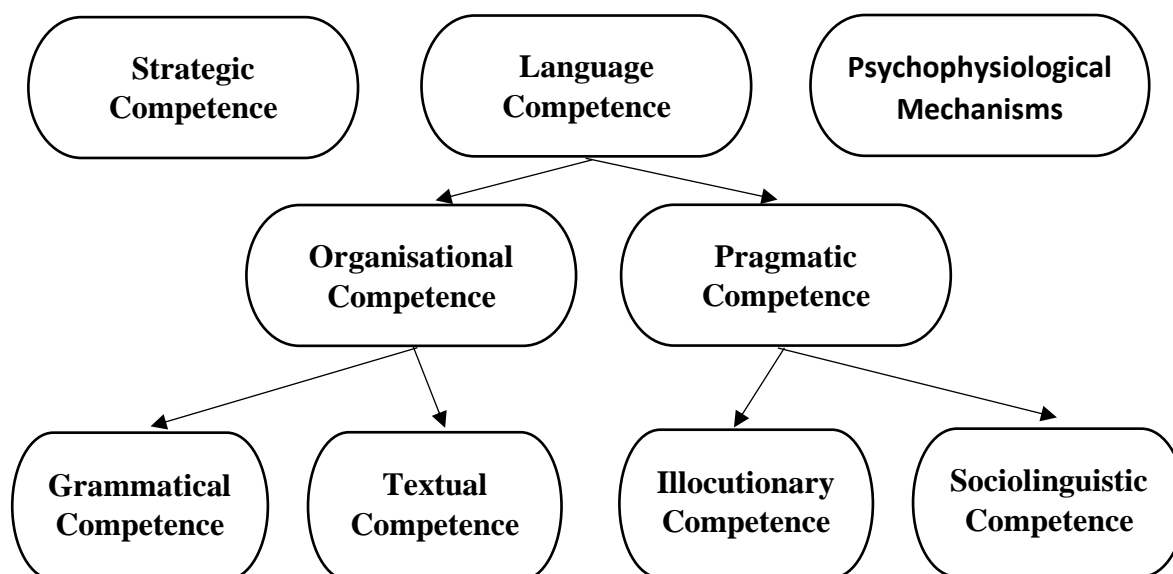


**Figure 1.2.1:** Canale and Swain's (1980) and Canale's (1983) model of communicative competence.

### 1.2.6.2 Bachman's (1990) Model

The model put forth by Bachman (1990), is another model of communicative competence, or a "theoretical framework of communicative language ability (CLA)", as Bachman calls it. This model includes three elements. The first element is 'language competence' which consists of organizational and pragmatic competencies. Organizational competence includes grammatical competence and textual competence, which are involved in language production and comprehension. While pragmatic competence focuses on "the relationship between utterances and the acts or functions that speakers or writers intend to perform through these utterances" (Bachman, 1990:89). It consists of illocutionary and sociolinguistic competencies. The former includes knowledge of and proficiency in language functions such as ideational, manipulative, heuristic, and imaginative functions. And the latter, according to Bachman (1990), is the ability to perform language functions in a manner that is appropriate to the features of the specific language use context. It is also the sensitivity to, or control of, the conventions of language use that are governed by those features. The second element is 'strategic competence', which is a key element at the same level as language competence, in contrast to Canale and Swain's model where it is at the same level as grammatical and sociolinguistic competencies.

It is seen by Bachman as "an important part of all communicative language use, not just that in which language abilities are deficient and must be compensated for by other means" (Bachman, 1990:100). It refers to the ability to link elements of language competencies to features of the situation's context. It consists of three essential parts, 'assessment' and it refers to evaluating what is required, what is available, and the level of communication. 'Planning' and it means choosing how to use what is at hand. And 'execution'. finally, the third element is 'psychophysiological mechanisms', where the second and the third elements deal with the mental capacities and physical mechanisms by which the community makes use of that knowledge (Cited in Eghtesadi, 2017).



**Figure 1.2.2:** Bachman's (1990) model of communicative competence.

### **1.2.6.3 Celce-Murcia, Dornyei, and Thurrell's (1995) Model**

The model of communicative competence proposed by Celce-Murcia, Dornyei, and Thurrell (1995) is a refinement of Canale and Swain's (1980) and Canale's (1983) models. Moreover, it contains five competencies, including 'discourse competence', 'sociocultural competence', 'actional competence', 'linguistic competence', and 'strategic competence'. This model aimed to expand sociolinguistic competence, which Celce-Murcia et al. divided into sociocultural and

actional competence after separating it from discourse competence. First, ‘linguistic competence’ contains the basic elements of communication including the patterns and types of sentences, the constituent structure, the morphological inflections, the lexical resources, and the phonological and orthographic systems. According to Celce-Murcia, Dornyei, and Thurrell, linguistic competence is preferable over grammatical competence, in order to emphasize that linguistic competence also encompasses lexis, phonology, and morphology in addition to morphology and syntax. Second, ‘sociocultural competence’ as a term was used instead of sociolinguistic competence in order to differentiate it from actional competence. It deals with the speaker's ability to convey ideas effectively within the social and cultural context, taking into account the pragmatic factors associated with variation in language use. Third, ‘actional competence’ which includes the knowledge of language functions and the knowledge of speech act sets. It refers to the capability of conveying and comprehending communicative intent, i.e., aligning actional intent with linguistic form based on knowledge of a list of verbal schemata that have illocutionary force. Next, ‘strategic competence’ refers to the knowledge of communication strategies and their application. And finally, ‘discourse competence’ refers to the choice, sequencing, and arrangement of words, sentences, and utterances to produce a coherent spoken or written text, with the use of cohesion and coherence, generic structure, deixis and the conversational structure inherent to the turn-taking system in conversation (Cited in Eghtesadi, 2017).

#### **1.2.6.4 Littlewood's (2011) Model**

The communicative competence model proposed by Littlewood (2011) contains five competencies. This model is also a refinement of Canale and Swain's (1980) and Canale's (1983) model, by including ‘sociocultural competence’ as a fifth element in his model. The first element is ‘linguistic competence’ and it refers to the knowledge of phonology and semantics, besides the language grammar and vocabulary. The second element is ‘discourse competence’ which refers to the ability of comprehending and creating spoken or written texts to participate in continuous discourse. The third element is ‘pragmatic competence’ which refers to the ability of

using linguistic resources to communicate and to interpret meaning in conversations. ‘Sociolinguistic competence’ is the fourth element, and it refers to the appropriate use of language in different social situations according to the context. Finally, the fifth element is ‘sociocultural competence’, and it incorporates psycholinguistic aspects that are absent from Canale and Swain's model. It comprises awareness of the cultural presumptions and knowledge that influence meaning exchange and may cause misconceptions in cross-cultural communication (Cited in Eghtesadi, 2017).

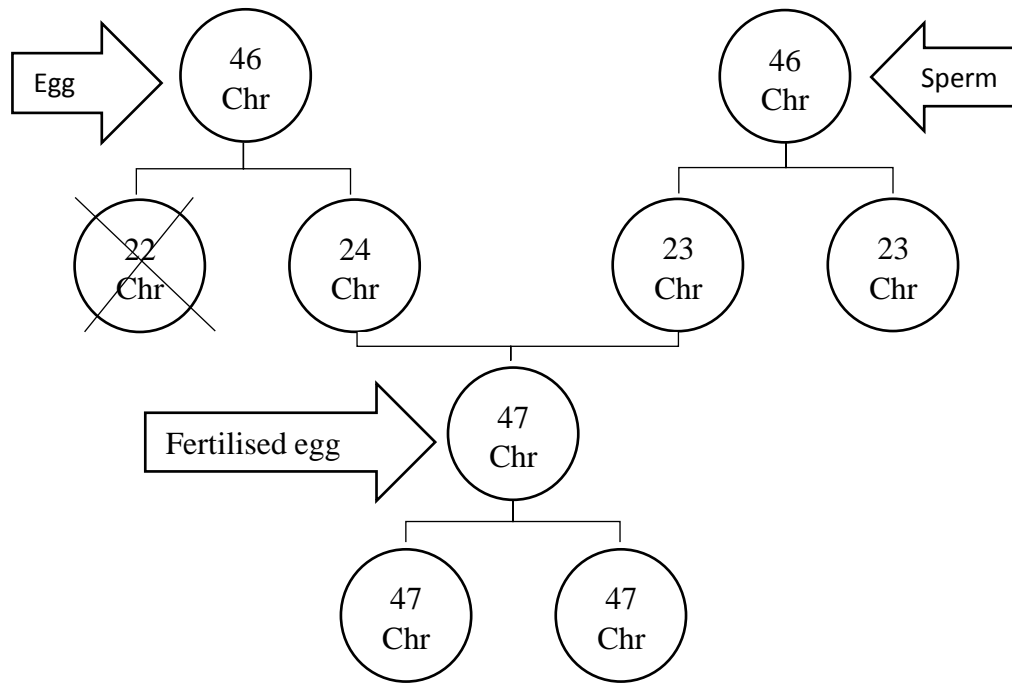
### **1.3 Part Two: Down syndrome**

Down syndrome disorder has a negative impact on the individual’s speech and language development. Therefore, in this part, the aetiology of this disorder, as well as its characteristics’ effect on their speech will be tackled.

#### **1.3.1 Down Syndrome Aetiology**

Although the condition of Down syndrome has been known since the middle of the 19th century, its genetic cause was not found until 1959, when the chromosome aberration was discovered by Professor Jerome Lejeune. Down syndrome is a genetic disorder that develops when the cell division process fails, causing the appearance of a third copy of chromosome 21 in all the cells instead of two copies, causing the foetus to have 47 chromosomes instead of only 46 (Cited in Lorenz, 1998).

