

**The British University in Dubai
Institute of Education**

**Educating Children with Williams Syndrome in the UAE
A Case Study**

**By
Hanadi Mahmoud Al Jafari**

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**Dissertation Tutor
Dr. Eman Gaad**

Dedication

For my sister Tahani who was aware of my studying and for my family for supporting me.

Acknowledgment

Ten months ago, these 20,000 words were just some headlines written with a poor pencil on a small piece of paper. I would like to thank all the people who have helped this dissertation to be born. First of all I am grateful to Emirates Group for awarding me an Emirates scholarship. Many thanks to Samer for the amount of knowledge about Williams Syndrome I learned from him. Great thanks to the staff at BUID for their help and support. Very special thanks to Dr. Eman Gaad for continuously following up for every single step. Great thanks to my fellow students for copying, searching for resources, and revising my English writing. Thank you very much to the special Rehabilitation Center staff who enriched my research with a worthwhile experience. Finally, a special great thanks to Carolyn Grace in New Zealand for her support since my first day at BUID.

Abstract

The aim of this study was to define the current educational status of a child with Williams Syndrome in the UAE. The researcher employed a qualitative multiple approach to data collection. Data were analyzed qualitatively. Reporting and displaying were also employed. This dissertation focuses on the curriculum, pedagogies, goals, social access, and the impact of non-disabled peers. The study identified the existence of dilemmas in seeking to secure effective recommendations in teaching children with Williams Syndrome in the UAE. These include concerns over specialist teaching materials, special educators' perceptions, and non-disabled peers knowledge and understanding of learning disability. Questions are raised about the current educational status of a child with Williams Syndrome in the UAE and about the recommendations that could be offered to develop the education of children with Williams Syndrome.

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1 INTRODUCTION

1.1. Introduction and Project Background

Throughout the world children who have disabilities and many others who experience difficulties in learning such as children with exceptional learning needs have traditionally been marginalized within or excluded from mainstream schools (Bradshaw&Tennant&Lydiatt.2004). This paper provides an overall picture of the current situation of such children in the UAE. This analysis suggests certain barriers to progress, including attitudes within communities towards certain groups of children, traditional practices in the field of special education. The paper concludes with a consideration of possible recommendations for teaching children with Williams syndrome and an outline of issues that need to be kept in mind

1.2. Research Questions

Drawing from the previous mentioned points, this research posed two research questions:

- What is the current educational status of children with Williams Syndrome in the UAE?
- What are the recommendations that could be offered to develop the education of children with Williams Syndrome?

Keywords: *children with special needs, children with disabilities, Williams syndrome, Special Education, Inclusive Education.*

1.3. Organization of the Chapters

As a case study, the researcher followed the procedures of displaying the chapters of the research. Chapter 1 in the dissertation introduces Williams syndrome and the Education system in the UAE. While chapter 2 gives a more detailed overview of Williams syndrome such as, conceptual definition, strengths and weaknesses of children with Williams syndrome, identification procedures, diagnoses, assessment, and implication of characteristics on placement. Chapter 3 covers the methodological issues which were used to collect the data about “Samer”. It was also important to clarify some ethical issues of collecting the data; the researcher also describes the challenges and limitations which she faced during the work. Chapter 4 describes the case “Samer” and all the effective environmental conditions around him such as school, staff members, curriculum, Samer’s parents, and the classroom organization. Research findings are discussed in chapter 5, which includes some valid points such as; meeting “Samer’s” academic needs “goals, content, context, pedagogy”, the special teaching material, “Samer’s” relations with peers, and knowledge of learning disability. Chapter 6 discusses the results of the research, while finally, chapter 7 comes up with recommendations for teaching children with Williams syndrome, and contains the conclusion.

1.4. Overview of the United Arab Emirates

The United Arab Emirates is a federation consisting of seven sheikhdoms located on the cusp of the Arabian Peninsula bordered by the Arabian Gulf to the north, Oman and the Gulf of Oman to the east, and Saudi Arabia to the south. The seven emirates- are Abu Dhabi, Dubai, Sharjah, Ras al-Khaimah, Umm al-Qawain, Ajman and Fujairah¹. The UAE covers an area of 30,000 square miles, and its climate is hot and humid (Bradshaw&Tennant&Lydiatt.2004).

¹. Please see UAE map in appendix 1. page 82.

The UAE oil resources made it one of the wealthiest countries in the world. The oil and the revenues it generates, however, are not equitably distributed. Revenues from petroleum exports accrue principally to the government of Abu Dhabi, where more than 80 % of the oil is located. Three other emirates- -Dubai, Ras al Khaymah, and Sharjah--account for the remainder of the UAE oil production. Nevertheless, since the formation of the UAE, Abu Dhabi has made significant annual contributions to the federal budget.

The UAE oil-fueled economic growth has been accomplished with the assistance of thousands of foreign workers. Citizens comprise only 12%. The foreign workers come from other Arab countries and from Afghanistan, Bangladesh, Britain, India, Iran, Pakistan, the Philippines, Sri Lanka, Thailand, Turkey, the United States, and Western Europe. The presence of such a large and diverse foreign community provides a cosmopolitan atmosphere to the cities of Abu Dhabi and Dubai. However, throughout the 1980s, there was growing resentment of foreigners among many UAE citizens, who felt uncomfortable being a minority, although a very privileged one, within their own country.

1.5. The UAE Education System

UAE society has witnessed major comprehensive developments in both structure and services under the auspices of a notable economic growth (Bradshaw&Tennant&Lydiatt.2004). This has been supported by a developed education system that provides all those fields with their requirements of national manpower equipped with science and knowledge which in turn will contribute to the march leading to progress (Bradshaw&Tennant&Lydiatt.2004).

Education in the UAE covers a variety of forms: technical, religious and general. In addition, it comprises formal education and non-formal education represented by adult education. It is being carried out at government schools and also in private schools. Education in the UAE has undergone major changes and expansion since the 1970's. It has been the aim of educationalists to enable students to develop by means of modern understanding of the educational

process, which aims at bringing up the learners for interaction with their community.

All local students in the UAE have access to mainstream Government education, which is of strong Islamic and Arabic influence (Gaad, *et al* 2006). However non nationals, especially non Arabic speakers, usually send their children to schools of their national character which are available all over the Emirates (Gaad. 2001).

The UAE school age begins at six and continues for 12 years (Bradshaw&Tennant&Lydiatt.2004). These years are divided into three stages: primary education (from 6-12 years), preparatory education (from 13-15 years), and secondary education (from 15-17 years). All mainstream education is conducted in single gender classes (Gaad, *et al* 2006). The provisions of special needs facilities include free school placements, but only for national children (Gaad. 2001).

The UAE society has devised its education policy with objectives based on principles of Islamic religion, Constitution, heritage and history, economic, social and political status, the status of education, UAE relationships- Gulf, Arab, Islamic and International- and future aspirations and challenges (National Report of the United Arab Emirates on the Development of Education from 1993-1996). In fact, these are the factors that greatly influence education policy (Colebatch . 2002).

Education in the UAE has tried to keep a balance between input and output as well as between quantity and quality of activities, programs and syllabuses. The MoE has spent a quarter of a century, since the establishment of the Federation on 2nd December 1971, working hard, incessantly and with full integrity and perseverance (MoE, 2005), and the following figures indicate the success of its efforts:

Table 1 shows the growth of schools, teachers, classrooms, and students' number (1971-1996) in UAE

	1971-1972	1995-1996
Number of schools	74 schools	615 schools
Number of classes	1024 classes	295333 classes.
Number of teaching staff and administrative staff	1585 staff members	25289 in 1995/96 of which 21319 were teachers.
Number of students	32862 students	295333 students

This means that the number of schools has increased 18 times from 1971 to 1996 (MoE 2005). It is worth mentioning here that the law in the UAE lays the necessary plans down to create a new system of education in UAE (National Report of the United Arab Emirates on the Development of Education from 1993-1996).

1.6. Special Education in the UAE

In the UAE there are no laws that are geared specifically towards students with special needs (Gaad, 2001). However, there are several sections that address the needs of students with special needs. Section 25 of "The National Report of the United Arab Emirates on the Development of Education 1995-1996" dictates that all individuals are equal. In addition the law of the Ministry of Work calls for the establishment of centers and institutions for persons with special needs (AlSharjah Government.1994). However, policies of teaching individuals with exceptional learning needs are changing now in the UAE, not because politicians are waiting for researchers to say the word, but because society demands change (Mittler 2000).

1.6.1. Special Education Services in Government Schools

The absence of a special education act has not prevented the establishment of the Special Education Department of the MoE to serve students with special educational needs (MoE 2005). The Head of the Special Needs Department at the Ministry of Education stated that students with special needs are not regarded as being handicapped but simply as students required to participate in the building up of their country according to their capabilities (MoE 2005).

Special education services within the UAE public school system presently appear to focus on an early intervention system. (National Report of United Arab Emirates in the Development of Education 1995-96). Young students in Kindergarten and grade one levels are usually identified through the school-based team process, then assessed by the educational psychologist and/or speech- language pathologist and finally accepted for extra support. (Bradshaw, Tennant&Lydiatt.2004). Identified students are then assigned to a resource room support. (Gaad, *et al* .2006).

These classes offer educational programs and services to cater for the requirements of students with special educational needs in Grades 1-3. They provide these students with therapeutic education that equips them with the basic skills to overcome their problems. The head of the Special Needs Department in the Ministry of Education stated that the hope is that these specially designed programs will release the students from the tremendous pressure caused by repetitive failure and continuous frustration and protect them from possible psychological disorders and social stigmas (MoE 2003).

Special education provides services to slow learners², hearing and visually impaired learners, students with oral speaking difficulties and slow achievers. Such classes serve 1574 students (MoE 2005). The Ministry has set the general rules for placing learners in special education classrooms. These rules include: a minimum IQ of 70, an appropriate level of emotional intelligence and motor skills, medical fitness, registration in public school and learners should not suffer from multiple disabilities. Additional rules apply to learners with hearing and visual impairments (MoE 2003). This policy adopted by the MoE is based on observing the achievement of the child from the age of seven. For some students with more severe disabilities which can be diagnosed at a younger age, such as Williams Syndrome, this has meant that their opportunities to be around non-disabled peers have been limited to recess. They are not admitted to government primary schools and are therefore not eligible for services provided by the Ministry at that age. Parents are told there are no services for these more involved disabled students (Martinez, 2004). The onus is on the parents to find an appropriate program. Many parents of children with disabilities choose to keep their children home (Bradshaw&Tennant&Lydiatt, 2004) or families are forced to send their young children to their home countries for education (Martinez, 2004).

As a result 1,444 students in grade 1-3 are registered in 214 special classes in the country (MoE 2005). This percentage is extremely low compared to the percentage in some developed countries. (The USA Department of Education's 16th Annual Report of the IDEA (2002-2003) indicated that about 36.6% of students with special needs receive special educational services in a resource room setting.

Theoretically, the Ministry of Social Affairs has proposed a law on the rights of disabled persons (AL Roumi³ 2006) which states that: "The law will be comprehensive and match international standards." Provisions contained within

² Please notice that all the terminologies mentioned as stated in the references do not reflect the views of the researcher.

³ . AlRoumi: is the Minister of Social Affairs in the UAE.

the draft law include guaranteeing a job quota for people with special needs in the public and private sectors, increasing accessibility to public buildings and residences and integrating people with special needs into public and private schools. She also asserted that “for the first time in the Arab world, we are going to get a comprehensive law for protecting the rights of people with disabilities. It will be a qualitative shift for them.”

1.6.2. Special Education Services in Private Schools

Due to the flourishing economy and social development corresponding to a structural and productive renaissance, the UAE has welcomed a tremendous number of expatriates from various countries (Gaad, *et al* 2006). Many expatriates opened private schools to meet their religious, cultural and educational needs and today both public and private sector schools operate in almost equal numbers in the UAE (Gaad, *et al* .2006). The Ministry of Education has licensed those private schools that follow the curriculum and syllabi of their mother homeland, but those schools operate under the supervision of the Ministry of Education to ensure they abide by educational and teaching ethics and morals (Bradshaw&Tennant&Lydiatt.2004).

