

**EFFECTS OF USING MULTISENSORY
APPROACH IN THE MASTERY OF ENGLISH
LANGUAGE SKILLS AMONG STUDENTS WITH
INTELLECTUAL DISABILITY IN THE STATE
OF KUWAIT**

by

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LIST OF ABBREVIATIONS

ID	Intellectual disability
MID	Mild intellectual disability
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5th edition
O&G	Orton–Gillingham method
VAKT	Visual–auditory–kinesthetic–tactile
NICHD	National Institute of Child Health and Human Development
NPR	National Reading Panel
DI	Direct instruction
CDDH	Centre for Development and Disability Health
DIBELS	Dynamic indicators of early literacy skills
PAF	Preventing academic failure

**KEBERKESANAN INTERVENSI LATIHAN MULTISENSORI TERHADAP
KEMAHIRAN MEMBACA PERKATAAN KVK DALAM KALANGAN
PELAJAR BERMASALAH KETIDAKUPAYAAN INTELEKTUAL RINGAN
DI KUWAIT**

ABSTRAK

Penyelidikan ini bertujuan mengkaji impak pendekatan multisensori dalam meningkatkan kemahiran Bahasa Inggeris dalam kalangan pelajar bermasalah ketidakupayaan intelektual ringan (MID) di Kuwait. Di samping itu, penyelidikan ini turut mengkaji persepsi guru-guru Pendidikan Khas terhadap pengajaran kemahiran literasi kepada pelajar-pelajar MID. Kajian ini menggunakan kedua-dua kaedah kuantitatif dan kualitatif untuk mengumpul data. Model ABA digunakan untuk mengumpul data kuantitatif dan keputusan dianalisis dengan menggunakan analisis visual, siri masa dan perjanjian pemerhati. Kaedah analisis bertema digunakan untuk menganalisis data yang diperolehi daripada temubual separa berstruktur dengan guru-guru Pendidikan Khas di sekolah berpendekatan dwibahasa. Sampel yang terlibat dalam kajian ini adalah tiga orang pelajar bermasalah ketidakupayaan intelektual. Selain itu, enam orang guru pendidikan khas yang berkhidmat di sekolah-sekolah keperluan khas bermedium dwibahasa di Kuwait turut dijadikan sampel dalam kajian ini. Dapatan kajian ini menunjukkan bahawa pendekatan multisensori adalah efektif dalam mengajar pelajar mengenalpasti huruf Bahasa Inggeris. Pendekatan kualitatif mendapati bahawa terdapat tiga tema utama yang timbul daripada kajian ini. Kajian turut menunjukkan bahawa guru-guru pendidikan khas di sekolah berpendekatan dwibahasa menghadapi masalah kekurangan sumber, kurikulum serta latihan

professional dalam bidang literasi untuk memastikan keberkesanan pengajaran terhadap pelajar bermasalah ketidakupayaan intelektual ringan.

**EFFECTS OF USING MULTISENSORY APPROACH IN THE MASTERY
OF ENGLISH LANGUAGE SKILLS AMONG STUDENTS WITH MILD
INTELLECTUAL DISABILITY IN THE STATE OF KUWAIT**

ABSTRACT

The purpose of this study is to determine the impact of using the multisensory approach in mastering English language skills among students with mild intellectual disability (MID) in the state of Kuwait and to investigate the perceptions of special education teachers towards teaching literacy skills to students with MID. The study adopted both quantitative and qualitative methods to collect the data. An ABA model was used to collect the quantitative data and the results were analyzed using visual analysis, time series and inter observer agreement. Thematic analysis was conducted to analyse the data obtained from a semi-structured interview with special needs teachers in bilingual schools. The study sample comprised three students with MID who participated in six-week literacy programs in a special needs centre in Kuwait and six special education teachers in special needs bilingual schools in Kuwait. Results showed that the multi-sensory approach was effective in teaching English letter identification, letter-sound correspondence and reading consonant-vowel-consonant words to students. Thematic analysis of qualitative data revealed three themes from the conducted interview. The research also showed that special needs teachers in bilingual schools lack resources, proper curricula and professional training in literacy to deliver proper and effective programs in teaching literacy to students with MID. Schools must pay serious attention to the importance of teaching literacy skills to students and providing teachers with all the possible tools to teach such skills.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

A characteristic of civilised communities is attending to the demands of students with special needs. Most countries have ensured the allocation of specific funds and resources for the education, care and rehabilitation of such students. Furthermore, the efforts exerted for these students are supplemented by laws proposed by various global organisations and countries to increase the quality of the programmes that cater to these students. The attention spurring such drive is due to the increasing number of students requiring and being part of special needs programmes. Recent estimation indicates that intellectually disabled students account for 3% of any population, and the percentage is 7% in poverty-stricken locations (Ibrahim, 2000). Special education programmes for intellectually disabled students have exhibited impressive advancement in the last few years due to the work conducted by researchers in this field. Europe, the USA and other countries have spearheaded research efforts in academic skill education for intellectually disabled students, with the primary aim of educating and equipping them with skills that will render them fully independent.