There are three types of Down syndrome. The first type is ‘trisomy 21’, and it affects around 95% of the individuals with Down syndrome. It occurs as a result of the appearance of 3 distinct copies of chromosome 21 instead of 2 copies (Cited in Lorenz, 1998).

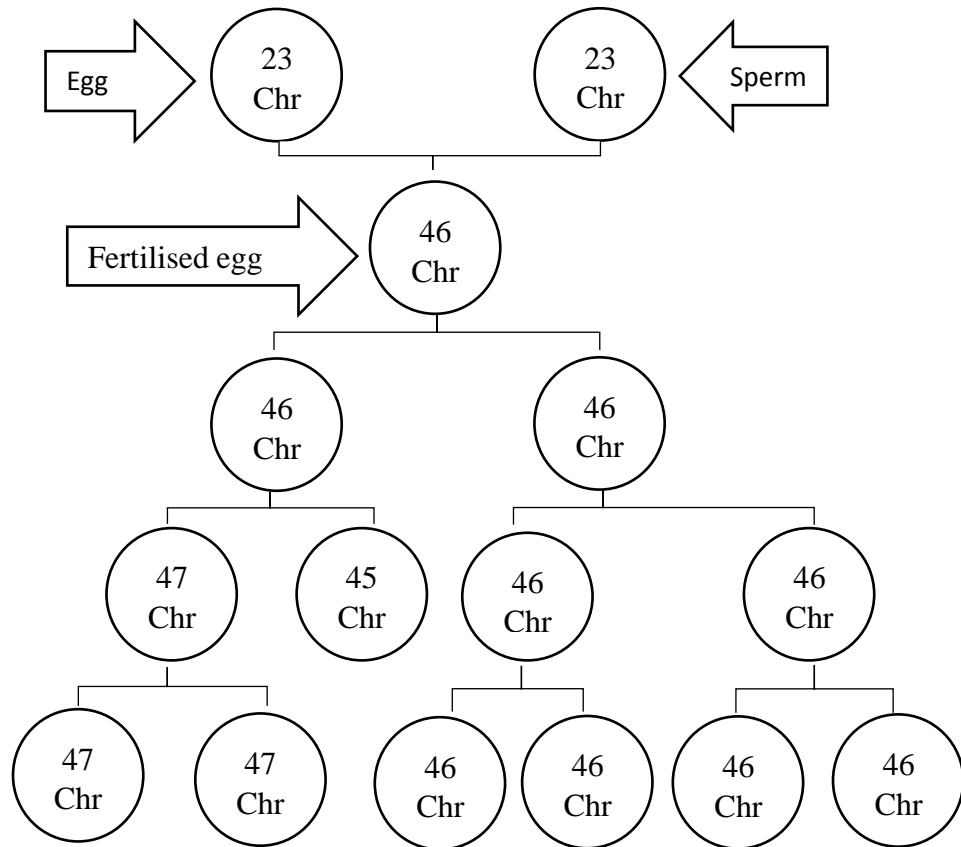


**Figure 1.3.1:** Trisomy 21 cell division (from *About down syndrome*. National Down Syndrome Society (NDSS)).

The second type is ‘translocation Down syndrome’, and it includes around 3% of individuals with Down syndrome. This type appears when an extra part or a whole extra chromosome 21 is attached or trans-located to another chromosome, rather than being a separate chromosome.

The third type is ‘mosaic Down syndrome’ or ‘mosaicism’. The term mosaic means mixture or combination.

Additionally, around 2% of individuals with Down syndrome have mosaic Down syndrome, which is a result of a mixture of cells, where they usually have two types of cells, one with 47 chromosomes, the extra chromosome is the third copy of chromosome 21, and the other with 46 chromosomes (normal cells) (Cited in Lorenz, 1998).



**Figure 1.3.2:** Mosaic Down syndrome cell division (from *Types of down syndrome - central Mississippi down syndrome society*).

### 1.3.2 Down Syndrome Characteristics

Failure of cell division process, causes Down syndrome disorder, which leads to the appearance of many changes on the individual's body and brain, causing health issues and cognitive development changes, that can create both mental and physical challenges. Some common physical characteristics include a flattened face particularly across the bridge of the nose, almond-shaped eyes with an upward slope in addition to small white spots on the eye iris, a short neck, tiny ears, a tongue that frequently protrudes from the mouth, little hands with a single line across the palm of the hand and small pinkie fingers that sometimes it may slant toward the thumb, small feet, poor muscle tone or loose joints, and shortness in height. Besides all that,

about forty to sixty percent of individuals with Down syndrome, have a congenital heart defect, in addition to the development of some infections and a higher risk of some organs functioning failure. Moreover, they usually have features of cognitive development that indicate mild to moderate intellectual disability, besides the issue of learning difficulties that lead to developmental delays. Additionally, their development of speaking and understanding language may take longer, they often reach developmental milestones a little later than their peers. They may also experience attention difficulties, a tendency to make bad judgments, and impulsive behaviour (Cited in Laguerre, 2022).

### **1.3.3 Down Syndrome Characteristics' Effect on Speech and Language Development**

Down syndrome characteristics have a huge impact on the individuals' speech and language development. Starting with their facial construction, their tiny mouths and noses, besides their large tongue, builds less room for speech production, and due to airflow issues in the nasal and oral cavities, their speech is less clear. In addition to their narrower, more arched, and higher raised palates than average, which requires more sophisticated fine-motor effort to produce sounds. Moreover, they have lower-positioned ears that create otitis media, which is a condition where fluid is trapped in the middle ear, causing pain, stuffiness, ear infections, and sometimes temporary or permanent hearing loss. Additionally, their low muscular tone causes the mouth to open, the tongue to be dropped, and mouth breathing. Hence, some slowing Down of speech can be anticipated due to decreased muscular tone, strength, coordination, and range of motion. Furthermore, most individuals with Down syndrome have a modest level of cognitive development, some have severe and others have average cognitive abilities. Although cognitive abilities may indeed be delayed, speech and language development usually lag behind cognitive development. Thus, they know more than they can express through words (Cited in Laguerre, 2022).

### **1.3.4 Down Syndrome Prelinguistic and Linguistic Communication**

Prelinguistic communication and linguistic communication are the two main phases that individuals with Down syndrome go through. Prelinguistic



communication refers to the non-verbal skills that develop before speech production, which occur throughout two stages of communication. The first stage is pre-intentional communication, and it refers to the actions that take place without a clear intention to communicate with the caregiver, including facial expressions, crying, reaching out to things and many other unintentional gestures. The second stage is intentional communication, and it starts developing from the age of eight to ten months. At this stage, babies with Down syndrome recognize that particular behaviours might be utilized as social indicators to communicate specific information to caregivers, including pointing, reacting to pointing, making gestures or signs, making eye contact, and paying attention to both the listener and the object at hand (Cited in Laguerre, 2022).

Moreover, their vocalization develops, and babies can also engage in give-and-take interactions, including turn taking, visual contact, vocalization, and pauses to indicate waiting for an answer. Therefore, the majority of the individuals with Down syndrome develop good prelinguistic skills, including the performance of intentional behaviours and the effective early use of gestures (Cited in Laguerre, 2022).

On the other hand, the second phase is linguistic communication, and it is related to the speech acquisition stages. Language development of Individuals with Down syndrome happens in the same chronological order as ordinarily developing kids, but more slowly, where speech delays become noticeable once their babbling and vocalization starts emerging. According to Bonamy and Buckley (1994), at the age of 9 months, with a 2 months delay, babies with Down syndrome begin to produce reduplicative babbling, which refers to the process of repeating a syllable containing a consonant and a vowel. Around the age of 16 months, with a 6 months delay, they start using their first few words. Next, at the age of 27 months (2 years and 3 months), with a delay of 15 months (1 year and 3 months), the 10 words stage begins. After that, they go through a vocabulary spurt, around the age of 30 months (2 years and a half), but it differs from one individual to another, some will go through a vocabulary spurt, and others will increase their vocabulary steadily over a longer period of time.

Later on, at 3 years of age, with an 18 months delay (1 year and 6 months), with an average vocabulary of 50 to 55 words, the two-word phrase consolidation stage begins (Cited in Laguerre, 2022).

### **1.3.5 Down Syndrome's Linguistic Challenges**

At the phonological level, individuals with Down syndrome face difficulties in producing consonants, they tend to simplify or modify some sounds to ease the process of pronunciation and to enhance the articulation speed. According to Hung, Truong, Wong, and Helms-Park (2019), their phonological errors include cluster reduction, weak syllable and final consonant deletion, substitution stopping, and substitution gliding. Concerning vocabulary, their expressive vocabulary is less advanced than their receptive vocabulary, which can be noticed in their words production delay in comparison to other individuals who are not affected by any disorder. In addition to that, their vocabulary storage carries more nouns than adjectives and verbs. Moreover, at the syntactic level, individuals with Down syndrome struggle in producing and understanding grammatical sentences. They face problems in using prepositions, adding bound morphemes, understanding passive voice sentences, and utilising models in their speech. Furthermore, at the pragmatic level, and especially conversational skills, it is noticeable that they are less descriptive and less likely to start conversations, and unlikely to seek clarification, they also tend to use simple answers. Finally, it is important to mention that the aforementioned challenges differ from one person to another, depending on their medical conditions and their backgrounds. Besides that, from adolescence and into the early years of adulthood, complicated grammar and sentence structures can be learned. And with enough visual aid, such as images, toys, and gestures, they can learn to continue conversational topics, reply to clarification requests, and pay attention while narration (Cited in Laguerre, 2022).