Pursuant to this, the organizational chart of the Ministry of Education stipulated the setting up of an integrated department concerned with private education (MoE 2005). This department supervises those schools and provides them with regulations, resolutions and circulars ensuring a follow-up in order to guarantee a sound conducting of the educational process (Martinez. 2004).

The private school system varies considerably in its organizational sophistication for supporting students with special needs in the UAE (Martinez.2004). However, the Ministry of Education and Youth require all private extra support if they knowingly accept students with special needs (National Report Of the United Arab Emirates On the Development Of Education from 1995-1996).

The MoE goals for the private schools system are to clearly indicate the requirements for accepting and supporting students with special needs (Martinez. 2004). They are also interested in developing ways to increase awareness and to foster effective intervention approaches for students with special needs. These efforts are being collaborated by the same group who are responsible for special needs services within the public system (Gaad, *et al* 2006).

The previous studies and observations for private schools revealed that these schools are not aware of the Ministry of Education's policies and procedures of including students with special needs. It also revealed that every school had its private policy regarding including students with special needs (MoE 2003). According to the researcher's experience in a rehabilitation center, to accommodate students with special needs in the private schools, many private schools did not accept students with special needs due to the lack of funding and expertise to supply appropriate services for those students (Bradshaw&Tennant&Lydiatt.2004). Other responses of those schools have varied according to their own policy of including students with special needs (Gaad, 2004). Some schools had resource rooms to support those students, other schools rejected accepting the students due to lack of time and resources while another school accepted students with special needs under certain procedures or for a trial period of observation.

However, it is quite likely that there are many students enrolled within private schools who would fit into the upper levels of a typical categorical disabilities system, such as mild disabilities or learning disabilities (Bradshaw&Tennant&Lydiatt.2004). However, the option of including students with obvious, exceptional learning needs-especially mental- are not valid and not offered to parents (Gaad *et al.* 2006).

1.6.3. Special Education Services in Rehabilitation Centers

There are five Centers for Preparation and Rehabilitation for the special needs within the UAE (Gaad, 2001). These centers provide services to individuals with learning difficulties in Abu Dhabi, Dubai, Sharjah and Al Ain (Bradshaw&Tennant&Lydiatt.2004). No centers exist in the remaining UAE cities (Gaad, 2001) and children have to attend the nearest center in one of the big cities (Bradshaw&Tennant&Lydiatt.2004). Such Centers are regulated and function under the authority of the Department of Special Needs in the Ministry of Labor and social Affairs (MoSA) not the Ministry of Education (Bradshaw&Tennant&Lydiatt.2004)

There are many private centers for children with wide-ranging mental and physical disabilities in most emirates (Gaad, 2001). These centers welcome both nationals, who are not allowed access to the Governmental centers (Gaad, 2001), and nationals who seek private education for their children for personal reasons (MoE 2003).

The World Health Organization (WHO) estimates that in 1999 750 million people worldwide will have physical, sensory or cognitive disabilities. Of these, 80% live in developing countries (Johnson, *et al.* 2001) and their number is increasing at an alarming rate year by year. But the number of special needs centers isn't multiplying at a rate to match this growth. If one out of every six people is disabled in some way, it is logical that one out of every six institutions be dedicated to the disabled. But this is not the case (Johnson, Kimball, Brown and Anderson. 2001). Today there is a mismatch between the population of such children in the UAE and the number of centers catering to their needs (Bradshaw&Tennant&Lydiatt.2004) with social demands for education raising the demand for specialists' responses regarding adapting rehabilitation centers as an approach to accommodate students with special

needs have varied between support and argument against those centers. As Al Qasimi states:⁴ *“We need to bridge the gap by introducing services that are not currently available and also provide new space for those on the waiting lists by widening the scope of existing services”*.

Another opinion echoed by a head teacher at one of the Special Needs Centers in Dubai, in a formal interview is as follows: *“We don’t need more general centers. What we need is more centers to provide specialized services; from the educational point of view we need more community partnerships with mainstreams schools. The problem- and a growing trend- is that more and more students are expelled from the mainstream school because they can’t cope with the learning methods there; they need an IEP to suit their learning needs. Satellite classrooms can solve the problem. Rather than expelling students and sending them to special needs schools, they can be retained to continue the education process”* (Grace, 2005).

On the other hand, a director of a social association in Dubai asserted that the introduction of such special schools in mainstream schools is the only practical approach possible, because it’s not commercially feasible to run special schools. She also affirmed that the only way forward is to accommodate special needs sections in mainstream schools and absorb their overheads within the existing school budgets.

1.7. Williams Syndrome and Education in the UAE

Any discussion of exceptional learning needs such as students with Williams Syndrome typically revolves around a discussion of the least restrictive environment and rapidly moves on to a detailed discussion of the place in which the services would occur (Johnson, *et al.* 2001).

Children with exceptional learning needs, including children with WMS, could be educated in any of the following four main sectors: special classrooms in Ministry of Education schools; Ministry of Labor and Social Affairs centers referred to as

⁴. Al Qasimi, is the head of Sharjah City for humanitarian services. An article published by Jalahama, A. (2005). *Surging a Head in the New Year. Challenge (2)*.

centers for preparation and rehabilitation of the handicapped; Private Sectors and that includes private special schools and daycare centers that are established by charity organizations (Gaad, 2001).

Parents of children with obvious exceptional learning needs such as children with WMS are usually guided by medical officials, doctors, or their general practitioner to register the names of their children once the child is three years of age to the nearest center for Care and Rehabilitation of the Handicapped (Gaad 2001). Those children with less apparent exceptional learning needs such as children with WMS can go without any identification or referral to a specialist (Gaad, 2001).

Once registered in such centers, children with WMS needs are categorized accordingly and are offered spaces locally on availability basis. They could also be referred by the psychologist to be registered at their local special classrooms in regular schools.

In another words, the alternative of including children with obvious, especially mental exceptional learning needs such as children with WMS in mainstream schools is not valid and not offered for parents at all, despite the current procedures for including children with other disabilities such as visual impairments or hearing impairment in the normal schools across the Emirates (National Report of the United Arab Emirates at the Development of Education, 1996).⁵

The private school system is supporting students with exceptional learning needs (Bradshaw&Tennant&Lydiatt.2004). However, the Ministry of Education has indicated that they are in the very early stages of attempting to develop

⁵. Please note that I relied on internet resources with issues related to the development of education in the UAE. [www. Yahoo.com. education/ inclusion.](http://www.Yahoo.com.education/inclusion)

guidelines for the private schools. (National Report of the United Arab Emirates on the Development of Education, 1996).⁶

⁶. Please note that I relied on internet resources with issues related to the development of education in the UAE. www.Yahoo.com.education/inclusion.

2 LITERATURE REVIEW

2.1 Introduction

The literature identified a wealthy background on WMS: for example, conceptual definitions; an overview of WMS; strengths and weaknesses of children with WMS; identification and assessment procedures for children with WMS; and the implication of characteristics on placement of the children. While the case study identified all of these issues and their influence on the current educational status for children with WMS in the UAE, the present paper focuses on curriculum, social access, the students' perceptions and the impact on peers.

2.2. Conceptual Definitions

The researcher found that it is important to define the terminologies mentioned in the research as stated in the references so as not to reflect the views of the researcher.

2.2.1. Disability

The loss or limitation of opportunities that prevents people who have impairments from taking part in the normal life of the community on an equal level with others due to physical and social barriers (Tager, 2004).

2.2.2. Impairment

The lack of a part or all of a limb, organ or mechanism of the body (Tager, 2004).

2.2.3. IQ Ranges

People with IQ's ranging from 80 - 130 are considered to have normal intelligence. An IQ of about 70 -80 is regarded as demonstrating a borderline degree of intellectual impairment Children and adults with IQ scores below 70 are regarded as having an intellectual disability (Pankau, *et al.* 2005). Other terms synonymous with this disability are "mentally handicapped", "mentally retarded", "developmentally disabled", and "intellectually challenged" (Martinez, 2004).

2.2.4. Williams Syndrome

Williams syndrome is a rare genetic condition (estimated to occur in 1/20,000 births) that causes medical and developmental problems (Semel, Rosner, 2003). It was first recognized as a distinct entity in 1961. It is present at birth, and affects males and females equally. It can occur in all ethnic groups and has been identified in countries throughout the world (Pankau, *et al.* 2005).

2.2.5. Standards

A set of minimum performance criteria, usually such as literacy, numeracy and science, which specify what all children should know, understand and be able to do by certain ages (Meyer, *et al.* 2004) .

2.2.6. Achievement

The progress made by learners over time. Thus it is possible for students to have achieved well (Given their starting point) but not to have reached the standards as specified by the performance criteria (Meyer, Kohn, Mervis, Kippenhan, Olsen, Morris, and Berman 2004).

The term 'special education needs' covers an array of difficulties as highlighted in the 2001 Special Educational Needs Code of Practice which:

“Does not assume that there are hard and fast categories of special educational need...(and) recognizes that there is a wide spectrum of special educational needs that are frequently inter-related, although there are also specific needs that are usually related directly to particular types of impairment (Edgerton, 2002)

2.3. Overview of Williams Syndrome

Williams Syndrome was discovered independently by Fanconi and Williams, a British cardiologist in 1952 (Pankau, *et al.* 2005). The name Williams is the one which stuck, early on; the disorder was also called Williams-Beuran Syndrome, as well as Infantile Hypocalcaemia. In 1993 the cardiologists discovered that WMS is caused by the deletion of one copy of a small set of genes on chromosome 7, which includes the genes which code for elastine⁷ and other genes too (Peoples, *et al.* 1999).The Syndrome occurs in approximately 1 in 30,000 births (Pankau, *et al.* 2005). Some of the frequent physical manifestation of WMS Syndrome includes a specific heart defect⁸, a defect in the production of Elastine, and hypocalcaemia. The facial features are quite distinctive, and have been described as “pixie-like” and “elfin”. People with WMS often look more like each other than people in their own families.

2.4. A complex Pattern of Strengths and weaknesses of Children with Williams Syndrome

Semel, Rosner (2003) believed that children with WMS can be described as: *"children who test as retarded, speak as though gifted, behave sometimes as though emotionally disturbed, and function like the learning disabled"*. Pankau, *et al.* (2005) stated that typical facial features seen in children with WMS include a wide mouth with full lips, a small chin, and a short, slightly upturned nose. Children with blue or green eyes often times show a starburst pattern in the colored part (iris) of the eyes.

⁷ . See Appendix 2 for the Elastine gene. Page 84.

⁸ . Specific heart defect such as narrowing of the aorta.

There is a complex pattern of strengths and weaknesses for children with WMS. Pankau, *et al.* (2005) introduces dissociations in the cognitive profile of WMS. General cognitive functioning typical of WMS is thoroughly detailed and has references to normal controls. On general cognitive tasks such as IQ probes, most individuals with WMS rank in the mild to moderate mentally retarded range, with global standard scores on IQ tests ranging from 40-90 (Semel, Rosner, 2003). In addition, the developmental time course for cognitive domains is illuminated, while there are fascinating peaks in abilities associated with WMS.

There is also some variability within WMS as a group⁹. Some adults with WMS live independently or semi-independently (Edwin, 1990), while others need significant help (Semel, Rosner, 2003). It should be noted that arithmetic is an area of great difficulty for most individuals with WMS. However, some are able to master addition and in a small number of cases, subtraction and division as well. Reading is a challenge for some, while others have been noted to be avid readers of books, magazines, and newspapers, but often on very specific topics of interests (Meyer, Kohn, Mervis, Kippenhan, Olsen, Morris, and Berman 2004).