## **1.4 Conclusion**

To sum up everything that has been stated so far, in the first part it can be concluded that the term communicative competence was introduced by Dell Hymes

as a reaction against Chomsky's distinction between competence and performance, additionally, Hymes proposed four parameters that are required for an efficient communication including possibility, feasibility, appropriateness, and attestedness. Furthermore, a set of communicative competence models proposed by a number of linguists were introduced. Meanwhile, in the second part it can be concluded that Down syndrome is a genetic disorder that leads to the appearance of many changes in the individual's body and brain, causing health issues and cognitive development changes. Moreover, its characteristics have an impact on the individuals' speech and language development, leading to different linguistic challenges. However, the next chapter will be devoted to investigate the individuals with Down syndrome's communicative competence development by investigating and analysing a sample from 'Balsam Association for the Inclusion of People with Down Syndrome' as a case study.

**2 CHAPTER TWO: RESEARCH  
METHODOLOGY AND  
FINDING**



## **2.1 Introduction**

This chapter sheds light on the research design and provides a general overview of the case study and the approach used. It also covers the sample population and data collected through observation, observation test, and interview as research tools, and its analysis. Moreover, the interpretation and discussion of the main findings, besides a set of suggestions and recommendations for the improvement of the studied matter were presented by the researcher.

## **2.2 Research Design**

Research design is an integral part of conducting any research. It is necessary as it facilitates the research process by representing the forward planning and organization of the research methodology, tools of data collection, and techniques of data analysis. It is considered as “the conceptual structure within which research is conducted; constitutes the blueprint for the collection, measurement and analysis of data” (Kothari, 2004: 31). In this work, the researcher adopted the mixed method approach, as it is suitable for the nature of the discussed topic, and it fits the research requirements. Moreover, this approach works on using both quantitative and qualitative methods, as doing so helps to provide a better understanding of the topic than using one only. According to Greswell (2018: 51), every approach has biases and flaws, but the gathering of both quantitative and qualitative data balanced out the flaws in each type of data.

Additionally, the researcher used a variation of research tools to gather reliable and valuable data, including the utilisation of observation, as a means of noticing the participants' communicative competence during their interaction with other people in a natural setting. More precisely, a disguised structured participant observation, where the participants are unaware of being observed, which provides a natural behaviour, using an observation checklist created by Wiemann (1977), which is utilised to measure the communicative competence.

Besides that, an observation test was used, that is based on the idea of including the participants in an activity or more, in order to be tested, while their answers are being observed. Finally, a structured interview was conducted with the speech therapist and the psychologist of the participants, to get more details about the subject under study.

Furthermore, the case study is identified as “a method for developing a complete understanding of a process, program, event or activity” (Newcomer et al, 2015: 177). In other words, it is a research method that focuses on the analysis of one entity, which enables the researcher to identify a problem, make generalizations and provide conclusions. In this study, the researcher opted for the exploratory single case study, which focuses on one case study, to understand the issue and to bring ideas to improve the studied matter. This case study was designed to gather data about the individuals with Down syndrome at ‘Balsam Association for the Inclusion of People with Down Syndrome’ in Maghnia, Tlemcen (Algeria).

### **2.3 Sample Population**

Sampling is one of the most important processes in research. Once the researcher selects the suitable sample, it helps in determining the quality of the collected data and the success of the research. In the present investigation, the researcher adopted the representative sampling paradigm along with the quota sampling method, since it provides a focus on the representative sample of a bigger population, which allows the procedure of research results generalization. Additionally, the quota sampling is based on picking out the samples selectively according to a number of characteristics that suites the purpose of the research. Dattalo (2008: 6) has mentioned that the unique feature of a quota sample is that rules are established to guarantee that the sample accurately reflects particular characteristics in relation to their prevalence in the population.

This study took place at the Balsam Association for the Inclusion of People with Down Syndrome in Maghnia. After the first observation, seven different individuals with Down syndrome were selected to participate in this research

according to different characteristics, including the participants' age, gender, and the period of studying in the association. The participants include five girls and two boys, with an age range that goes from five years old to eighteen years old, where three of the participants have newly joined the association, and the other four participants have joined three years ago. In addition to an interview conducted with the association's speech therapist, as well as with the psychologist.

Furthermore, the association's teaching method is based on randomly dividing the learners into two groups, each of which sits around a table. One group works with the psychologist and the other with the speech therapist, where both use the individual teaching method, or one-to-one teaching, in which one teacher works directly with one learner. While sitting around the table, the teachers, with constant interaction and guidance, provide each learner with one activity to do; for instance, the psychologist asks one learner to use a magnetic wooden puzzle while another one reads the alphabet cards. Meanwhile, the speech therapist gives mathematical activities to a learner or more and, at the same time, teaches other learners how to pronounce letters, produce sounds, etc.

## **2.4 Data Collection**

After the research design has been organized and planned, the researcher starts collecting data. This step is highly important to guarantee the success of the study, where the researcher must apply a set of principles to determine the quality of the gathered data, including validity, reliability, and practicality, along with respecting research ethics. The purpose of the current study is to examine the communicative competence of people with Down syndrome. Therefore, the researcher used observation, an observation test, and an interview as research instruments to properly tackle all of the study's aspects.

### **2.4.1 Observation**

One of the crucial and fundamental tools for gathering data in almost all kinds of research studies is observation, especially in qualitative research where it has been used extensively. Human behaviour can be understood and measured using



observation as a research instrument, since it allows the researcher to gather data that cannot be collected using other instruments, particularly with special cases, including people who are not able to answer a questionnaire or to be interviewed, as Sapsford and Jupp have mentioned “observation can provide information on the environment and behaviours of those who cannot speak for themselves” (Sapsford and Jupp, 2006: 59). Therefore, it results in providing a rich description of the studied matter.

In the present study, a disguised structured participant observation was used by the researcher in the investigation, in order to observe the participants' communicative competence, where the participants behave naturally, since they are not conscious of being observed. Moreover, the researcher participated in the observation by communicating with the participants but without them understanding what the purpose of the researcher is. The observation took place in the Balsam Association's classroom, particularly in the psychologist's space and the speech therapist's space. The researcher attended ten sessions, and the duration of each session ranged from two hours to two and a half hours. This observation was based on a communicative competence scale (CCS), developed by Wiemann in 1977, which serves as a tool for assessing communicative competence, using 36 Likert-type items represented in appendix A, to be rated from ‘strongly agree’ to ‘strongly disagree’, to determine how communicatively competent the participants are, including whether each participant is “empathic, affiliative and supportive, and relaxed while interacting; he is capable of adapting his behaviour as the situation within the encounter changes and he moves from encounter to encounter” (Wiemann, 1977: 195).

#### **2.4.2 Observation Test**

Reliability, validity and test discrimination are three qualities every effective test ought to have. According to Gronlund and Linn (1995), reliability is the consistency of measurement, or the consistency of test outcomes or other evaluation findings across measurements, while “the validity of a test concerns what the test measures and how well it does so” (Anne Anastasi, 1969: 65). Additionally, test

discrimination means that the test must reflect the variations in the participants being tested.

In this study, the researcher used an observation test which requires the participants to take a look at pictures, watch a video or listen to an audio for a brief period of time, after which they must respond to questions based on that. Thus, this exam is audio-visual. This kind of testing facilitates the process of data collection, particularly with individuals who are not able to read texts, and to answer written questions.

#### ***2.4.2.1 Test Activities***

The researcher prepared a test which constitutes of three parts, the first part is a picture description, where the researcher provides a picture (Appendix B) to the participants in order to be described. The second part is video summarising, in this part the researcher plays a short story video (Appendix C) for the participants in order to be summarized orally. Finally, the third part contains multiple-choice questions; it is a test in which the participants choose from among three options, the most appropriate answer is the one that is more communicative than the other answers, which reflects the communicative meaning behind the picture or the video. The first question is related to the video, where the participants are asked about the moral of the previously watched story. The second and the third questions are related to a picture (Appendix D) which represents a communicative situation.

#### ***2.4.2.2 Scoring Rubric***

The participants' answers will be used later in answering a scoring rubric (Appendix E), that is composed of progressive levels of frequency, namely: never, infrequently, frequently, mostly and always. This scoring rubric is adopted from Verhoeven and Vermeer's (1992) work, it consists of a group of communicative statements, each of which alludes to directly observable communicative behavioural features, that is based on a nine-point, criterion- referenced scale that covers both verbal and non-verbal components, including accuracy, appropriacy, comprehension, fluency, intelligibility, range, kinesics, proxemics and prosodics.

**Table 2.1:** Rubrics Meaning

Rubric	Meaning
Accuracy	It relates to how well learners use the language system (vocabulary, grammar, and pronunciation).
Appropriacy	It refers to the appropriate use of language in a given context.
Comprehension	It is the capacity to comprehend language, including words and sentences' meaning.
Fluency	It refers to speaking effortlessly, in a fast way, and without frequently pausing.
Intelligibility	It is the degree to which a speaker is understood.
Range	It relates to the use of an adequate range of vocabulary and structures in speaking.
Kinesics	It refers to nonverbal communication, including gestures, body movements, and facial expressions.
Proxemics	It is a type of nonverbal communication in which messages are passed between two speakers by means of the shifting distance between them during a discussion.
Prosodics	It is also known as prosody, and it refers to the stress, rhythm, and intonation of speech.

### 2.4.3 Interview

The interview is a common research technique used by researchers to learn more about the respondents' thoughts, opinions, and attitudes. It takes the form of a conversation between the researcher and the interviewee during which the researcher proposes a number of questions about the studied matter, including both open-ended and close-ended questions. It is an important research instrument as it “enables participants 'interviewers and interviewees' to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view. In these senses the interview is not simply concerned with collecting data about life, it is life itself” (Cohen et al, 2018:506). Moreover, it allows the

researcher to collect rich information and make more precise conclusions about what is being investigated.

In this study, the researcher used a structured interview, where the interviewer asks the same predetermined questions to all the interviewees, in the same order. Additionally, “the structured interview is useful when the researcher is aware of what she does not know and therefore is in a position to frame questions that will supply the knowledge required” (Cohen et al, 2018: 59).