Children with WMS are socially forward¹⁰ and carry on conversations with such ease that it is not until it becomes obvious during the course of conversation that they do not know some facts that most people know (Pankau, *et al.* 2005)- for example, that the sun rises in the east- that you might realize that they are mentally retarded (Farran, Jarrold, Gathercole. 2001) .Adults with WMS have a conceptual understanding of basic biological categories of living such as people, animals, and plants, that is only equivalent to that of normal 6 year-old (Farran, Jarrold, Gathercole, 2001). The limited biological knowledge and understanding of subjects with WMS is also evident in their failure to attain the level of conceptual restructuring that most normal children achieve by age 10-11

⁹ . WMS group: means shifted downward from the normal distribution into the mild to moderate range of mental retardation

¹⁰ . See appendix 13 for Samer's report in Egypt. Page 168

(Alloway, Gathercole, Willis, Adams. 2005). For example, adults with WMS have difficulty differentiating 'not alive' into the conceptual categories of dead, inanimate, unreal or nonexistent (Farran, Jarrold, Gathercole, 2001).

Along with their general cognitive deficits, individuals with WMS typically have difficulty in mathematics and its application to every life aspects such as making change, balancing a checkbook, and cooking from recipes (Pankau, *et al.* 2005).

An unusual narrowing of the aorta¹¹ called supraaortic stenosis is often present, and hernias are often seen in the inguinal area of the abdomen (Pickering & Gathercole. 2004). Muscle tone is typically low (Pankau, *et al.* 2005) and children are often on the low end of birth weight (Farran, Jarrold, Gathercole, 2001).

Children with WMS show a complex pattern of strengths and deficiencies that would not be evident by counting IQ points (Pickering & Gathercole. 2004). Verbal abilities, for example, are exceptionally strong. Long-term memory is also generally excellent. However, the sense of spatial relationships is very poor. If a therapist, for example, were to ask a child with WMS for a picture of a boy on a bike, the child might not be able to identify many of the parts of the picture. The parts will not likely be spaced in a way that makes much sense. However, if the therapist asks for a description of what it is like to ride a bike, the child will likely describe the sensation with a detailed and imaginative story (Meyer, *et al.* 2004).

Children with WMS may be slow to develop language in the pre-school years¹² (Alloway, Gathercole, and Willis & Adams. 2005). However, by school-age their verbal abilities are, in most cases, markedly superior to their perceptual abilities and to their gross and fine motor skills (Meyer, Kohn, Mervis, Kippenhan, Olsen, Morris, and Berman 2004). Their spoken language tends to be

Grammatically correct (Alloway, Gathercole, Willis, Adams. 2005), complex and fluent at a superficial level, with a well developed and precocious vocabulary

¹¹ . See Samer's medical report, appendix 5 page 120

¹² . See Samer's medical report, appendix 5 page 117.

(Semel& Ronser. 2003), but with poor turn-taking and topic maintenance skills (Farran,Jarrold, Gathercole, 2001). However, a prime characteristic of children with WMS is a strong impulse toward social contact and effective expression. Thus, the social and language profiles of individuals with WMS are also in striking contrast to individuals with other disorders such as autism (Pickering & Gathercole. 2004). In contrast, they are often clumsy and have difficulties in the integration of visual-spatial information and in sequencing and constructional tasks (Farran,Jarrold, Gathercole, 2001) .

Most children with WMS are outgoing and socially disinherited towards adults, including strangers (Tager 2004), but they tend to have poor relationships with peers (Farran,Jarrold, Gathercole, 2001). Typical behavior difficulties include over activity, poor concentration and distractibility, excessive anxiety¹³ (Alloway, Gathercole, Willis, and Adams. 2005), attention seeking behaviors¹⁴, and high rates of preoccupations and obsessions with particular activities or objects (Semel& Ronser. 2003). In some cases depression, anxiety and/or preoccupations and obsessions worsen in adulthood (Pickering & Gathercole. 2004). Many of the children are hypersensitive to particular sounds (Tager 2004), including electrical noises like vacuum cleaners, drills, and sudden loud noises like thunder. The basis for this hyper accuses are not clear (Tager 2004), and it often becomes less of a problem in adulthood (Pickering & Gathercole. 2004).

Children with WMS share several key characteristics (Tager. 2004). They exhibit spatial relationship difficulties resulting in handwriting problems (Semel& Ronser. 2003). They share difficulty with math, which also has spatial roots as well as being associated with the abstract reasoning deficit (Hoogenraad, *et al.* 2003). They do best at reading in general (Alloway & Temple. 2005), which is linked to their verbal strengths (Semel and Rosner 2003). They do better at the lower level

¹³ . See Samer's medical report, appeddix 5 , page 114

¹⁴ . See Samer's medical report, Appendix 5, page 102.

reading sub-skills such as word identification and phonics than they do at comprehension which requires more abstract reasoning (Alloway & Gathercole & Willis & Adams, 2005).

The affected individual does not form visual images easily and does not revisualization well (i.e. from memory). Children with WMS also perceive the world differently than someone whose perceptual ability is seen to be intact. In a way, perception is the more spatial aspect of cognition, e.g. going from parts to whole, understanding cause and effect, etc. So a child with a deficit in this area would tend to focus on the details (and even perseverate on them), but fail to grasp the complete picture (Hoogenraad, *et al.* 2003).

Despite their relatively good verbal and social skills, most adults with Williams syndrome are unable to live independently (Farran, Jarrold, Gathercole, 2001) and require ongoing support and supervision in everyday activities (Pickering & Gathercole. 2004) . This is most likely due to their characteristic over-friendliness and social disinheriting, and their limited social awareness, distractibility, and high levels of anxiety and fearfulness (Pickering & Gathercole. 2004).

2.5. Identification Procedures for Children with Williams Syndrome

Many individuals with WMS remain undiagnosed or they were diagnosed at a relatively late age (Semel & Ronser 2003). This is of concern since individuals with WMS can have significant and possibly progressive medical problems (The National Institute of Neurological Disorders and Stroke (NINDS) 2005). When the characteristics of WMS are recognized, referral to a clinical geneticist for further diagnostic evaluation is appropriate (Farran, Jarrold, Gathercole. 2001).

The identification procedures of children with WMS generally have two parts:

2.5.1. Clinical diagnosis based on a variety of characteristics.

Young children with WMS have distinctive facial features including a broad forehead, a short nose with a broad tip, full cheeks, a wide mouth with full lips, small widely spaced teeth and a low birth weight. Anna¹⁵ stated that: “Samer weighed 5lb 8 oz at birth”¹⁶ and “Samer was very demanding in every aspect, needing to be fed every thirty minutes”¹⁷. In older children and adults, the face appears longer and gaunter. Also a form of cardiovascular disease called supra-valvar aortic stenosis (SVAS)¹⁸ can occur. If this condition is not treated, the aortic narrowing can lead to shortness of breath, chest pain, and heart failure. Other problems with the heart and blood vessels have also been reported in people. Some children have soft loose skin. Besides medical problems involving the eyes and vision, problems with the digestive tract can occur, even hernias. Anna affirmed in the interview that: *Samer had a double hernia operation when he was 3 months old*¹⁹. The urinary system can also be affected (Hoogenraad, *et al.* 2003). Also irritability during infancy is noted in some cases (Hoogenraad, *et al.* 2003). This is in line with the medical report statement that: “Samer showed some anger when ever he was told to carry out a task”²⁰.

2.5.2 Medical/Genetic test confirmation through a blood test

The absence of an Elastin gene from a chromosome is detected by the “*FISH* technique”. *FISH* is an acronym for the technical expression "fluorescence in situ hybridization." A blood sample is taken from the child and then treated with two specific colored markers that give off a "fluorescent" light when exposed to ultra-violet light. One of the markers attaches to each of the two copies of chromosome number 7 in a cell. When both copies of chromosome possess the Elastin gene, an additional fluorescence of another color is seen attached at

¹⁵ . Anna is Samer’s mother.

¹⁶ . According to Anna. See appendix 4.paragraph 8. page 98.

¹⁷ . According to Anna. See appendix 4 .paragraph 10. page 98.

¹⁸ . SVAS is a narrowing of the large blood vessel that carries blood from the heart to the rest of the body (the aorta)

¹⁹ . According to Anna. See appendix 4. Paragraph 12. page 98.

²⁰ . See the medical report, appendix 5. Page 101.

another location to each of the two chromosomes²¹. If the FISH test shows the Elastin gene to be missing from one copy of chromosome 7 which probably causes the physical and developmental challenges experienced by the child (Tager, 2004), then the individual tested can be said to have Williams syndrome. It is worth mentioning that if the individual with WMS plans to become a parent, there is a 50/50 chance that his or her child will have WMS.

WMS is usually identified by the Electroencephalogram (EEG) test²² to validate the results of FISH test (The National Institute of Neurological Disorders and Stroke (NINDS, 2005). It also affects males and females equally (Semel, Rosner, 2003). Treatment is symptomatic and supportive (Tager, 2004). Individuals with WMS need regular monitoring for potential medical problems by a physician familiar with the disorder (Tager 2004).

2.6. Assessment Procedures for Children with Williams Syndrome²³

The assessment is a vital yet complex key to designing optimal educational plans at all levels. While each child must be evaluated carefully as an individual, children with WMS are predisposed to specific potential developmental and learning strengths and weaknesses. However, there is a great deal of variety across each of the characteristics associated with the syndrome. Some of these patterns can be quite confusing for those who are not familiar with them. Even those who have worked with children from other special populations, such as children with learning disabilities or other developmental disabilities, may find the distinctive patterns of learning in WMS confusing. Familiarity with common trends or propensities can greatly facilitate the evaluation process itself and can lead to optimal educational planning.

²¹ . See appendix 2 For pictures illustrating chromosome 7. page 84.

²² . See Samer's medical report, appendix 5, page 117.

²³ . See appendix 3 for the initial assessment form related to the case. Page 86.

The most important resources of information for teachers and therapists about any child are the child and the child's family. With all children, parents, brothers and sisters, and environmental factors strongly effect their development and personality. There are other genetic influences that also affect the child. For a child with WMS, the syndrome is only one factor in who he or she is.

There are three purposes of assessment identified by the Institute for assessment: screening, supporting instruction, and evaluation to create policy decisions (Alloway, Gathercole& Willis& Adams, 2005). It is rare that one single assessment can fulfill more than one purpose very well (Loughlin & Lewis, 2000). In fact, The National Institute of Mental Health (2004) stated that:” Each of these purposes represents an important opportunity for test or assessment data to inform judgment if the tests or assessments are used carefully and well (Loughlin & Lewis, 2000). No single type of assessment can serve all of the purposes; the intended purpose will determine what sort of assessment is most appropriate (National Institute of Mental Health, 2004)

The process and the outcomes of assessment can easily become instruments of exclusion (Loughlin & Lewis, 2000). Unfortunately assessment has come to be identified with assessment of special needs students’ progress, including individuals with WMS against the National Curriculum (Fuchs& Benowitz & Barringer, 1987) and with the results of national tests rather than teacher assessment²⁴ (Johnson, *et al*, 2001). This is a different purpose from using assessment to work with the student to plan the next step (Mittler, 2000). Therefore the national tests are the central requirement for labeling and classifications because assessing the students with special needs in the schools including the students with WMS increasingly come to be constructed as a means of segregating children with difficulties or identifying the academic high-fliers for special schooling (Mittler, 2000).

²⁴ . Please see a sample of the national curriculum tests by the Ministry of Education, appendix 6. page 123.

The nature of students with WMS development makes the assessment difficult. Their characteristics are complex and multifaceted (Semel& Rosner, 2003); all areas are interrelated and can affect the student's success in school (Johnson, *et al*, 2001). Their development is rapid in general and uneven, so their abilities change quickly making it difficult to capture in a moment what a child can actually do (Conlin, Gathercole,Adams, 2005). Moreover, children are typically poor test takers (Semel& Rosner, 2003). They have short attention spans and poor writing abilities (Johnson & Kimball& Anderson, 2001). Students with WMS exhibit difficulties with norm-referenced tests that may limit the reliability²⁵ and validity²⁶ of their test scores (Semel and Rosner, 2003). Problems may include language or communication styles, the length of the testing, attention difficulties, or reading difficulties (Pickering, Gathercole, 2004). Furthermore, some tests may not be fair for students from some culturally diverse backgrounds (Anderson & Johnson,1995).

It is advisable to obtain valid information with the Kaufman-ABC test to identify the children with WMS abilities, accompanied by pieces of other tests as needed. This test is particularly useful for children with WMS because it is fast paced, brightly colored and intrinsically appealing to most children. It has a strong visual component in most subtests. It is less reliant on language processing, so word finding difficulties pose less of a confounding factor and the breakdown of processing evaluated in the subtests tends to correlate quite well with patterns of strength and weakness associated with Williams syndrome so specific areas of strength and weakness can be pinpointed.

A "typical" profile on the K-ABC for a child with WMS might show the mental processing such as Face Recognition, Number Recall, Magic Window, Hand Movements "motor planning difficulty", Word Order, Matrix Analogies "spatial analysis difficulty", Photo Series "impulsivity can interfere; children with good attention may do well", Gestalt Closure, Triangles Dramatic Weakness "spatial analysis/visual motor integration difficulty".

²⁵ .Reliability seeks to determine that the test is consistent in what it measures.

²⁶ . Validity refers to the extent to which a particular test measures what it is intended to measure.

Udwin&Yule (1998) believe that due to WMS children's characteristics and varied abilities, there are some specific procedures that should be followed during the assessment to validate the results of the holistic assessment: for example, most traditional standardized testing can be very helpful to get information about areas of learning strength and weakness in children with WMS. However, if the child shows significant scatter in the level of his/ her performance it does not make sense to "average" these very different levels to obtain an IQ or other type of "composite" score. It is more meaningful to discuss the child's level of performance in specific areas, and to plan curriculum according to these levels. For example, the child may be ready to understand third grade science, but may need first grade math instruction. Another example of the tests modifications according to the general syndrome characteristics that children with WMS are highly sociable and generally want to interact with and will be motivated to please the examiner. Therefore, providing a lot of social attention even before beginning the assessment and using social praise as a frequent reward throughout the evaluation is time well spent in order to obtain valid results.

Children with WMS typically have very complex learning profiles; therefore it is particularly important for the assessment team to work to integrate findings across disciplines. For example, it is very important for the psychologist to incorporate information from the occupational therapy and Speech and Language evaluations in order to interpret his information correctly and provide optimal recommendations.

2.7. Implications of Characteristics on Placement

Any discussion of special education services typically revolves around a discussion of the least restrictive environment and rapidly moves to a detailed

discussion of the place in which the services would occur (Johnson, *et al.* 2001). Due to WMS²⁷ students' cognitive and social

Characteristics, the types of services that they need can be grouped into two categories: special education and related services²⁸. Special education includes adapted material, alternative curriculum; access to a special education teacher qualified to meet his particular disability and individualized instruction.

Children with WMS have an unusual pattern of abilities²⁹, often with relatively good spoken language but poorer perceptual and motor skills and concentration difficulties³⁰. As a result, they have special educational needs that are quite different from those of other children (Udwin&Yule. 1998) and it can be quite difficult to find a school that will be exactly suited to their particular learning needs (Meyer, *et al.* 2004) Their verbal skills and highly developed sociability may suggest a relatively high level of ability³¹.

If they are placed in an ordinary school or in a school for children with Moderate Learning Difficulties they are often unable to cope due to their lower abilities in non-verbal areas and their limited concentration (Udwin. Howlin& Davies. 1995). On the other hand, if they are placed in a school for children with more severe learning difficulties, children with WMS may well miss out on much of the verbal and social stimulation from which they could benefit if they were among more able children (Udwin, Yule, 1998). There is no one type of school that is ideally suited to their needs (Udwin, Howlin, Davies, 1995). Finding the most appropriate school will depend on the individual child's level of ability (Udwin, Yule,1998) which can range from mild to severe learning difficulties, and also on the provision in the particular schools that are available locally (Gaad, 2004).

With the greater emphasis that is now being placed on inclusion in UAE there are increasing numbers of children with learning difficulties, and thus also more

²⁷ . Throughout the dissertation Williams Syndrome will be referred to as (WMS)

²⁸ . Samer's medical report. See Appendix 5. page 103.

²⁹ . (WMS) characteristics was discussed in chapter number 2.

³⁰ . According to the multiple classroom observations. See the observation schedules page 54.

³¹ . According to the classroom observations.

children with WMS being educated in mainstream schools, with varying amounts of additional support. Nicolaides (2004) believed that it is clear that for inclusion to work effectively for children with WMS, classroom settings which offer a great deal of flexibility and substantial support will be necessary. Galaburda, et al. (2002) supported this idea when he affirmed that this will require extra adults in the classroom, small classes, intensive involvement of specialist teachers, learning support assistants, carefully structured and graded work plans, teamwork between classroom teacher, assistant, specialist teachers and speech and occupational therapists.

The question of what will happen after the child leaves school can be a major worry for parents (Gorlach, *et al.* 2001). The previous studies asserted that most adults with WMS continue to need at least some supervision and support in their daily lives. Hoogenraad, *et al.* (2003) believes that individuals with WMS go on learning and acquiring skills after they leave school. However, Gorlach, et al. (2001) said that they may go to a Further Education Unit or College, or other training scheme, for a number of years after leaving school to continue their training in independence and self help skills such as dressing, cooking, independent travel, and to learn other skills. For the longer term, special education centers, adult training centers or daycenters are further options which provide work activities and recreational facilities (Ishikawa, *et al.* 1999). A few adults obtain employment either on the open market or in sheltered employment, and some go on to independent living. Others require ongoing support and supervision in everyday activities, and continue living at home (Ishikawa,etal.1999).

3 METHODOLOGIES

3.1. Introduction

Traditionally, disability research reflected the traditional view of disability. Subjects were usually regarded as dependent and passive “objects” of research. Often the researcher was the only beneficiary. Participatory methodology on the other hand (Brechin *et al*, 1999) aims to minimize the potentially oppressive nature of disability research (Hunt *et al*, 2000). Participants are involved in the research production. Data analysis and discrimination, jointly undertaken, better position the participants to map and clarify some issues in the research and to negotiate new structures (Swain, Barton& Clough 1995).

Specifically it asks:

The conceptual framework for this study was designed to answer the research questions as stated in the introductory chapter:

- What is the current educational status of children with Williams Syndrome in the UAE?
- What are the recommendations that could be offered to develop the education of children with Williams Syndrome?

3.2. Rationale for Case Choice

Several reasons made the case ideal for this study: a) the subject was a child with Williams Syndrome which is the topic of this case study, b) placed in the rehabilitation center, c) with provision of full modified services due to his special educational needs and due to the nature of offered services in the rehabilitation centers in general, d) where the researcher was working as a teacher: this

allowed the researcher, with her knowledge base about the situation and all people involved, to have an insider's opportunity; f) the characteristics of the syndrome were extremely new for the teacher and for the working staff, g) when the researcher tried to improve her knowledge about the case, she found that the documents which are related to Williams Syndrome were few, h) on the other hand, none of the searched documents were related to Emarati or Gulf educational status, i) the researcher decided to scaffold her knowledge about the case to come out with some recommendations due to the case's characteristics in order to support the child in his current placement.

3.3. Methods of Data Collection

A case study requires collection of information using multiple methods of evidence or data collection (Robson 2002). With the researcher as a teacher and the child already in the classroom, data for this study was ready for collection even before engaging the study. At this time the case was new for the teacher, therefore a flexible design strategy which emerged and evolved during data collection was adopted to increase the teacher's knowledge about Williams Syndrome in general and the case in specific.

The researcher decided to take the opportunity to develop detailed and intensive knowledge about the child's characteristics and progress within a certain school setting (the real life context) using multiple sources of evidence (Robson, 2002). Tager (2004) described this design research strategy as a "case study" which is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.

Multiple approaches were used for data collection, described by Robson (2000) as a collection of methods combined to avoid sharing the same deficiencies³². Besides semi-structured interviews, a sociometric observation and unstructured

³² . Please see table 1, for duration of interviews, page 36.

and semi-structured observations were also employed. Also sociometric observational techniques record social behaviour by exploring Samer's interaction with his peers (Kane, Lawler, 2000). The researcher tried to cover the basic concepts of the study, terminology, processes, and methods, and has applied the techniques being used in the case study. The researcher also gathered data using multiple techniques thereby strengthening the study by providing opportunities for triangulation during the analysis phase of the study. She has followed the protocols for case study research, including time deadlines, formats for narrative reporting and field notes and collecting of documents. The researcher needed to be a good listener who could hear the exact words being used by those interviewed. The researcher has reviewed the related documents, looking for facts about the child's progress according to his characteristics, whilst also reading between the lines and pursuing collaborative evidence elsewhere when that seems appropriate. The researcher tried her best to focus on the purpose of the study, grasp the issues and be open to contrary findings. She was also aware that she was going into the world of real human beings who might have been threatened or unsure of what the case study would bring.

A selected extract from a drawing test (Shyer 1978) was read and based on a "Draw and write" technique³³. Samer was invited to respond to the extract on prepared worksheets in order to show his ability to express his drawing (Conlin & Gathercole & Adams. 2005). Besides sociometric observational techniques the author recorded social behavior by exploring John's interactions with his peers (Johnson, Kimball, Brown, and Anderson. 2001)

The researcher examined raw data using many interpretations in order to find linkages between the research object and the outcomes with reference to the original research questions. Throughout the evaluation and analysis process, the researcher remained open to new opportunities and insights. The case study method, with its use of multiple data collection methods and analysis techniques,

³³ . Please see Samer's drawing assessment. Appendix 7. page 133.

provides researchers with opportunities to triangulate data in order to strengthen the research findings and conclusions.

Researchers have used the case study research method across a variety of disciplines. Social scientists, in particular, have made wide use of the qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods (Robson 2002). Therefore the case study in this research can be seen as exploratory if the purpose is to use the results to get some feeling as to what is the current educational status of children with Williams syndrome in the UAE in order to decide the most effective teaching approach when teaching children with Williams syndrome for defining the best alternative when educating children with WMS in the UAE.

Table 2. Methods and durations of time spent collecting data

Data Collecting Method	Research Participant	
Duration		
Semi-Structured interview	Samer, school principles	35 minutes
Semi-Structured interview	Lima, Occupational Therapist	45 minutes
Semi-Structured interview	Verla, Speech Therapist	35 minutes
Semi-Structured interview	Anna, Samer's mum	45 minutes
Semi-Structured interview	Head of Special Needs Sector, MoE	45 minutes
Semi-Structured interview	Acting Head of Special Needs Sector, Zayed Higher Organization	50 minutes
Sociometric Observation	Lima, an Occupational therapy session (Creating a wooden aero plane)	60 minutes
Unstructured participant	Samer and his classmates in cooking	8 hours
Semi structured non-participant	Samer and his classmates	2 hours

3.3.1. Observation

Observation can be used as a data collection technique in flexible as well as fixed design approaches. Its major advantage is its directness (Robson 2002). It is one of the direct involvements with the person who is in the spot light (Kane&Lawler, 1978). It is usually used to gather accurate information about how a program operates and, more particularly, about processes (Robson 2000). Observation has benefited the researcher to view operations of the academic style in the classroom (Kane&Lawler, 1978). Also, by observation, the researcher has been able to adopt the events as they occur .The observation was employed for Samer in the classroom during teaching sessions and occupational therapy sessions, in the play ground and at home. The researcher prepared the observation program which showed the location of the observation, the duration and the number of observation times. However, the resulting information was relatively unstructured and complex and it required much effort to organize the data and to address validity issues. Being part of a group, the researcher had the opportunity to play the role of a participant observer. This helped her know all people involved; understand their habits, use of language and non-verbal communication. It also helped her see their social interactions, actions and behaviors in specific context.

In order to investigate Samer's interaction with his classmates, unstructured participant observation was conducted in the school playground twice weekly for five weeks. Each observation session lasted 30 minutes, involving time sampling at preset intervals of five minutes. The first author adopted a participant role as a teacher on yard-duty. She informed the children that she would be watching how they played and recording it on a dictaphone.

In order to investigate the nature of the access Samer is afforded to the curriculum, the researcher used semi structured non-participant observation. An observation schedule was designed which combined interaction analysis and anthropological classroom research approaches (Hamilton, Delamont, 1999).