The face-to-face interview was done at Balsam Association for the Inclusion of People with Down Syndrome, with two interviewees, the speech therapist and the psychologist, each one was interviewed for 20 minutes. The interview contains six questions (Appendix F) aiming to get different information from the interviewees according to their frequent communication with the individuals with Down syndrome, concerning their level of communicative competence, the most important factors affecting their communicative competence, and the most important changes that must be applied to see improvements.

## **2.5 Data Analysis**

The most critical part of any research is the data analysis. Data analysis condenses gathered information. It involves the analysis of data collected via the use of logical and analytical reasoning in order to find trends, correlations, or patterns. At this step, the researcher begins to analyse the information gathered either qualitatively or quantitatively, or by combining the two. Additionally,

data analysis can be broken down into two major areas: Descriptive and inferential. Descriptive statistics allows the researchers to describe the data and examine relationships between variables, while inferential statistics allows researchers to go beyond the parameters of their study sample and drawn conclusions about the population from which the sample were drawn.

Marczyk et al (2005: 209)

In this study, the researcher has analysed the data collected qualitatively and quantitatively after the data has been organised.

### 2.5.1 Observation Results

The observation took place in the Balsam Association's class, for ten sessions. This observation was based on Wiemann's communicative competence scale (CCS), in order to assess the individuals with Down syndrome's communicative competence, using 36 statements describing different situations to be observed.

- **Statement number one (1):** The individuals find it easy to get along with others.

The first statement is related to the individuals' coping with other people, including normal people or the ones with Down syndrome. The results reveal that the participants who are less than 15 years old find it difficult to get along with others, while participants between the ages of 15 to 18 years old, find it easier to get along with others.

- **Statement number two (2):** The individuals can adapt to changing situations.

The second statement is related to the individuals' adjustment to situation changing. The great majority of the participants showed that they can adapt to changing situations, unlike the ones who are 5 and 6 years old, who find it a little bit difficult to adapt.

- **Statement number three (3):** The participants treat people as individuals.

The third statement is about whether other people are treated as individuals by the ones with Down syndrome. The results show that all the participants do actually treat people as individuals, as it is noticeable that they tend to treat others with dignity, and appreciate them as valuable individuals, with the belief that they have value.

- **Statement number four (4):** The individuals interrupt others too much.

The fourth statement focuses on the interruption of the individuals to other people. The majority did not show any acts of interruption, only one participant who did interrupt a few of the people in the class, which is possibly due to the participant's background and the habits adopted from his/her environment.

- **Statement number five (5):** The individuals are 'rewarding' to talk to.

The fifth statement turns around the idea of giving a reward to support the individual to speak and communicate. The results show that the majority of the participants are not rewarded to talk, but the ones who are 5 and 6 years old, are sometimes being rewarded to talk, to boost their motivation using affirmation words, as well as allowing them to use toys once they finish their activities.

- **Statement number six (6):** The individuals can deal with others effectively.

The sixth statement is about whether if the individuals can effectively interact with others. The observation results show that most of the participants do not actually deal effectively with other people, as they face troubles understanding what others say, including complex sentences, or new vocabulary. Moreover, they sometimes reply with a completely unrelated answer to the asked question, or they just remain silent.

- **Statement number seven (7):** The individuals are good listeners.

The seventh statement focuses on whether the individuals pay attention to what other people are saying. The results show that all the participants are good listeners, but not all of them react to what has been said or what has been asked of them to do, as they lack attention and lose interest so quickly.

- **Statement number eight (8):** The individuals' personal relations are cold and distant.

The information related to the eighth statement were collected by observing the individuals, in addition to asking their parents about their personal relations. All of the participants' personal relations are neither cold nor distant. Their relationships involve good interaction and communication in comparison to their genetic disorder. In addition to that, they are close to their parents and family members, as they all seek love, attention, and care.

- **Statement number nine (9):** The individuals are easy to talk to.

The ninth statement focuses on whether the individuals are amenable to the conversation. The data collected shows that the participants who are less than 10 years old are not easy to talk to, unlike the participants between the ages of 10 to 18.

- **Statement number ten (10):** The individual won't argue with someone just to prove he/she is right.

The tenth statement focuses on whether the individual won't debate with someone in an attempt to establish their superiority. The results show that only one participant does argue in order to prove his/her point of view.

- **Statement number eleven (11):** The individuals' conversation behaviour is not 'smooth'.

In this statement, the researcher observed whether the participants' behaviour during conversations is smooth. The results show that all the participants' conversational behaviour does not reach the smoothness level.

- **Statement number twelve (12):** The individuals ignore other people's feelings.

In this statement, the emotional side is being observed and confirmed by the parents. The results show that all of the participants do not ignore other people's emotions, and they do care about how they feel. For instance, the participants speak politely and show emotional support if they notice that the other person is not okay by hugging, kissing, and showing the other person how much they love him/her.

- **Statement number thirteen (13):** The individuals generally know how others feel.

This statement is also related to feelings. The results reveal that all the participants observed generally know how others feel.

- **Statement number fourteen (14):** The individual lets others know he/she understands them.

The aforementioned statement focuses on whether the person conveys to others that he/she is aware of what they have said or not. The results reveal that the majority do let others know that they understand them, except for the 5 years old participant, who faces difficulty maintaining eye contact, due to long exposure to screens, as the child's ability to develop mentally is weakened by excessive usage of modern technology. Since the brain develops in response to a variety of external stimuli, and regular technology usage has a detrimental effect on brain development, leading to the appearance of acquired autism.

- **Statement number fifteen (15):** The individuals understand other people.

This statement is related to the individual's understanding. The results show that all the participants do understand others, but the level of understanding differs from one to another according to their age.

- **Statement number sixteen (16):** The individuals are relaxed and comfortable when speaking.

This statement concerns the behaviour of the individuals while speaking. It is noticeable that the participants above the age of 10 find it easy to speak, while the younger participants are less relaxed and less comfortable while speaking, especially with new faces.

- **Statement number seventeen (17):** The individual listens to what people say to him/her.

This statement is about the listening skill. The collected data shows that all the participants do listen to what people say to them, but their reactions differ according to what is said.

- **Statement number eighteen (18):** The individuals like to be close and personal with people.

This statement indicates the personal relations of the individuals. From the collected data, it is clearly shown that all the participants like to be close and personal with people, especially their home members.



- **Statement number nineteen (19):** The individuals generally know what type of behaviour is appropriate in any given situation.

This statement focuses on the behaviour of the individuals in different situations. The results show that in already dealt with situations, the participants generally know how to behave, for instance, greeting people using polite words, and asking about how they are doing, etc. While new situations are found to be more complicated to know the appropriate behaviour, for example, if an individual is in the kitchen, and the cooking oil is on fire, he/she will not know how to put the fire out, as it is a new situation for him/her.

- **Statement number twenty (20):** The individual usually does not make unusual demands on his/her friends.

In this statement, the researcher observed whether the individual do make unusual demands, including buying expensive things, getting out at night alone, cooking alone without the guidance of the parents or an older person, etc. The results reveal that all the participants observed have never made any unusual demands.

- **Statement number twenty-one (21):** The individual is an effective conversationalist.

This statement concerns the level of effectiveness of the conversationalist. The results show that the participants who are 15 years old and more, have a higher level of effectiveness in making conversations than the younger ones, but their level is lower than normal individual's effectiveness level.

- **Statement number twenty-two (22):** The individuals are supportive of others.

In this statement, the act of supporting others was observed. The results show that the majority of the participants are actually supportive of others, they tend to give help and assistance to their friends while playing or learning in the association, they also help their parents cook, etc. Additionally, they support others by using encouragement and affirmation words.

- **Statement number twenty-three (23):** The individual does not mind meeting strangers.

After observing the individual's reaction to meeting new people, results show that all the participants do not mind meeting strangers, but at first, they will keep quiet until they get used to the new person, then they will start interacting more with him/her. In addition to that, the 5- and 6-years old participants take longer to start interacting with the stranger in comparison to the 15-, 16-, and 18-years old participants.

- **Statement number twenty-four (24):** The individuals can easily put himself/herself in another person's shoes.

This statement concerns the ability of the individuals to put themselves in another person's shoes. The data collected show that all the participants are not able to put themselves in someone else's shoes, as their understanding level is lower than a normal person. They cannot try to envision how they would feel or behave if they were in the same circumstance as someone else. For example, if the parent loses his/her job, the individual will not understand how it exactly feels.

- **Statement number twenty-five (25):** The individuals pay attention to the conversation.

In this statement, the researcher observed whether the individuals do pay attention to the conversation or not. The results reveal that the majority of the participants do pay attention to the conversation, but their interest fades rapidly, as they get bored easily if the topic is not interesting enough for them.

- **Statement number twenty-six (26):** The individuals are generally relaxed when conversing with a new acquaintance.

This statement is about the state of relaxation while conversing with a new acquaintance. The results reveal that all the participants are not 100% relaxed when conversing with a new acquaintance. But they get relaxed after a short period of time.

- **Statement number twenty-seven (27):** The individuals are interested in what others have to say.

In this statement, the researcher observed how interested the individuals are in what others have to say. The results show that the majority of the participants are interested in what others say, but not for a long period of time.

- **Statement number twenty-eight (28):** The individuals do not follow the conversation very well.

This statement focuses on the conversation followed by the individuals being observed. The results show that all the participants follow the conversation but not very well, as they stop paying attention in a short period of time, they start changing the topic if it was not interesting enough for them, or they stop answering the person who is talking with them.

- **Statement number twenty-nine (29):** The individuals enjoy social gatherings where he/she can meet new people.