The first author undertook observation in the classroom for four English sessions, which were each 20-30 minutes in duration.

3.3.2. Interviews

Interviews were held weekly and lasted an hour. The purposes were to:

- Facilitate free and open conversation about the participants' views about Samer,
- Create a forum in which the researcher's data and analysis could be checked by the participants, thus involving them in the analysis,
- Enable participants to choose how the researcher's results should be used.

Since December 2005, 19 meetings were held over 8 months. These were recorded and transcribed (8000 words). Transcriptions were analyzed for content using *meaning units*: "The smallest unit of conversation that means something" (Robson, 2000). The meaning units were color coded and pasted into general categories. For example each phrase forms in the transcript has a meaning unit coded by italics³⁴.

Semi-structured and unstructured interviews are widely used in flexible, qualitative designs. Robson (2002) stated that face-to-face interviews offer the possibility of modifying the line of inquiry, following up interesting responses and investigating underlying motives in a way that questionnaires cannot.

In this study a series of interviews were designed with the Head of the Special Education Department at the Ministry of Education in the UAE, The Acting Head of the Special Needs Sector in Zayed Higher Organization for Humanitarian Care and the class teacher to find out her perspective on Samer's future placement. The occupational therapist was met to define the basic recommendations related

³⁴ . Please check the appendixes writing style.

to Samer's fine motor skills³⁵. In this study, semi structured interviews were designed to have a number of interviewer questions prepared in advance, however such prepared questions were designed to be sufficiently open so that subsequent questions were not planned in advance but were improvised. Samer's mother, who expressed an interest in contributing to and facilitating the study, was audio recorded which allowed the researcher to concentrate on the interview which was transcribed later.

3.3.3. Documents

In this study, Samer's medical and evaluation reports were provided by Samer's mother. However his IEP and his academic performance sheets were provided by the class teacher³⁶. That gave access to information that would have otherwise been unavailable.

3.4. Methodological Issues

3.4.1. Challenges

Lack of time was a major challenge for the researcher being a teacher with full time and postgraduate attending courses in the afternoon plus a researcher involved with participants? Samer's French language was a real challenge because it was hard for the researcher to identify his strengths and weaknesses. She was not sure if Samer really did not know or he did not understand the instructions due to his different language of communication. It was not easy for the researcher to find a balance between the classroom teaching processes and her observation sessions as a researcher especially as the observer had to be in participant element during observation processes. It is worth mentioning that all Samer's medical reports and previous plans were in French and thus needed some time to be translated into English to make sense for the teacher as a

³⁵ See final occupational therapist's recommendations Appendix 8. page 135.

³⁶ . See a sample of Samer's IEP in appendix 9. Page 137.

teacher and as a researcher. Some other challenges were due to the general characteristics of the case such as heightened degree of anxiety, difficulty forming friendships, hyperactivity, and emotional 'labiality' (moving more quickly than most children from happiness to tears or vice versa).

3.4.2. Ethical Considerations

Barton (2001) argued that, despite its antioppressive intent, the participatory researcher must have the humility to identify the limitations of research that is inevitably partial. Similarly, not everyone is ready, or wishes, to comfort their oppression. For those who do, the sequences are unpredictable. There are a number of key phrases that describe the system of ethical protections that the researcher has created to try to protect better the rights of the research participants. One of the main ethical issues required that *participants were not coerced into participating* in the research. This is especially relevant to a case with special needs. Closely related to the notion of voluntary participation was the requirement of *informed consent*. Essentially the researcher fully informed the participants about the procedures and risks involved in the research. On the other hand, the participants gave their consent to participate. The researcher set two standards in order to protect the privacy of research participants, one of which was *confidentiality*: the researcher assured participants that identifying information would not be made available to anyone who was not directly involved in the study. However, the stricter standard was the principle of *anonymity* which was *attained* when the researcher assured the participants that they would remain anonymous throughout the study. Clearly, the anonymity standard was the stronger guarantee of privacy. However, it was sometimes difficult to accomplish by the researcher, especially in situations where participants had to be measured at multiple time points. A further example is when it was required to audiotape an interview, interviewees were asked for permission and the researcher explained that this was to make it easier to focus on the interview rather than taking notes. The researcher informed the center's administration about the research and she took permission from the center and parents to copy samples of Samer's paper sheets which were done during the year. It is also

worth mentioning that all the home visits which were done by the researcher were done after the school time or on the weekends, not during school time.

3.4.3. Limitations

The main limitation of this study was lack of resources about WMS. Most of the available data covered the inclusion issue of students with special needs as a main alternative in the Western countries. As in most case studies, one of the limitations was the specification of the findings and results which limited the generalization of the recommendations for every case according to the different characteristics from one case to another. The researcher relied heavily on internet resources to enrich the study with the latest information. However, this element might have reduced the validity of the study due to the informal resources. It is unlikely that identical circumstances can be re-created for the attempt to replicate the study. However Robson, (2002) stated that: social life contains elements which are generalizable across settings and other elements that are particular to given settings. Accumulation of findings of several case studies provides suggestive evidence and can be thought of as the development of a theory which helps in understanding other cases or situations. (Robson, 2002).

4 INTRODUCING SAMER

4.1. Description of the Case

Samer, the 14 year old French boy whose alternative status was examined in this research, has been assessed as having Williams Syndrome WMS³⁷, which is a rare genetic disorder with a unique personality that combines overfriendliness and high levels of empathy with anxiety (The National Institute of Neurological Disorders and Stroke (NINDS) 2005³⁸.) According to the basic WMS characteristics list, children with WMS may have severe learning difficulty, impaired development and learning ability in acquiring skills in language and communication, social and personal development, motor coordination, and basic literacy and numeracy (Brechin, 1999). However, they are over sociable: Samer's doctor stated in the medical report that: " *Samer knows how to get liked by adults, he makes his presence felt by showing closeness and gentleness*³⁹.

Samer was chosen specifically because of his need for an appropriate individualized educational program and the inherent difficulties this may present for a class teacher in a multi grade class with a wide range of individual needs of 13 children in a rehabilitation center. Samer was also willing to participate in the research, and his mother, Anna, expressed an interest in contributing to and facilitating the study.

³⁷ . According to Samer's medical report. Appendix 5. page 120.

³⁸ . This definition is also available online www.williams-syndrome.org.uk.

³⁹ . Please see Samer's medical report appendix 5. Page 102.

4.2. Description of the Context

4.2.1. School

After moving to the UAE, Samer stayed home for a few months. His parents finally placed him in a Rehabilitation Center in Dubai. The center has a policy to receive all types of challenges except the severe cases to avoid interruption in classrooms especially as the center is focusing on academic skills.

The center is very well equipped with the newest equipment and furniture to serve the students. It is established on one large floor of a building which is especially designed for children with special needs with facilities such as “the small toilets, the low sinks, the plastic covered floor, the sandy play ground, the safe automatic locking gates...etc”. It is divided into four main sections: Red Nursery Section, Physical Challenges Section, Yellow Academic Section, and Blue Vocational Section which Samer took a part in. In addition to a large play ground and a speech therapy department, the center has an occupational and physical therapy department. The center has three well equipped kitchens for children’s cooking sessions, besides a soft play room, a library; a big art room, a swimming pool and a music room. The school serves 180 children and has 80 teachers and therapists who are categorized into Arabic/English speaking staff. The center is located near a huge mall in Dubai which facilitates the functioning academic skills of all the students through activities such as “shopping, walking, crossing the road ...etc”.

4.2.2. Staff ⁴⁰

Hanadi⁴¹ was an English speaking teacher in the vocational section from January 2003-June 2006 and a researcher.

She was a 27 year old Jordanian with a Master’s Degree in Special Needs Education who had 9 years teaching experience in different Rehabilitation Centers and resource rooms in Jordan and the Emirates. She had received

⁴⁰ . Please note that staff section will only describe the staff members who worked directly with Samer.

⁴¹ . The Researcher followed the ethical consideration in her research when she took the approval of all the mentioned staff members to write their real names. Please see the ethical consideration page 43.

previous training in dealing with children with special needs and had gained a certificate of Special Needs Education. She had previous experience in dealing with different cases in one classroom and she was aware of all types of challenges offered in class support and was willing to learn from this new challenge. In January 2005 Samer joined the class; it was the same time as her registration for her second postgraduate research degree in Special Needs Education. She moved to the UAE 8 years ago.

Saeed was an Arabic speaking teacher in the same classroom which Hanadi was teaching in from September 2001 to September 2006. He was a 32 year old Jordanian with a Master's degree in Special Needs Education. He had five years' teaching experience at the same rehabilitation center in Dubai. Saeed was teaching a group of 10 Arabic speaking students in the same classroom as Hanadi.

Lima was the occupational therapist for both English and Arabic students in the vocational section. She was a 24 year old Jordanian with a Bachelor's Degree in Occupational Therapy. She had three years' training experience at the same rehabilitation center in Dubai. Lima used to occupy the students in a group session to improve their fine motor skills for developing their daily life skills as a main purpose of the occupational therapy.

Verla was the English speaking speech therapist in the center. She was a 35 year old English woman with a Bachelor's Degree in Speech Therapy. Verla used to occupy Samer in an individual speech therapy session twice a week to improve his receptive and expressive language; especially since Samer's mother's tongue was French. Therefore it was useful to engage him in speech therapy to improve his communication skills, which was a major limitation in dealing with Samer since he joined the center.

Reda was the carpenter of the upper age boys. He was a 55 year old Egyptian with a Diploma of Vocational Skills and a rich experience in training upper age

students in the Governmental sector in Abu Dhabi until he retired and joined the current center.

Redah used to occupy Samer in a carpentry session twice a week to improve his vocational skills with tasks such as softening the wood, painting, hammering and removing nails. However, Redah started to notice Samer's strange behavior during carpentry sessions (such as working comfortably until a machine was switched on, swinging his legs as long as the noise was available, extreme refusal to use any of the machines...etc), until the researcher defined the general characteristics of Williams Syndrome which were all clearly seen in Samer's behavior during carpentry session.

Angy was the music teacher for the center. She was a 40 year old Philipino with a Diploma in Music and a rich experience in training students with special needs: therefore she came with songs which were easy to relate to every week. Angy used to occupy Samer in two group music sessions, besides one individual session a week. Angy noticed that Samer was fascinated with music since the beginning although English as a language of instruction was not the commonly used language for Samer. Afterwards the researcher defined that children with (WMS) are fascinated by music.

Maryoon was the music therapist. She was a 40 year old English woman with an advanced certificate in Music Therapy. The difficulty of the nature of her job gave her the skills to be patient with special needs children. Maryoon enjoyed the music therapy sessions with Samer who would sing her songs. She was always assuring that Samer had an excellent long term memory for songs and names.

Barbara was the swimming trainer for the center. She was a 55 year old English woman who was excited to pass on to the children with special needs her excellent swimming skills. Barbra enjoyed the swimming sessions with Samer due to his funny reactions and wide smile. Barbra stated more than once that Samer was very chatty and that he enjoyed dealing with strangers such as volunteers. However, she noted he had poor turn taking and poor relationships

with his peers. Therefore Barbra assured the researcher that Samer had one of the main characteristics of children with WMS: that is, carrying on conversations with strangers, but not with peers and family members.

Khalid was the sports teacher for the center. He was a 35 year old Kenyan with a long experience of training children with special needs in different rehabilitation centers in Dubai. He occupied Samer in two group sport sessions and one individual basketball training session. Khalid asserted that Samer was not hyper active; however he stated he was impulsive. Khalid strongly recommended some physical exercises for Samer to improve his clumsy walking which is a general characteristic for children with Williams Syndrome.

4.2.3. Curriculum

The classroom teacher followed the British Curriculum for the first and second primary grades. However, she needed to fully modify the given curriculum for Samer according to his ability to learn and his general characteristics as a child with WMS. It is worth mentioning that Samer had never been to a school before, therefore he needed to learn the basic cognitive and academic skills with heavy modifications for the curriculum. In general, the regular curriculum was designed around thematic units: School, Color, Shape, Body Parts, Senses, My family, Community Helpers, Transportation, Animals, Insects, and Wild Animals.