This statement focuses on how the individuals feel in social gatherings. The results show that all the participants enjoy social gatherings, and have fun in parties with old and new faces. In celebration of the International Day of Down Syndrome, Balsam association organized a party on this occasion, where the participants excelled in presenting activities according to their abilities, including presenting educational plays about cleanliness and respect for others, in addition to raising awareness of accepting people with Down syndrome in the community. Moreover, the participants enjoyed dancing on the traditional Kerkabou music (known also as Krakeb music), as well as wearing the traditional costumes in national occasions, and celebrating each other's birthdays. Besides playing and singing with clowns and Disney characters (cosplayers).

- **Statement number thirty (30):** The individual is a likeable person.

After observing the individuals, the results show that all the participants are likeable, especially by people who are aware of their genetic disorder, as they are nice

and loveable. Therefore, people use terms of endearment to address them, like; beautiful, sweetie, and baby (zina /z ɪ n ɑ:/, chbab /ʃ ə b ɛ b/, hbiba / ɧ b ɪ b ɑ:/, etc. While people who do not have an idea about this disorder and what qualities these individuals have, they often show a negative attitude towards them, including children and adults.

- **Statement number thirty-one (31):** The individuals are flexible.

This statement focuses on the flexibility of the individuals. The results show that all the participants are flexible, and do adapt easily to change and new situations. For example, the participants went to a swimming pool, which is a new place for them, they adapt easily which means that they can cope with changes, showing how much they were enjoying what they were doing, using words like; how nice, I'm happy (ki ghaya /kɪ ɡ ɑ j ɑ/, ni farhan / n ɪ f ə r ɧ ɑ: n/), etc, even if it is something new for them.

- **Statement number thirty-two (32):** The individuals are not afraid to speak with people in authority.

Once the researcher observed how the participants feel while speaking with people in authority, results show that some of the participants feel afraid to speak with people in authority, especially strict ones.

- **Statement number thirty-three (33):** People can go to the individuals with their problems.

In this statement, the researcher observed that people cannot go to the participants with their problems, as their comprehension level is lower than normal people.

- **Statement number thirty-four (34):** The individuals generally say the right thing at the right time.

Concerning this statement, the researcher observed that the participants generally say the right thing at the right time, in relation to the things they are doing or talking about.

- **Statement number thirty-five (35):** The individuals like to use their voice and body expressively.

Concerning body and voice expressions, the researcher observed that the participants do have a good level of body and voice expressions, including facial expressions and hands expression. In addition to a good usage of voice in expressing their thoughts, anger, and happiness.

- **Statement number thirty-six (36):** The individuals are sensitive to others' needs of the moment.

In this statement, the researcher observed how sensitive the individuals are to others' needs of the moment. The results show that the participants who are 5 and 6 years old are somehow sensitive to others' needs of the moment as they are still too young and needy, on opposite to the older participants.

## 2.5.2 Observation Test Results

In the observation test, after a brief period of time spent looking at images and watching a video, a number of questions were asked by the researcher to the participants, about what was seen and heard, in order to test their communicative competence.

### 2.5.2.1 Test Activities Results

The observation test includes three parts, each part with one activity. In the first part the researcher provided a simple kids picture of a surprise birthday party, to the participants in order to be described. The results show that only one of the participants, who belongs to the 15 to 18 years old group has succeeded in describing the picture and understanding whose birthday surprise was, this may be due to the participant's constant interaction with other people in his father's shop. While the other two found it difficult to commence describing the picture, and with little help they started describing but only few words were produced, for instance, they used the words party, birthday party, cake, balloons, candle (hafla [ h a f l a ], eid milad [ʔ i d m i l ə d ], kika [ k i k a ], bwawek [b w a: w q ], chame' [ʃ m a ʔ ] ), etc.

Meanwhile the rest of the participants could not describe the picture properly, and some of them remained silent.

In the second part, the researcher played to each participant the same video, which is a short story for kids, in order to be summarised orally. The results reveal that none of the participants succeeded in summarising the short story perfectly, and the majority faced hesitation in answering the question, but with little help most of the participants started answering and producing words and sentences to describe what they understood from the video in general, using words and phrases only, like; rabbits, their mom has gone to the woods, they ate carrots (aranib or gninet [ʔ a r a n i b ], [g n i n ə t], mamahom mchat lel ghaba [m a m a h ə : m ] [ m ʃ a : t] [ l ə l ġ a b a ], klaw ljazar, klaw zrodiya [ k l a w ] [ l j a z a r ], [ k l a w ] [ z r ə : d i j a ] ), etc. The participants utilized incomplete sentences, using Algerian dialectal Arabic as well as some code switching to classical Arabic.

Meanwhile, the youngest participants found it difficult to summarise the story, instead of producing full or almost full sentences, they summarised the story by producing only few random words related to the story, including rabbits ([ʔ a r a n i b ], [g n i n ə t]), woods ([ ġ a b a ]), carrots ([l j a z a r ], [z r ə : d i j a ]).

Moving to the third part, in this test the participants were asked to pick the most acceptable response to three multiple-choice questions, which is the one that is more communicative than the other options and represents the communicative meaning behind the presented images and video. Concerning the first question, the results show that when the participants were questioned about the moral of the previously seen short story, only one participant picked the right answer (we should not steal, ma nekhawnouch [ m a n ə χ a w n ə : ʃ ]), while the rest of the participants choose the wrong choice. And after the researcher gave a hint to the participants as a way to facilitate the answer to the question, another two participants were able to pick the correct answer, while the rest gave wrong answers. Finally, the answers to the second and third questions were tied to a picture that depicts a communicative situation (a dog being checked by a veterinarian, accompanied by his owners). The collected data show that only two of the participants picked the most convenient

answer to the question (who is sick?). While in the third question (what is wrong with the dog?), the majority of the participants selected the correct answer, saying that the dog injured his hand (grad yedah [g r a d j ə d ə h], mrid myedah [mr ɪ d m j ə d ə h]), as the previous communicative situation was illustrated, which it eases the process of selecting the suitable choice.

### ***2.5.2.2 Scoring Rubric Results***

In this part, the researcher used the participants' answers, in addition to what was observed during the testing process in answering a scoring rubric that is adopted from Verhoeven and Vermeer's (1992) work, which includes a number of communicative statements, used to observe some communicative behavioural features, covering verbal and non-verbal components, including accuracy, appropriacy, comprehension, fluency, intelligibility, range, kinesics, proxemics and prosodics.

#### **2.5.2.2.1 Fluency**

With regard to evaluating the fluency of the participants, five communicative statements were used, which express different cases that the researcher observed.

- **Statement number one (01):** The individuals respond with little hesitation.

The first communicative statement concerns whether the individuals do respond with little hesitation or not. The results show that four of the participants do mostly hesitate a little in answering, while the rest of the participants do always respond with little hesitation. For example, when the participants have been asked to summarize the video, they hesitated a little before responding, saying "hmm", "aah", etc.

- **Statement number two (02):** The individuals need little prompting.

The second communicative statement concerns whether the individuals need little prompting or not. The results reveal that the 5- and 6-years old participants mostly require little prompting, while the rest of the participants infrequently need some prompting. For instance, when the participants were asked to describe the first

picture, the researcher tried to prompt them using questions like; "what do you see in the picture? ", "what are the kids doing? ", "whose birthday is this? ", etc.

- **Statement number three (03):** The individuals speak in complete sentences.

The third communicative statement covers whether the individuals speak in complete sentences or not. The data obtained shows that the 5- and 6-years old participants never speak in complete sentences, while the older participants infrequently speak in complete sentences. The participants while being observed, used words and phrases only, like; "rabbits", "they ate carrots" (aranib or gninet [ʔ a r a n i b ], [ g n i n ə t ], klaw ljar, [ k l a w ] [ l j a z a r ], etc.

- **Statement number four (04):** The individuals' sentences are well structured.

The fourth communicative statement tells of whether sentences produced by the individuals are well structured. The results reveal that all the participants face difficulties in building well-structured sentences, their sentences are poorly structured and lack some grammatical components, the participants sometimes omit a subject, verb, or object; for example, saying "broke his hand" ([g r a d j ə d a h]), instead of "the dog broke his hand" ([l k ə l b g r a d j ə d a h]).

- **Statement number five (05):** The individuals' speech is clear and comprehensible.

The fifth communicative statement relates to whether the individual's speech is clear and comprehensible. The gathered information reveals that the majority of the sentences produced, especially by the participants whose their ages range from 10 to 18 years old, are somehow clear and comprehensible, even though their sentences are not well structured and complete. But in comparison to a normal person, their speech is way less clear and comprehensible, as they struggle to talk in a way that is always understood by those around them.

#### 2.5.2.2.2 Range

In order to study the range of the individuals, two communicative statements were used in the process of observation.



- **Statement number one (01):** The individuals use adequate range of vocabulary and structures.

The first communicative statement focuses on whether the participants use an adequate range of vocabulary and structures. The obtained data show that the participants do not actually use an adequate range of vocabulary and structures in their speech, so it was noted that there is a shortage in the number of vocabulary and structures used, which decreases with the decrease in the age of the participants.

- **Statement number two (02):** The individuals give response to questions asked.

The second communicative statement tells whether the participants give a response to the questions asked. The results reveal that the participants face hesitation in answering asked questions. But generally speaking, they do give answers if the question was clear enough for them, including the tweens and older participants, for example, one participant was asked about what he/she made for Iftar, and his/her answer was: I made Borak (an Algerian beef rolls), with hash meat, and cheese ([d ə r t] [l b ə: r ə k] [b l v j ã d a f i] [w l f a r m a dʒ]). Meanwhile, it was observed that the kids infrequently answer asked questions.

### 2.5.2.2.3 Accuracy

For the purpose of investigating the accuracy of the individuals, two communicative statements were employed during the observation phase.

- **Statement number one (01):** The individuals pronounce words competently.