4.2.4. Samer's Parents

Samer is from a French family. His mother was 38 years old with a college degree. She spent all her life in France before moving to Dubai in March 2004. The primary language spoken at home was French. His mother stated that they had tried to have some level of understanding of English since Samer was young. However, it was difficult for Samer to pick up two languages at the same time. Therefore they stopped dealing in the English language at home. Samer's father was a 45 year* old who held a Bachelor's Degree. He had been living in Dubai for 2 years.

4.3. Classroom Organization

Samer had been studying in a center for special needs in Dubai (UAE) since January 2005. He was a member of the boys' pre-vocational section which included an academic classroom and carpentry workshop, as well as a kitchen for the preparation, cooking and serving of food .The class had 13 students with eight different nationalities. The boys' age range was from 13-18. The students had varying abilities and different diagnoses. The boys spoke English, Arabic, Hindi, and French, however English was the language of instruction in the classroom.

The class had a team teaching focus (English and Arabic). The students shared the same large room⁴². The groups were sectioned off based on the students' abilities. Two teachers introduced the vocational skills and the academic material for the students. All the students shared all other activities such as art, music, occupational therapy, and sport. Samer was a member of the English group. Samer sat with other five colleagues in the group on a rectangle table where the students were facing each other⁴³. He was observed several times within and outside the classroom and the researcher visited him at home; therefore Samer was familiar with the observer.

⁴² . According to the researcher's observation in the classroom.

⁴³ . Please see the classroom layout in appendix 10. page 149.

5 FINDINGS & DISCUSSIONS

The findings were generated from a wide range of data source, which were examined for considerable periods of time. The findings are presented conceptually by themes that were generated through comparative analysis of the data (Strauss& Corbin, 2000). These themes were identified inductively in accordance with their pertinence to the research focus and their conspicuousness in the data.

5.1. Findings of Samer's School Day

5.1.1. Meeting Individual Needs through a Common Curriculum

In analyzing the data, the curriculum was conceived of in terms of aims, goals content, context and pedagogy (Norwich, 1999). None of the staff members interviewed had difficulty in interpreting the aims of the received "modified" primary school curriculum as being common to all variety of students (Strauss&Corbin, 2000). The researcher reflected her experience with Samer as a teacher when she reported that: "*Samer had always been very happy in school*". This is corroborated by Samer's mother, who affirmed that: "*He never had any problem going to school. He loved going to school really*"⁴⁴. His drawing response, which he clearly explained, also conveyed his contentment and enjoyment of school⁴⁵. In his drawing he described the top left figure as himself kicking a ball, the central figure as his friends, and the bottom figure as the researcher on yard-duty. The drawing contrasts with drawing responses by Lewis & Norwich (2000), where the

⁴⁴ . According to Anna. See appendix 4. paragraph 24. page 99

⁴⁵ . See Samer's drawing figure appendix 7. page 133.

child with special needs depicted themselves as recipients of fighting and teasing in the playground.

5.1.1.1. Goals

There were unanimous agreements that common curricular goals presented serious difficulty for Samer. The introduction to the revised Primary School Curriculum refer to curricular goals in terms of general objectives which include enabling the child to read fluently and with understanding, write fluently and legibly and acquire an appropriate standard of spelling , grammar and syntax (Norwich, 1999).

In Infants, Anna recalled that “*Samer was unable to do the little bits of work that his classmates were doing. When Samer joined the current classroom he was unable to sit still and concentrate or color a picture*”⁴⁶.

The teacher recounted her experience with him when she bought extra books for him at the beginning of the year which were at the junior infants level. She also brought in pre-school jigsaws and made up special little books for him. During classroom observation, the class teacher was always required to differentiate the lesson for Samer in order that he might access the English curriculum designed for 1st and 2nd classes.

5.1.1.2.. Content

All of the interviewed staff members encountered difficulties in providing Samer with curriculum content identical to that of his classmates. Saeed recalled that when Samer came to the classroom:

“They had all kind of moved on and he had not yet moved on.....there was very little academic stuff he could be ready for at that time”.

⁴⁶ . According to Anna. See appendix 4 Paragraph 18. page 99.

When the researcher asked for the possibility of Samer accessing the 1st class curriculum content, Anna pointed out that:

*“There isn’t an absolute hope that he would go anywhere near it-he has to have his own special program”.*⁴⁷

This is in line with what Saeed⁴⁸ pointed out that: *“We’re doing history now about Strong Bow and the Normans and all that, that’s totally irrelevant and I think that it’s waste of time doing that with Samer”.*

The researcher reflected her experience with Samer when she added that what the resource teacher provided her with to develop Samer’s basic literacy and numeracy skills was” excellent if it could work on that I mean that’s ideal, that’s what I think is perfect”. Interestingly, Samer* demonstrated his ability to access the content of the math program, at his own level

During math instruction, the teacher * asked Samer to complete an addition sum correctly. Samer suggested that three pencils could be added to complete the sum correctly, and it is worth mentioning that during the last week pencils were bought by the classroom teacher from the charity shop to explain the addition lesson for the students.

This corroborates research by Ware, Peacey (2001), which illustrates that children with severe learning difficulties can follow programs of study in math and academic stuff at the appropriate chronological age. Byers (1996) suggests that individual needs may be met through the content of the National Curriculum, provided such learning experiences occur in meaningful contexts.

5.1.1.3. Context

All of the team work including the teacher, Arabic teacher, Occupational therapist...etc, identified a dilemma in seeking to meet individual needs in the context of a multi grade class, which *characterized the rehabilitation center in

⁴⁷ .According to Anna. See appendix 4. paragraph 22. page 99.

⁴⁸ .According to the partner teacher “Saeed”. See appendix 11. Paragraph 13. page 151.

which Samer was placed. Saeed recalled the difficulty of giving Samer an individual attention when he stated that:

“In a class of 13 individual cases and all the different ability ranges it is so difficult to manage”⁴⁹.

5.1.1.4. Pedagogy

The research yielded data that suggested that the special needs educators perceived that a specialist esoteric pedagogy was required to meet the needs of students with exceptional learning needs. These findings are confirmed by research conducted by Shoetel *et al.* (1999) and Thomas *et al.* (1998). Anna described her perception of a rehabilitation center:

*“I have an idea that special rehabilitation center * programs are specifically geared towards the different abilities. I presume that a lot of these children, fall into a certain ability range, and that everything is done at that level...I’m sure the teachers there might have extra courses done”⁵⁰.*

Shoetel *et al.* (1999) suggest that unanimity among teachers concerning the need for special methods may represent an obstacle to vary the pedagogy of students with special needs if teachers believe they lack the expertise to teach these students.

Data obtained during classroom observation suggest that Samer was engaged through looking and listening, activity-based learning. Samer sought to ensure he was at the correct page when reading a book, through glancing at the book of the student sitting next to him or through actively seeking guidance from the student sitting at the other side of him. As the lesson was read aloud by the teacher, Samer actively followed the next through finger pointing at the individual words. Samer worked independently of help on tracing and basic writing tasks such as

⁴⁹ .According to the partner teacher “Saeed”. See Appendix 11 paragraph 16. page 152

⁵⁰ According to Anna. See appendix 4 paragraph 26. page 99.

Letters that were modified by the class teacher⁵¹. One of the lessons concerned words with the sound “F” and Samer unhesitatingly copied the letter “F” from each word on the blackboard. These data suggest that special needs educators need to be re-affirmed regarding the effectiveness of their existing pedagogical skills in meeting the learning needs of students with special needs (Thomas, *et al.* 1998).

5.1.2. Specialist Teaching Materials

The working staff interviewed expressed concern regarding the lack of specialist teaching materials available to them. Saeed stated that “*most of the available materials are play and fun. However, Samer needs a concentration on academic and social skills*”⁵² Saeed also affirmed that: “*it is higher than Samer’s level which need to be modified again to present it to him and that needs extra work from the teacher*”⁵³. Verla, the speech therapist, referred to the availability of equipment* and extra funding in the rehabilitation centers and recommended that:

*“The teachers ...would get help with equipment; computers or anything that might be there that would keep these children occupied. However this equipment is damaged most of the year”*⁵⁴

Similar views were expressed by Lima, who had observed that there were huge benefits in having all the resources and all the expertise focused on the one class. Lima suggested that:

*“every child with special needs might need different equipment...there should be stuff made available for every class before they choose the subject case to enter a specific classroom according to his learning ability, and not just throw the child in and hope the teacher will survive between the children’s wide range of abilities”*⁵⁵

⁵¹ . Please see a sample of Samer’s worksheets in appendix 12. page 154

⁵² .According to the partner teacher “Saeed”. See appendix 11 paragraph 16. Page 151.

⁵³ .According to the partner teacher “Saeed”. Please see appendix 11 section 23. Page 151.

⁵⁴ According to the speech therapist “Verla”. See appendix 15 paragraph 13. Page 175

⁵⁵ .According to the occupational therapist “Lima”. See appendix 14 paragraph 14. page 171.

5.1.3. Interactions with Non-disabled Peers

The rehabilitation center has a social policy with the local community that mainstreamed students should come to the center twice a week to volunteer in different classrooms; one of these classes was Samer's class. Neither the classroom observation nor the playground yielded data which indicated evidence of overt discriminative behavior directed at the students in general and specifically at Samer especially since he is impulsive and does not follow the instructions. All of the team workers and interviewed referred to the positive effect on Samer. Saeed affirmed that:

*"The other students definitely have learned great patience, great tolerance and great understanding that will go with them for the rest of their life and I can't see any of them writing articles in the paper about special needs people afterwards or using the terminology "handicapped" anymore, when they have experienced it"*⁵⁶

Barbara⁵⁷ reported that there had never been an incidence where they heard "a mainstreamed student saying anything disrespectful or wrong to one of the students". During playground observation, the ball went into some mud. A volunteer placed his hand on Samer's shoulder to prevent him from falling into the mud.

Data furnished evidence of Samer's non-disabled peers' lack of knowledge and understanding of learning disability. These findings endorse research, which reveals that it is unrealistic to suppose that knowledge and understanding of learning disability automatically accompany the placement of students with special needs integrated settings (Bayliss, 2000).

5.1.4. Samer's Relations with Peers

Data obtained from sociometric observation and playground observation demonstrates Samers' significantly low sociometric status. Samer unhesitatingly nominated three of the non-disabled volunteers to play with him. However, he did

⁵⁶ According to the partner teacher "Saeed". See appendix 11 paragraph 15. Page 151.

⁵⁷ Barbara is the swimming trainer in the center.

not nominate any of his classmates to spend time with him. Samer also nominated the volunteers later when he was being interviewed. This was evidence that Samer was typically unafraid of strangers and showed a greater interest in contact with adults than with peers (Tager 2004).⁵⁸ This in line with what Samer’s doctor stated in the medical report that: “Samer *is experiencing behavioral difficulties within his family circle, even though his integration within the current school is developing favorably.*”⁵⁹ The researcher reflected her experience with Samer and stated that: “He used to go to anyone who paid him attention. Samer made a significant number of verbal and non verbal initiations during playground observation with his classmates and his non- disabled peers (see Table 3).

Table 3. Samer’s initiations with classmates and non-disabled volunteers

Number of initiations Observations volunteers	Number of initiations with classmates	number of with
1	0	2
2	1	3
3	1	2
4	2	4
5	0	3
6	0	3
7	0	4
8	1	3

Bayliss (2000) distinguishes between children’s relationships, which are characterized by equal participant rights and familiar interactions, and asymmetrical relationships, characterized by didactic interactions, where one partner assumes a superior role. Autism (1999) suggests that underlying relationships are reflected in the way we use words. Interactions between Samer and his peers, also between Samer and non-disabled volunteer “strangers”, recorded during classroom observation and playground observation, were dominated by a didactic transactional structure by the volunteers and absence of familiarity by classmates.

⁵⁸ . <http://www.vcc.ca/>.