The first communicative statement focuses on whether the participants do pronounce words competently or not. The results show that all the participants struggle in pronouncing words competently, since Down syndrome as a disorder affects their speech, for further information concerning this point, more details are mentioned in the second part of the first chapter, entitled 'Down Syndrome Characteristics' Effect on Speech and Language Development'. However, there is a noticeable difference between the 5- and 6-years old participants, and the others, as

the speech therapist and the psychologist help in developing the pronunciation of sounds. For instance, deletion of a weak syllable or final consonants as in "bbit vs rabbit" ([g n i n a] vs [n i n a]).

- **Statement number two (02):** The individuals give correct responses.

The second communicative statement relates to the point of receiving correct responses from the participants. The results reveal that only a few participants succeeded in giving the correct response while tested, nevertheless, while communicating and asking questions about their personal lives ("how are you doing?", "what is your name?", etc.), the participants who belong to the 15 to 18 years old group, frequently give the correct answer, while the rest of the participants may face some difficulties in answering correctly depending on the nature of the question.

#### 2.5.2.2.4 Comprehension

A communicative statement was used during the observation phase in order to look at each person's comprehension.

- **Statement number one (01):** The individuals comprehend overall sense of questions.

The statement concerns the comprehension of the overall sense of the question. The data obtained show that the majority of the participants find a little difficulty in understanding the main meaning of the question, as the questioner might need to talk more slowly than normal, and they might take some time to respond to the question. However, the difficulty of understanding the overall meaning depends on the difficulty level of the question, as the majority find it easy to comprehend simple questions, generally related to their personal lives.

#### 2.5.2.2.5 Appropriacy

During the observation stage, a communicative statement was utilized to evaluate each participant's appropriacy.

- **Statement number one (01):** The individuals give appropriate responses.

The statement refers to whether the individuals give an appropriate response or not. This statement is related to the previously mentioned point, where data show that as long as the participants have some trouble understanding the question's core meaning, this will cause giving inappropriate responses, as has been observed. Therefore, the complexity of the question determines how difficult it is to provide an appropriate answer, where most participants gave appropriate answers to simple and straightforward questions. For instance, once the participants were asked about the animal in the video, all their answers were right, but once they were asked about the moral of the story, only one participant answered correctly, and with little help, two other participants also chose the right response.

#### **2.5.2.2.6 Intelligibility**

In order to check the participants' intelligibility, a communicative statement was used during the observation.

- **Statement number one (01):** The individuals convey meaning with little difficulty.

The statement focuses on whether the participants convey meaning with little difficulty or not. The results reveal that all the participants face little trouble in conveying meaning, as their speech is a little difficult to be understood, for example, they experience difficulty with pronouncing some sounds, such as the /s/ and /z/, which can be replaced by a /θ/ sound, as well as the /f/ and /v/ sounds, which can be replaced with a /p/ or /b/ sound, and /w/ or /j/ sound may also be used in place of the /l/ sound. However, these difficulties vary among the participants. In addition to that, they struggle in carrying on long discussions, recounting personal experiences or narrating stories, especially the 5- and 6-years old participants.

#### **2.5.2.2.7 Prosodics**

Two communicative statements were used to observe the individuals' prosodics.

- **Statement number one (01):** The individuals' speech is expressive and appropriately intonated.

The first statement is related to whether the individuals' speech is expressive and appropriately intonated or not. The data gathered show that the majority of the participants' speech is more expressive, as older as they get. While their speech is less intonated in comparison to their level of expression and to normal people, this is due to their disorder effect on the structure, function, and coordination of the muscles involved in speech production, as well as cognitive processing differences. Therefore, their speech pattern lack variation in pitch and tone. However, it varies from one participant to another.

- **Statement number two (02):** The individuals' flow of speech is rhythmic and continuous.

The second statement concerns the flow of the participants' speech whether it is rhythmic and continuous or not. The results reveal that all the participants' speech flow is neither rhythmic nor continuous, since they face some difficulties in carrying on long conversations and producing fully structured sentences, as well as the effect of their disorder on their muscles, etc.

#### 2.5.2.2.8 Proxemics

For the purpose of investigating the individuals' proxemics, a communicative statement was used.

- **Statement number one (01):** The individuals are aware of personal and interpersonal space.

This statement focuses on the awareness of the participants' personal and interpersonal space. The researcher's collected data show that the participants are actually aware of their personal space which is the comfortable distance between the individual and another person he/she is talking to or standing next to. Moreover, the majority of the participants feel uncomfortable when someone invades their personal space. Additionally, the participants are also aware of their interpersonal space which

is the physical space that the individuals keep around their bodies when interacting with others. For instance, the participants during the test respected the researcher's physical boundaries when conversing and kept a reasonable distance, that is neither too close nor too far.

#### 2.5.2.2.9 Kinesics

Three communicative statements were used by the researcher to observe the participants' kinesics.

- **Statement number one (01):** The individuals display effective use of body language.

The first statement focuses on whether the participants display effective use of body language or not. The results show that every participant uses body language skilfully, in order to communicate their feelings and intentions. For example, during the party, the participants used hand gestures to convey their feelings by applauding and moving their bodies, as well as jumping to express excitement and happiness.

- **Statement number two (02):** The individuals display effective use of facial expressions.

The second statement concerns whether the individuals do display effective use of facial expressions or not. The obtained data reveal that face expressions are used skilfully by all the participants, in expressing their feelings including whether they are happy, sad, fearful, angry, surprised, confused, disgusted, etc. For instance, the participants use smiling whenever they greet other people in the association, as well as using frowning to show sadness when disagreeing with their friends.

- **Statement number three (03):** The individuals display confidence in the interactive process.

The third statement is related to both of the individuals' kinesics and prosodics. It focuses on whether the participants display confidence in the interactive process or not. The results reveal that the majority of the participants show confidence while interacting with others, especially the ones whose ages range from 10 to 18 years old.

For instance, they confidently introduce themselves to others, while the rest feel a little shy while interacting.

### 2.5.3 Interview Results

After the researcher has finished collecting data through observation and test observation, a structured interview was conducted with the speech therapist and the psychologist to study the participants' level of communicative competence, the most significant influences on their communicative competence, and the most significant adjustments that must be made to achieve improvements.

The structured interview was conducted by using the following questions:

- **Question number one:** According to your constant communication with individuals with Down syndrome, what is your assessment of their level of communicative competence in general?

This question was asked to have a general view of the individuals with Down syndrome's level of communicative competence. The psychologist has mentioned that according to her constant communication with individuals with Down syndrome, the level of the communicative competence is directly related to the cognitive abilities of the individuals, and since their cognitive abilities are lower than normal people, their communicative competence is also low. Additionally, the speech therapist has stated that the communicative competence of these individuals is at a lower level than that of normal people, but their communicative competence differs from one case to another according to the degree of their intellectual disability, so that those with Down syndrome have varying symptoms from one individual to another, therefore, the simpler the level of the disorder is, the higher their communicative competence is.

- **Question number two:** Is the age factor considered as the biggest influence on the communicative competence of individuals with Down syndrome?

This question was set to inspect the influence of age as a factor on the individuals with Down syndrome's communicative competence. The psychologist

has claimed that the age factor is considered as an influencing factor on the communicative competence of individuals with Down syndrome, but it is not the biggest influencer. Furthermore, the speech therapist has added that the age factor is considered as an influencing factor, so that if the diagnosis was early, that is, the family knew that their child has Down syndrome, then in this case the doctors should direct the parents to contact a speech therapist and a psychologist, in order not to reach some complications, as things are simple at first and then it gets more complicated through time. The more the child gets older, the more it becomes difficult to improve, and the improvement is consistent with communicative competence. Therefore, if the child receives speech therapy and psychological support from a young age, he/she will have an improvement in various aspects, and this affects the level of the communicative competence. Moreover, as the child ages and his/her family give up, the child will face more challenges that could even cause him/her to lose control of his/her tongue, which will negatively affect the pronunciation, and the level of communicative competence, which will continue to decline. Although it is known that these children are social, but as soon as the language problem gets worse, they will find it difficult to be more social, which will result in a decline in social communication, and communicative competence.

- **Question number three:** Does the difference in learning duration lead to a difference in the level of communicative competence among individuals with Down syndrome?

This question was asked to know more about the effect of learning on the individuals with Down syndrome's communicative competence. Both of the psychologist and the speech therapist confirmed that the learning period has an impact on the individuals with Down syndrome's level of communicative competence, so that if the child receives educational support from a young age, and not necessarily in specialized centres, such as kindergartens, a significant improvement will be noticed. Therefore, it is important for the child to start getting out of the house from an early age, in order to meet new people which helps in increasing the possibility of improvement, since it pushes the child to make a self-effort, and not to become

dependent on his/her parents, that is, the more educational support he/she receives, the better his/her communicative competence level gets.

- **Question number four:** Does the age factor or the learning factor have the greater role in the development of the communicative competence of the individual with Down syndrome?

This question was asked in order to know which factor among age and learning factors that has a greater impact in developing the communicative competence of the individuals with Down syndrome. Both of the psychologist and the speech therapist mentioned that the age and learning factors have the same characteristics and advantages, so that if the child receives speech therapy, psychological support and educational support at an early age, this will allow him/her to develop his/her communicative competence. Therefore, there is a complementary relationship between the two factors. For example, if the child is provided educational support but at a late age, he/she will not go through any improvement, and for that reason, the previously mentioned factors have to be taken into consideration, in order to reach the best level of communicative competence, that may lead the individual to move from the level of social integration to the level of professional integration, despite his/her intellectual disability.

- **Question number five:** What are the most important factors helping to develop the communicative competence of the individual with Down syndrome?