⁵⁹ . Please see Samer’s medical report in appendix 5. Page 113

5.1.5. Knowledge of Learning Disability

The data obtained from the vignette analysis indicated that Samer's mainstream volunteers confused learning disability with mental health disability, which is consonant with research conducted by Kyle and Davies (1999) that:

"Gerri was a very bad Down syndrome, Gerri was perceived as a tiny bit handicapped, very stupid, badly retarded, even displayed in some ways, funny? and dumb".

Such negative descriptions reflect a lack of knowledge of learning disability and can only be addressed by reformulating and devising more appropriate definitions which provide an accurate perception of the reality experienced by people with learning disability in society (Oliver, 2002).

Bayless (2000) suggests that integration and knowledge of learning disability practice should be evaluated by examining the degree to which a joint culture exists in the educational setting. A joint culture emerges through negotiation and sharing where interactions are familiar and relationships are symmetrical (Bruner, 1999). Fostering equal and complementary relations between students with general learning disabilities and their non-disabled peers is a complex task, which must be based on knowledge and understanding of the implications of having a learning disability and the alternative possibilities for communication and participation that exist. The quality of interactions is central to the educational, social and emotional development of all students and is a priority in educational settings (Lewis. 2000).

6 Recommendations & Conclusion

6.1. Implications and Recommendations

The following suggestions and recommendations have been compiled over several years of working with students with exceptional learning needs such as children with WMS, and from the offered recommendations of all the research participants. Not all the recommendations are used on all students within the syndrome all of the time. These are various strategies tried with varying success with a variety of high needs students. These strategies are intended to be a spring board to help reflective teachers consider alternatives for their struggling students. The researcher used more scaffolding early in the year and tried to create more independence in the subject child as the year progressed.

6.1.1. Recommendations Related to Teaching Strategies

6.1.1.1. Comprehension: It is important for the teacher to ensure that decoding skills have been mastered first. Boota *et al* (2000) believes that the student must be able to read words accurately before he/she can understand meaning. Therefore a phonics based reading curriculum is the most effective approach. The teacher can develop self-questioning techniques to monitor comprehension too by using the phonics approach. This style was the most effective style to teach Samer reading”.

6.1.1.2. Use of Verbal Mediation and Verbal Self-direction: Franck, *et al.* (1999) affirmed that the most common element of all of the remedial interventions described in the literature on children with WMS is the use of verbal mediation and verbal self-direction. “*Both for analyzing information and for organizing to perform a task. This means the child must be taught through direct instruction, how to talk through various steps, to successful completion*”

of the process or task”⁶⁰. Francke, *et al.* (1999) believes that this concept can be used to improve verbal reasoning, vocabulary development, reading comprehension, and social skills. Because writing involves cognitively difficult processes requiring idea development, organization, and the ability to go from parts to a whole, it lends itself well to a verbal mediation approach. Handwriting can also be taught this way to young children (Botta, *et al.* 2000).

6.1.1.3. Internalize Comprehension Strategies: It is very important for the student with WMS to internalize comprehension strategies: “who, what, why, where, when...etc” (Hoogenread, *at al.* 2003). Lima, the occupational therapist, supported this idea when she stated that: “*The teacher can focus on the organization and structure of paragraphs*”⁶¹. The researcher reflected her experience clearly when she mentioned that this will help the student to classify his thoughts.

6.1.1.4. Vocabulary Development: Francke, *et al.* (2000) believes that the teacher can make concrete associations for unknown words whenever possible. This is in line with what Saeed stated:” *The student can use words he encounters in his reading, define words he wants to know*”⁶². It is strongly recommended for the students to be encouraged to verbalize and paraphrase his/her understandings: Ishikawa, *et al.* (1999) strongly recommended that the teacher should work toward a depth in understanding and stay away from letting the student slide by with surface understandings.

⁶⁰ According to Anna. See appendix 4 paragraph 17. page 98.

⁶¹ According to Occupational therapist “Lima”. See appendix 14. paragraph 12. page 172.

⁶² According to the partner teacher “Saeed”. See appendix 11. Paragraph 18. page 152.

6.1.1.5. Writing: According to Saeed: *“Giving a brief daily practice to improve the student’s handwriting rate and legibility; addressing posture, position of hand and paper, grasp of pencil and directions for forming individual letters will really help the student to achieve a depth of understanding”*⁶³. Hoogenraad, *et al.* (2003) supported this idea when he stated that it is very effective to teach keyboarding and word processing skills to the student at a young age. However, the teacher/parents should focus on only one aspect of writing at a time (e.g. pre-writing, writing, editing). On the other hand, the teacher should remember to hold expectations for rate and volume of written products based on the student's demonstrated abilities (Botta, *et al.* 2000).

6.1.1.6. Group work: According to the researcher’s experience as a teacher of Samer for two years, she recommends engaging the student in group work and hands-on learning whenever possible. Osborne, *et al.* (2002) affirmed that cooperative efforts will free the teacher to reach students who may require additional assistance. Team teaching may also be advantageous from time to time (Osborne, *et al.* 2002). He also suggested that the teacher might bring another teacher who has additional information in a particular subject area into the room (Hoogenband, *et al.* 2003). Verla, the speech therapist, stated that: *“At other times it is important to allow students time on their own to work through the various tasks ahead of them”*⁶⁴.

6.1.1.7. Do not give up: If nothing seems to work, go back and review what has been done (Peoples, *et al.* 1999). The speech therapist stated in the narrative interview that: *“The teacher needs to look at how long and how consistently a strategy has been maintained. Disorders of any kind are taxing, and there is no one right way to get rid of the student.”*

⁶³ . According to the partner teacher “Saeed”. See appendix 11 paragraph 26. page 151.

⁶⁴ . According to the speech therapist. See appendix 15 paragraphs 21. page 176.

*"The teacher may have to try several strategies before he/she finds the right one"*⁶⁵.

Once the teacher finds an effective means, he/she may have to implement it along with some other means before the teacher is fully successful (Robinson, *et al.* 2003).

6.1.2. Recommendations Related to Curriculum and Assignment Modifications

Curriculum can be designed to make sure that students with WMS have meaningful opportunities to achieve the high academic standards established. Instead of beginning with a separate curriculum for students with exceptional learning needs (Peoples, *et al.* 1999) educators can design lessons based on the general curriculum and standards. Instruction can be planned to ensure that the general curriculum is accessible and challenging for children with exceptional learning needs (Osborne, *et al.* 2002). For the purposes of this, following are recommended strategies:

Due to the researcher's experience of teaching children with exceptional learning needs, she recommended that when independent work is presented, the teacher can try to give it to the student in small "segments". For example, a test or worksheet could be folded in half. The student could be asked to do the first half and then come up for further directions. Nicolaidis, *et al.* (2004) stated that dividing the work will prevent* the student from feeling rushed or overwhelmed with the amount of work given.⁶⁶

The teacher can allow extra time within reasonable limits (People, *et al.*1999). Saeed recommended from his experience of teaching children with special needs that: *"Reducing the length of an assignment is sometimes a good idea"*⁶⁷.

⁶⁵ . According to Anna. See appendix 4 paragraph 18. page 98.

⁶⁶ . Please see a sample of the analysis worksheet. appendix 16. page 178.

⁶⁷ .According to the partner teacher "Saeed". See appendix 11. Paragraph 26. page 152.

In teacher's lesson plans, it is strongly recommended to note in italics or mark with a highlighter the objective the teacher wants the student to master (People, *et al.*1999). Saeed stated that: *"The teacher needs to look at the students IEP to check the objectives needed to be covered form time to time"*⁶⁸.

Due to the research's experience with Samer, she recommended that it is really effective to present information visually for the student. Robison, *et al.* (2003) stated that using overhead projector, posters, pocket charts, chalkboard and auditing orally whenever possible with the child with WMS will help him to a deeper understanding (Osborne, *et al.* 2002). Lima, the occupational therapist, stated that: *"Have the student do simple exercises before writing such as, pushing palms of hands together, pushing down hard on a desktop, squeezing and relaxing fist to improve his fine motor skills"*⁶⁹.

6.1.3. Recommendations Related to Goals and Objectives for Instructional Units

Goals and objectives for the student who is challenged will be agreed upon for each instructional unit before the unit is taught (Galaburda, *et al.* 2002). Some of the goals will relate to the concepts and content of the unit. Some will relate to the strengths and needs that were identified by the collaborative team, and agreed upon as goals and objectives in the IEP. Gorlack, *et al.* (2001) asserted that the teaching of the IEP objectives will be embedded in the regular lessons and routines of the classroom: *"They do not need to be taught at a separate time, in a separate place"*⁷⁰. The indications of learning and growth may be different from one student to another, even within the same syndrome. However, they must be recognized by the teacher as a valid point (Gorlack, *et al.* 2001).

⁶⁸ .According to the partner teacher "Saeed". See appendix 11. paragraph 24. page 151.

⁶⁹ .According to the occupational therapist "Lima". See appendix 14 . Paragraph 25. page 173.

⁷⁰ . In accordance to the partner teacher "Saeed. See appendix 11 Paragraph 20. page 151.

6.1.4. Recommendations Related to Assessment Procedures

There are some characteristics associated with WMS that can be incorporated as assets in the assessment process. These include:

6.1.4.1. Assessment of Sociable Nature

Most children with WMS are highly sociable and generally want to interact with and will be motivated to please the examiner (Pankau, *et al.* 2005). These are not small assets. Therefore, providing a lot of social attention even before beginning the assessment and using social praise as a frequent reward throughout the evaluation is time well spent in order to obtain valid results (Reilly, *et al.* 2003). Younger preschool aged children may have difficulty at first concentrating on the evaluation tools as they may be so taken by the presence of a new adult to interact with (Pankau, *et al.* 2005). Spending extra time in the beginning for some pure unadulterated social play and conversation is a worthwhile investment (Wang, *et al.* 2005).

6.1.4.2. Assessment of Emotional/Psychosocial Functioning

Udwin, Yule (1998) affirmed that it is very important for the psychologist to interview the family and teacher and observe the child in the classroom in order to develop an understanding of the child's emotional and psychosocial functioning. Udwin, Yule (1998) said that if, for some reason, classroom observation is not possible, a videotape can be made by the classroom teacher illustrating easy and difficult times. *“Some children do best during structured and small group times and have difficulty with loud, busy, unstructured times such as recess and in the*

*cafeteria*⁷¹. The researcher asserted that an extra support around these times can be very helpful.

Projective tests can be helpful to elucidate emotional themes (Thorn, *et al.* 2002). The TED test is particularly helpful, especially* self-esteem and peer cards (Willis, Gathercole. 2001). During picture based and especially sentence completion tasks, some children with WMS have a tendency towards the dramatic, and a verbal disinheriting can create responses that may be unduly concerning. *“It is not uncommon for children with WMS to have a love of story telling, to sense an interested audience, and to provide somewhat idiosyncratic responses”*⁷². Thorn, *et al.* (2002) stated that sometimes it is the combination of a short attention span, word finding difficulty, and a love of language for language sake that can result in disorganized responses and the impression of 'loose' emotional makeup. However, *” It is important not to give too much credence to this type of interpretation of projective response unless responses are supported by a variety of other information”*⁷³.

6.1.4.3. Assessment of Adaptive Functioning

Adaptive functioning can be done with a parent interview using the Vineland Adaptive Behavior Scales⁷⁴. *“Classroom observation is also very important to understanding the child's adaptive functioning”*⁷⁵. Be aware that fine and gross motor skill difficulties can interfere with performing many adaptive tasks independently (Galaburda, *et al.* 2002).

6.1.4.4. Hyper Sensitive to Sounds

Many children with WMS, especially younger children, are very sensitive to certain sounds and find it extremely difficult to concentrate when certain sounds are in the environment (Botta, *et al.* 2000). Sounds that may seem insignificant such as the noise of water through pipes, the loud speaker, etc. may interfere

⁷¹ . According to the speech therapist “Verla”. See appendix 15. Paragraph 19. page 176.

⁷² . According to the partner teacher “Saeed”. See appendix 11. Paragraph 19. page 151

⁷³ . According to anna. See appendix 4 . Paragraph 11. page 99.

⁷⁴ . Please see a sample of Vineland test. Appendix 17. page 181.

⁷⁵ . According to the speech therapist “Verla”. See appendix 15. Paragraph 14. page 176.

with concentration (Botta, *et al.* 2000). In general, assessment of specific skill levels should take place in as quiet a room as possible. However, it is also important to observe the child in a busier, louder environment to learn how the child is affected by environmental disturbances (Ishikawa, *et al.* 1999).

6.1.4.5. Anxiety

According to the researcher's experience with Samer, she affirmed that common manifestations of anxiety which may appear during the testing include:

- The child asking repeated questions about what activity is going to be next (Francke, *et al.* 1999).
- If the evaluation is done in a hospital setting, the child may ask repeated questions about the possibility of a medical procedure, and the child may have continued performance anxiety, asking: "Did I get that right?", and "Am I doing a good job?" repeatedly (Botta, 2000).

6.1.5. Recommendations Related to Social Behavior

6.1.5.1. Unacceptable Behavior

Unacceptable behavior in a student with WMS does not usually appear overnight (Francke, *et al.* 1999). *"The teacher needs to have a long term view of the situation to diminish and eliminate problem behavior"*⁷⁶. Pankau, *et al.* (2005) believes that such behavior indicates that the surrounding environment does not meet the needs of the student in some way. However, strongly the message is sent: *"We need to listen to the student, and we need to respond as quickly and as effectively as possible"*⁷⁷.

⁷⁶ . According to the partner teacher "Saeed". See appendix 11. Paragraph 14. page 152.

⁷⁷ . According to Anna. See appendix 4. Paragraph 29. page 98.

Peoples, *et al.* (1999) believes that the teacher must also record what happens just before and immediately after the behavior occurs. The researcher reflected from her experience with Samer that it is very important for the teacher to see if others are involved in precipitating events, and if the behavior is a result of their interactions with the student. Peoples, *et al.* (1999) affirmed that teacher or parents need to record other factors for consideration. Perhaps the student is upset by something that happened earlier. The researcher asserted again that the teacher should be aware of everything in that child's world on that day and at that particular time (Peoples, *et al.* 1999).

Pankau, *et al.* (2005) believes that after the teacher has collected all the information, he/she can take further action. Depending upon the severity of the behavior. *"The teacher may feel that he/she needs to problem-solve with the collaborative team in the school"*⁷⁸. The researcher reflected her experience when she asserted that ethically the teacher needs to make sure that he/she has agreement from parents and team members about any strategy which will be used with the student. For example, if the teacher removes the child from the classroom, and does it on an ongoing basis for a significant amount of time, he/she may need to show how the strategy does not damage the child's well-being (Pankau, *et al.* 2005).

*"When there are significant outbursts that involve other children or hamper the climate of the playground or classroom, teacher or parents need to ensure that everyone is protected and comfortable. It is strongly recommended to remove the child for a cooling down period"*⁷⁹. Pankau, *et al.* (2005) believes that this may not be a consequence of lasting value for the student, and may not change the behavior, but it will give everyone time to consider what to do next. *"The teacher needs to leave the child alone for as long as possible ,even though this will not help to change the behavior, and may even strengthen the child's determination to continue"*⁸⁰.

⁷⁸ . According to the occupational therapist "Lima". See appendix 14 .Paragraph 10. page 171.

⁷⁹ .According to the partner teacher "Saeed". See appendix 11. Paragraph 16. page 151.

⁸⁰ . According to Anna. See appendix 4. Paragraph 29. page 98.

The researcher asserted from her experience that what will work at the beginning of the year for a particular need, may not work at mid point or year's end. If the teacher does find a strategy that is particularly effective then he/she will use it consistently with the student, implementing other means and then going back and implementing it again as the need arises (Osborne, *et al.* 2002).

6.1.5.2. Role play

Role play is an effective way to convey information to the student that his behavior is unacceptable to others.

Role play is most effective when students feel that they are in a safe environment. Therefore, the teacher needs to lay out the ground rules before beginning. For example, no one is to speak about any one person in particular, no derisive comments are acceptable, and laughter is also unacceptable. Children with disabilities and, more specifically children with WMS, can and should be involved with role play whenever possible *"...Over the summer, Samer would benefit from joining a team sport such as football or basket ball- social contexts can help him to develop his social skills. And sport can also improve his overall stamina and physical endurance"*⁸¹.

6.1.6. Recommendations Related to Adapting the School Environment

Children with exceptional learning needs such as children with WMS may require some significant changes in school operations (Peoples, *et al.* 1999). *"Teachers' schedules need to be adjusted so that special education teachers and support staff can participate in planning meetings. Team meetings are important to be provided"*⁸². Pankau, *et al.* (2005) affirmed that it is very effective to establish early release days for

⁸¹ .According to the occupational therapist recommendations please sees Samer's final report, in appendix 8, page 135 and the narrative interview with Lima in Appendix 14 paragraph 27. page 173.

⁸² . According to the partner teacher "Saeed". See appendix 11 paragraph 14. page 151.

program development. Lima, the occupational therapist, supported this idea when she mentioned in the interview that: *“Early release days can provide teachers with protected time for working on the full teaching program”*⁸³.

Osborne, *et al.* (2002) mentioned that the teacher teams may need training in strategies for working effectively together. This could be achieved through, for example, in-service sessions on team planning and decision making or models for collaborating in the classroom. The researcher reflected her experience again when she added that: *“Alternative means of communication and conflict resolution can help to provide a solid foundation for a successful collaborative effort in some cases”*. Peoples, *et al.* (1999) believes that principals need to decrease the class size when a unique student with disabilities such as a child with WMS is included due to their special characteristics.

Resource allocation may be the biggest challenge of all in a successful educational program—and the greatest resource requirement is time (Nicolaidis, *et al.* 2004). Saeed added that: *“Teams need time for planning, for discussing student performance issues, for developing interdisciplinary units, for reflecting on and evaluating past and ongoing efforts, and for developing common interventions and standards. Teams need time to reach consensus on the types of adaptations and modifications to be provided, on grading procedures, and on methods for communicating among themselves concerning student performance”*⁸⁴. The researcher supported this strategy according to her successful experience to provide team members with an additional planning period one day per week—one period for their standard individual planning and one for team planning.

6.1.7. Recommendations Related to Teachers’ Training

Special needs educator and therapists must be committed to the educational program effort to meeting the needs of a unique student such as a student with (WMS). Saeed affirmed that *“It is very important for the special educator and therapists to*

⁸³ . According to the occupational therapist “Lima”. . See appendix 14. Paragraph 23. page 171

⁸⁴ . According to the partner teacher “Saeed”. See appendix 11 .Paragraph 8. page 152.

*understand the profiles of the student, and they must know what they can do to help this student meet his behavioral, social, and academic goals*⁸⁵.

Galabruda, *et al.* (2002) mentioned that teachers may be concerned with how the presence of a very unique student with disabilities will affect their teaching and their ability to cover a specific curriculum for a wide range of abilities. Verla, the speech therapist, added that: *“Teachers may be concerned about the impact on learning outcomes for the high level ability students in the classroom. And they may be concerned about their workload and their time commitments”*⁸⁶. Gorchach, *et al.* (2001) affirmed that in-service in these areas can provide teachers with the understanding and encouragement they need to effectively respond to the successful teaching program of * students with disabilities.

6.1.8. Recommendations Related to Teachers’ Collaboration

The researcher, as a teacher, added firmly that there are many ways in which general and special education teachers can work together. Saeed stated that: *“At the most basic level, teachers can share information about the academic and behavioral needs of their students and the strategies and interventions those students require. At a more advanced level, teachers may work together in the classroom. Team teaching—or co-teaching—may be the ultimate goal”*⁸⁷. Regardless of how teachers choose to work together, however, all students benefit when teachers make a conscious effort to make the curriculum and their instruction more relevant and accessible to all learners whatever was the case (Hoogenraad, *et al.*2003).

⁸⁵ . According to the partner teacher “Saeed”. See appendix 11. Paragraph 6. page 151.

⁸⁶ . According to the speech therapist “Verla”. See appendix 15 . Paragraph 10. page 175.

⁸⁷ . According to the partner teacher “Saeed”. See appendix 11 . Paragraph 4. page 151.

6.2. CONCLUSION

This research intended to identify the current educational status of children with WMS and come out with* recommendations it could offer to develop the education of children with WMS.

Research* is never final and always partial (Barton, 1996) For example, the data generated by the participants inevitably underwent considerable reduction. The results presented can only be representative, rather than comprehensive. The small scale of the study precludes generalization of the results, but the participants' confirmations of the analysis strengthen credibility. Their views do shed light upon the research questions.

Based on the observations and data obtained during this research, it is apparent that a number of practical dilemmas emerge in securing the successful teaching strategies of a child with WMS as a type of general learning difficulty in a center for rehabilitation.

The data displayed a discrepancy between the practice observed in the English lessons and the perception of the existence of special education needs-specific pedagogies present a serious dilemma for teaching children with WMS as a type of exceptional learning needs practice. From an extensive review of the literature, Lewis and Norwich (2000) conclude that there is a lack of evidence to support special educational needs- specific pedagogies. They suggest that a common and coherent framework of teaching skills, which acknowledge the existence of differences in degree, intensity and explicitness to teaching, should constitute a continuum of teaching approaches and inform pedagogical practices for students with special needs in general.

From the observations during occupational therapy sessions, and due to the wide range of students in the classroom, it appeared that the placement of the student

with WMS according to his characteristics, requires structures that facilitate the supply of accurate and useful information to all personnel involved in meeting the intellectual, social and emotional needs of the student. The provision of a continuum of specialist support and advisory personnel to liaise with parents and center personnel would greatly enhance this process.

While the research raises a question about the appropriateness of the teaching strategies of a child with WMS in a class for students within a wide range of learning difficulties in meeting their learning needs, the data here suggests the difficulties were on the social side of the center, not just the curriculum and pedagogies. It is clear from the data that Samer was not fully socially interacting with the occupational therapist, or with the music and gym teachers. He was not fully participating with his peer group during the session. This is due to the large group members of the classroom and the difficulty of managing all the students in one activity during 45 minutes: that is, for the duration of the occupational therapy, music, and physical sessions.

These issues raise questions too about the model of resource teaching provision which operates predominately by withdrawing non-Arabic or English speaking students on a one-to one basis for additional support (Mittler, 2000). This model has serious limitations in terms of meeting the educational needs of students with disabilities in an appropriate manner. The emphasis on withdrawal reduces the opportunities for a whole educational system approach in terms of the wide range of abilities. Telling the special needs educators that they have main responsibilities for all the students in their classroom and then operating a support system that militates against this is contradictory. Thus, future research is needed to shed more light on the investigated syndrome from different perspectives. Follow up studies can be recommended, such as, studies maybe with mainstreaming students with WMS, or maybe follow up studies with curriculum modifications and environment adaptation.

Finally, it is hoped that this research provides a basic understanding of WMS and that the findings can support teaching children with WMS according to their needs. It is also hoped that other researchers find the results and findings of this study useful enough to support further studies.

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8 APPENDICES

8.1. Appendix 1

Map of the UAE indicating the separate Emirates

8.2. Appendix 2

A picture of an Elastine Gene

8.3. Appendix 3
Samer's initial assessment form

8.4. Appendix 4

Transcript of Samer's mother as participant in an interview

8.5. Appendix 5
Samer's medical report

8.6. Appendix 6

A sample of the curriculum based assessment test

8.7. Appendix 7

Samer's Drawing assessment

8.8. Appendix 8

The occupational therapist's final report

8.9. Appendix 9
Class teacher's final report and` Samer's
Individual Educational Plan

8.10. Appendix 10

Classroom layout when Samer worked as part of a small group

8.11. Appendix 11

Transcript of the partner teacher participant in an interview

8.12. Appendix 12
Examples of Samer's class work

8.13. Appendix 13

Teacher's report about Samer's trip to Egypt

8.14. Appendix 14

Transcript of occupational therapist participant in an interview

8.15. Appendix 15

Transcript of speech therapist participant in an interview

8.16. Appendix 16

A form for Program analysis worksheet

8.17. Appendix 17
Vineland Adaptive Behavior Scale