This question was set to inspect the key elements influencing the development of an individual with Down syndrome's communicative skills. The psychologist has mentioned that one of the most important factors contributing to the development of communicative competence, is the integration of the individuals with Down syndrome, with normal children in regular schools. While the speech therapist has mentioned that one of the most important helping factors, in addition to the age factor and the learning factor, is the role of the family added to the specialized centres that receive children at an early age. He focused on the idea that the greater the cultural level of the family is, and the better its income is, allows the child to start learning at



an early age including having extra sessions in private centres, etc. Which leads to a great improvement. Meanwhile, if the parents do not do anything to help their child, and tend to provide him/her clothing and food only, neglecting the fact that their children have the potentials for improvement, this will lead to a significant decline in the level of his/her communicative competence.

- **Question number six:** What are the most important changes that should be applied to help individuals with Down syndrome in developing their communicative competence?

This question was asked to have an idea about the most crucial adjustments to make in order to help the individuals in developing their communicative competence. The speech therapist has suggested a set of adjustments including organising awareness-raising campaigns to spread awareness about the importance of speech therapy and psychological support to improve the individuals with Down syndrome's communicative competence. Additionally, the importance of changing some of the negative aspects of special centers, including not allowing some children to join their classes if they have not yet obtained personal hygiene, which is considered as an obstacle. Moreover, if the child's disability is high, he/she won't be able to join these associations at an early age, which contributes to a decrease in his/her communicative competence. Moreover, the vocational training centres must receive individuals with Down syndrome, so that when the children are formed in special centres and reach 20 years old, they need to join the vocational training, which currently does not allow them to join, since it sees this type of individuals as having a low intelligence level, and it does not allow them to practice certain professions or jobs, as it is considered as a risk of being injured from the tools used. Finally, it is necessary to change the program of the integrated classes by developing special programs for people with Down syndrome, since the academic program for normal people needs a high level of intelligence, which means that despite the provision of special centres, they will not succeed, as their intelligence does not allow them to.

## 2.6 Interpretation and discussion of the Main Findings

After finishing the process of collecting data through the observation, the observation test, and the interview, the results of each tool were interpreted and discussed in relation to the hypotheses, for the sake of gathering a considerable amount of information concerning the individuals with Down syndrome's communicative competence, which in turn allows the researcher to verify the validity of the previously suggested hypotheses.

The observation demonstrates that all the participants treat others as unique individuals, and they do not make any outlandish demands. They are good listeners, and maintain warm and friendly personal relationships. They also do not downplay other people's feelings and are normally aware of how others are feeling. They are receptive to what others have to say, and enjoy being up close and personal with others. They are likeable and adaptable, and they typically say the right thing at the right moment, and exhibit a good range of body and voice expressions. They also don't mind interacting with strangers. Additionally, the majority of people don't talk over other people too much or engage in pointless arguments to support their own position. Furthermore, they do show others that they comprehend them, and are supportive of others.

Moreover, the majority of the participants whose ages range from 10 to 18 years old, find it easy to get along with other people, and they can adapt to changing situations easily. Besides that, they have a higher level of effectiveness in making conversations, contrary to the ones whose ages range from 5 to 6 years old. Therefore, it can be concluded that a high percentage of participants have acceptable communication abilities, in addition to being distinguished by being highly social compared to their disability, as they have the ability to communicate and feel what others feel, in addition to their ability to use verbal and non-verbal communication. And most importantly, participants whose ages range from 10 to 18 years old, have better communicative abilities compared to younger participants.

However, all of the participants follow the discourse, but imperfectly. They also comprehend each other, though to varying degrees depending on their ages. In

addition to that, most participants are generally aware of how to act in pre-existing situations, however it can be challenging to know how to act in new situations. Moreover, they are interested in what others say, but not for a long period of time. Thus, it is concluded that despite the participants' ability to communicate, their communication is not perfect or close to being perfect, so that most of the participants face several difficulties in communicating, due to several reasons, the most important of which is their disability, in addition to other influencing factors such as age and learning period, so that the greater the age and the duration of learning, the more their ability to communicate or their communicative competence improves and develops.

On the other hand, none of the participants genuinely interact with others well, and their conversational behaviour is not at a seamless level. They are not able to put themselves in someone else's shoes, and they are not 100% relaxed when conversing with a new acquaintance. Moreover, people cannot go to the participants with their problems, and some of them feel afraid to speak with people in authority, especially strict ones. Finally, the young participants are sometimes being rewarded to talk, and somehow sensitive to others' needs of the moment. Thus, it is deduced that their communication is not smooth, and that they cannot perform several communicative actions, due to their low level of intelligence. The observation test shows that the participants have low level of intelligence as the majority failed in providing the right answers, especially the young participants.

Concerning fluency, all of the participants struggle with creating well-structured phrases; they usually pause a little before responding, and they mostly require little prompting, and never speak in complete sentences. However, the majority of the produced sentences, especially by the older participants, are somehow clear and comprehensible, even though the sentences are not well structured and not complete. Therefore, it can be said that the participants do not speak fluently but they are somehow understood but with little difficulty, which means they are not fully intelligible.

Additionally, their range of vocabulary and structures is limited. Moreover, their accuracy is also limited as participants with Down syndrome speech is affected

by their genetic disorder. Besides that, as they get older, their speech tends to become more expressive, but they also speak with less intonation, and their flow is neither rhythmic nor continuous. Thus, it is concluded that the sentences produced by the participants are not rich and less structured, which affects their communication. Meanwhile, it can be noticed that the individuals with Down syndrome are aware of their personal space, and their face expressions and body language is used skilfully, and the majority of the participants show confidence while interacting with others, especially the older they get.

From the interview with the speech therapist and the psychologist, it can be understood that the individuals' cognitive abilities are low, therefore, their communicative competence is also low. Moreover, it is clear that there is a complementary relationship between the age and the learning factors, since the early access to speech therapy, psychological care, and educational support will help the individual to develop his/her communicative competence. Additionally, there are many other contributing factors, the most important of which is family awareness and financial sufficiency. Hence, from what have been mentioned previously, it can be said that both of the hypotheses are valid and proved by the data collected.

## **2.7 Suggestions and Recommendations**

The study's findings revealed that individuals with Down syndrome have inadequate cognitive capacities, which also affect their communicative competence. Additionally, there is a complementary correlation between age and learning factors since individuals with early access to speech therapy, psychological care, and educational support have better chances in developing their communicative competence, which plays a crucial role in their lives as reinforcing their social skills, allowing them to communicate more effectively, and connect with others. For this reason, the researcher has listed the following suggestions proposed for the individuals with Down syndrome's parents, the society members they are living with, and the educational system, for the purpose of developing the individuals' communicative competence.

First of all, awareness about this disorder should be spread across the society. Presentations at educational institutions and community gatherings are one method that creates awareness in the society, especially in October as it is Down Syndrome Awareness Month. According to Tony Green, the Director of the Division of Developmental Disabilities "It is important to increase awareness and build a community of acceptance and inclusion for people with Down syndrome, as a result, they will flourish as active, contributing, and valued members of their community".

- Presentations can be made specifically for younger audiences, such as primary school pupils, in order to learn inclusion, awareness, and acceptance of these individuals.
- Teachers at a school where a child with Down syndrome studies have also to be acknowledged about their state.
- Volunteering for helping organisations which support Down syndrome education and offer services for individuals with Down syndrome.
- Providing financial support to these associations.
- Posting about Down Syndrome Awareness Month through social media platforms, besides using hashtags to support spreading more information about this matter.

Secondly, the importance of letting the parents know the benefits their child gets from early intervention services, including speech therapy and psychological support, besides physical therapy, starting from a young age in order to boost their development in all areas, among which their communicative competence. In addition to taking the following directions into consideration:

- Practicing age-appropriate pragmatic skills, like saying 'hello' and 'bye', maintaining appropriate distances between people, turn-taking and sharing.
- Keeping the parents' speech natural.
- Speaking calmly so they can learn easily.
- Playing, singing and reading books to help with sounds and words.
- Establishing trust through polite and respectful communication.
- Listening to the child with patience and attention.

- Acknowledging and praising effective communication efforts.
- Responding to the child's lead and being responsive.
- Requesting specific recommendations from a speech therapist based on the child's abilities.

Finally, the significance of integrating individuals with Down syndrome who are characterized by mild disability in schools, in addition to providing special classes for the individuals from a young age, besides the use of a special teaching program, according to their low mental abilities, as it helps to accelerate the development of their communicative competence and improving other areas.

## **2.8 Conclusion**

This research provided a detailed description of the individuals with Down syndrome's communicative competence, additionally to a focus on the most significant factors responsible for accelerating the process of developing communicative competence. This chapter is devoted to the empirical part of the study which investigated how early learning affects the individuals' communicative competence. The researcher employed three research instruments (triangulation), including observation, observation test, and interview to gather information that emphasized the two hypotheses which were represented at the beginning of the dissertation. Through the analyses of the data collected, it was concluded that receiving speech therapy and psychological support from a young age, have an important impact on the development of the communicative competence.

# **General Conclusion**

## **General Conclusion**

The necessity to broaden the scope to additional grounds relevant to the communicative competence has grown as a result of growing interest in studying every corner of human language, it is one of the most significant areas that piqued academics' interest, who have long attempted to delve deeper into this area.

Generally speaking, the capacity to accomplish communication goals in a socially acceptable way is known as communicative competence, it comprises the capability to choose and apply abilities that are appropriate and effective in the relevant situation. This study aimed to investigate the linguistic skills of individuals with down syndrome, with a focus on their communicative competence and its development, specifically in 'Balsam Association for the Inclusion of People with Down Syndrome' (Maghnia- Tlemcen).

Therefore, the research was divided into two chapters, the first chapter dealt with reviewing the literature on two topics, the first one on communicative competence in general, and the second one on individuals with down syndrome and their linguistic characteristics. While the second chapter dealt with the research design and methodology with a precise description of the data gathering procedures, the research tools, and the analysis and interpretation of the collected data.

Through planning and carrying out an exploratory case study, and following the triangulation and analysis of data gathered from various sources using a set of research tools, including observation and observation test with the individuals with down syndrome, and an interview with the association's speech therapist and psychologist, the two hypotheses put forward were confirmed. The results revealed that most of the participants face several difficulties in communicating, and their communication is not smooth, and they cannot perform several communicative actions, due to their low level of intelligence. Moreover, they do not speak fluently but they are somehow understood but with little difficulty, which means they are not fully intelligible. And the sentences they produce are not rich and less structured, which affects their communication, especially the new group of the individuals with down syndrome, as their level of communicative competence is lower than the



advanced group whose ages range from 10 to 18 years old, which confirms the first hypothesis.

On the other hand, the results revealed that early access to speech therapy, psychological care, and educational support positively affects the participants' communicative competence, leading to the conclusion that both of the age and learning factors share the same importance, and have a complementary role in developing the communicative competence of the individuals with down syndrome, which confirms the second hypothesis.

In the end, a set of recommendations and suggestions were introduced to the community members, and most importantly to the parents to help the individuals with down syndrome to improve and boost their communicative competence development.

As no piece of study is perfect, the present research has faced some obstacles prevented it from being idealistic. First of all, the researcher faced difficulties to get access to the city's government centre of down syndrome, which includes more individuals who attends the sessions more frequently, unlike the association in which the research was conducted, which made the process of gathering data harder and longer. Second, it is difficult to observe all what the researcher is looking for in a short period, and some of the investigated points require the individuals to be observed in their homes with their family members. Moreover, the participants have different backgrounds which definitely affects their linguistic capacities.

Additionally, the interview was directed to only two teachers (the speech therapist and psychologist), and the observed participants are only seven people, which is a small sample. For those who would like to make further extent of this study, although the research has reached its objectives; spotting the light on other factors affecting the communicative competence development would be more advantageous and helpful to gain reach more information and cover different perspectives.

To conclude, one might argue that a greater attention must be directed to the individuals with down syndrome, for the sake of improving their communicative

competence by receiving speech therapy and psychological support from a young age.

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# **Appendices**

## **Appendix A**

### **Wiemann's Communicative Competence Scale (CCS)**

Completing the following scale by writing in one of the sets of letters before each numbered statement based upon whether the observer strongly agree (SA), agree (A), is undecided or neutral (?), disagree (D), or strongly disagree (SD).

1. The individual finds it easy to get along with others.
2. The individual can adapt to changing situations.
3. The individual treats people as individuals.
4. The individual interrupts others too much.
5. The individual is rewarding to talk to.
6. The individual can deal with others effectively.
7. The individual is a good listener.
8. The individual's personal relations are cold and distant.
9. The individual is easy to talk to.
10. The individual won't argue with someone just to prove he/she is right.
11. The individual's conversation behaviour is not smooth.
12. The individual ignores other people's feelings.
13. The individual generally knows how others feel.
14. The individual lets others know he/she understands them.
15. The individual understands other people.
16. The individual is relaxed and comfortable when speaking.
17. The individual listens to what people say to him/her.
18. The individual likes to be close and personal with people.

19. The individual generally knows what type of behaviour is appropriate in any given situation.
20. The individual usually does not make unusual demands on his/her friends.
21. The individual is an effective conversationalist.
22. The individual is supportive of others.
23. The individual does not mind meeting strangers.
24. The individual can easily put himself/herself in another person's shoes.
25. The individual pays attention to the conversation.
26. The individual is generally relaxed when conversing with a new acquaintance.
27. The individual is interested in what others have to say.
28. The individual doesn't follow the conversation very well.
29. The individual enjoys social gatherings where he/she can meet new people.
30. The individual is a likeable person.
31. The individual is flexible.
32. The individual is not afraid to speak with people in authority.
33. People can go to S with their problems.
34. The individual generally says the right thing at the right time.
35. The individual likes to use his/her voice and body expressively.
36. The individual is sensitive to others' needs of the moment.

## Appendix B



## Appendix C



**YouTube Link:** <https://www.youtube.com/watch?v=RqgvKgXJbOE>

## Appendix D



## **Appendix E**

### **Scoring Rubric adapted from Verhoeven and Vermeer (1992).**

Completing the following scoring rubric by writing in the blank space before each numbered statement with never, infrequently, frequently, mostly, or always according to each individual.

1. Responds with little hesitation (FLU).
2. Needs little prompting (FLU).
3. Speaks in complete sentences (FLU).
4. Sentences are well structured (FLU).
5. Speech is clear and comprehensible (FLU).
6. Uses adequate range of vocabulary and structures (RNG).
7. Gives response to questions asked (RNG).
8. Pronounces words competently (ACC).
9. Gives correct response (ACC).
10. Comprehends overall sense of question (COMP).
11. Gives appropriate response (APP).
12. Conveys meaning with little difficulty (INTL).
13. Speech is expressive and appropriately intonated (PROS).
14. Flow of speech is rhythmic and continuous (PROS).
15. Is aware of personal and interpersonal space (PROX).
16. Displays effective use of body language (KIN).

17. Displays effective use of facial expressions (KIN).

18. Displays confidence in the interactive process (KIN/PROS).

## **Appendix F**

### **The Structured Interview**

#### **Introduction:**

The capability to create and understand acceptable and situation-appropriate sentences is referred to as communicative competence, that is seen by Lesenciuc & Nagy (2009) as the capacity to interact and use language effectively in a variety of circumstances.

- ❖ According to your constant communication with individuals with Down syndrome, what is your assessment of their level of communicative competence in general?

According to your opinion:

- ❖ Is the age factor considered as the biggest influence on the communicative competence of individuals with Down syndrome?
- ❖ Does the difference in learning duration lead to a difference in the level of communicative competence among individuals with Down syndrome?
- ❖ Does the age factor or the study factor have a greater role in the development of the communicative competence of the individual with Down syndrome?
- ❖ What are the most important factors helping to develop the communicative competence of the individual with Down syndrome?
- ❖ What are the most important changes that should be applied to help individuals with Down syndrome in developing their communicative competence?

## Translation of Appendix F

### ملحق ف

#### مقدمة:

يشار إلى القدرة على إنشاء وفهم جمل مقبولة ومناسبة للوضع على أنها الكفاءة التواصلية، والتي يراها ليسنسيوك وتاجي (2009) على أنها القدرة على التفاعل واستخدام اللغة بشكل فعال في مجموعة متنوعة من الظروف.

• وفقاً لتواصلك الدائم مع الأفراد المصابين بمتلازمة داون، ما هو تقييمك لمستوى كفاءتهم التواصلية عموماً؟

على حسب رأيك:

• هل يعتبر عامل السن المؤثر الأكبر على الكفاءة التواصلية للأفراد المصابين بمتلازمة داون؟

• هل تفاوت المدة التعليمية يؤدي الى وجود تفاوت على مستوى الكفاءة التواصلية بين الأفراد المصابين بمتلازمة داون؟

• هل لعامل السن او لعامل الدراسة دور أكبر في تطور الكفاءة التواصلية للفرد المصاب بمتلازمة داون؟

• ما هي أهم العوامل المساعدة في تطوير الكفاءة التواصلية للفرد المصاب بمتلازمة داون؟

• ما هي أهم التعبيرات الواجب تطبيقها لمساعدة الأفراد المصابين بمتلازمة داون في تطوير كفاءتهم التواصلية؟



## Summary

This research aims to investigate the communicative competence level of individuals with down syndrome and its development: Case of individuals with down syndrome at 'Balsam Association for the Inclusion of People with Down Syndrome' in Maghnia, Tlemcen (Algeria). The results revealed that the majority of the individuals face several difficulties in communicating, especially the younger individuals as their level of communicative competence is lower than the older ones. Moreover, both of the age and learning factors have a complementary role in developing the communicative competence, since early access to speech therapy, psychological care, and educational support positively affects and boost the individuals' communicative competence development.

**Key words:** Down syndrome, Communicative competence development.

## Résumé

Cette recherche vise à investiguer le niveau de compétence communicative des individus trisomiques et son développement : Cas des individus trisomiques à 'l'Association Balsam pour l'Inclusion des Personnes Trisomiques' à Maghnia, Tlemcen (Algérie). Les résultats ont révélé que la majorité des individus font face à plusieurs difficultés de communication, en particulier les plus jeunes car leur niveau de compétence communicative est inférieur à celui des plus âgés. De plus, les facteurs d'âge et d'apprentissage ont un rôle complémentaire dans le développement de la compétence communicative, puisque l'accès précoce à l'orthophonie, aux soins psychologiques et au soutien éducatif affecte positivement et stimule le développement de la compétence communicative des individus.

**Mots clés :** Syndrome de Down, Développement de compétence communicative.

## الملخص

يهدف هذا البحث إلى تقصي مستوى الكفاءة التواصلية وتطورها للأفراد المصابين بمتلازمة داون. تم إجراء دراسة استقصائية على الأفراد المصابين بمتلازمة داون في 'جمعية بلسم لإدماج المصابين بمتلازمة داون، بمغنية، تلمسان (الجزائر). وكشفت النتائج أن غالبية الأفراد يواجهون عدة صعوبات في التواصل، خاصةً الأفراد الأصغر سنًا، بحيث أن مستوى كفاءتهم التواصلية أقل من الأفراد الأكبر سنًا. علاوة على ذلك، يلعب كل من عامل السن وعامل التعلم دورًا تكامليًا في تطوير الكفاءة التواصلية، بحيث أن الحصول المبكر على المعالجة النطقية، الرعاية النفسية، والدعم التعليمي يؤثر إيجابيًا بتعزيز تنمية الكفاءة التواصلية للأفراد.

**الكلمات المفتاحية:** متلازمة داون، تنمية الكفاءة التواصلية.