The current work is introduced in this chapter through a description of the study's background and the services and laws relevant to disabled Kuwaiti children. A discussion is then provided together with the problem statement, study purpose, research questions, hypothesis, significance of the study and limitations. Definitions of important

terminologies are also presented. The chapter serves as a guide and roadmap towards the entire work.

1.2 Background of the Study

Use of the English language is the benchmark for literate and well-educated individuals. Recognised as the leading global language worldwide, English is spoken by more than one billion people. Its relevance is further reinforced by its use in all-encompassing situations and sectors, including air transport, shipping, linguistics, science, technology, computer lingo and even commerce. David Crystal (2003) highlighted the status of English as a dominant language in his book titled *English as a Global Language*. English is particularly significant for Kuwaitis, who often travel abroad for study, business or holiday purposes. The language is also used for political speeches on the television and in signboards and advertisements when people travel, and it is the language of choice when a person is in a foreign city looking for accommodation or restaurants.

Various researchers have indicated that children with mild intellectual disability (MID) account for 85% of the total disabled population and constitute the largest fraction of the intellectually disabled (DSM5) community. These children are described as those who can be taught and can attain a high level of education and learning compared with other groups of intellectually disabled individuals. Therefore, special education programmes have been designed to cater to the requirements of students with MID and equip them with rehabilitative skills to achieve independent living. Heward (2005) reinforced the need for these students to become self-reliant, which is the most vital characteristic of these students. Furthermore, Patton et al. (1996) outlined the following fundamental aims of education for students with MID: (1) proficiency in routine life skills,

(2) independent living conditions, (3) effective and sustainable employment and (4) adaptability in school and societal integration. These aims have motivated educators to prioritise reading skills above other areas because the ability to read is a key survival element for these children to comprehend the world and extract information for guidance. Given that students with intellectual disability generally struggle with language and communication, by extension, reading is a form of linguistic skill that is a challenge for these children. Despite being viewed as an undesirable skill until the 1950s (Katmis, 2000), reading is now a skill heavily emphasised upon, especially among the mildly intellectually disabled, as evidenced by the efforts exerted by educators. Reading has been acknowledged as a vital factor in improving the quality of life of intellectually disabled students; literate individuals are more likely to acquire self-confidence and life accomplishments compared with their illiterate peers (Koppenhaver, Coleman, Kalman, & Yoder, 1991). Students with MID experience difficulty in information extraction and organisation, whether after seeing or hearing such information. They are also unaware of the techniques that can be utilised to perform such tasks and commit the information to memory (Fornriss & Kavale, 1993; Ried, Hresko, & Swanson, 1996; Scruggs & Laufenberg, 1986; Torgesen & Kail, 1980). Methods, such as verbal rehearsal or clustering, help improve their memory performance and supplement their efforts for achieving key academic skill accomplishments because memory is a pillar of academic success (Hallahan, Kauffman, & Lloyd, 1985; Beirn-Smith, Ittenbach, & Patton, 1998).

Students with MID find information memorisation and retrieval difficult, which in turn affects their academic endeavours due to the further complication posed by reading-related challenges. According to Scarborough (1998), phonological, syntactic and semantic problems are prominent issues encountered by these students. These students are unable to

identify or recall sounds in spoken language, which subsequently result in poor blending and segmentation skills, especially in decoding new words. Furthermore, Wiig (1991) observed syntactic deficits in several of these children: they cannot group words into meaningful sentences. Therefore, teachers should demonstrate organised and reiterative techniques for phonological decoding and comprehension skills. Moreover, considering that reading is a process that involves specific skills and different senses, Qarny (2009) reiterated the necessity of specific sensory and mental abilities and constant training for a child to attain understanding of codes and their respective sounds. Specific cognitive growth is necessary for a child to be able to link codes with sounds and for the child to cluster them together to understand a word.

Al Hadidi and Al Khateeb (1997) observed that students with MID can learn fundamental academic skills up to grade six but require much time, effort and usage of different pedagogies. Al Kahtany (2004) outlined several key aims of educational programmes for this particular group of students; these aims are summarised by the following points.

- a) Development of sensory skills
- b) Development of motor and cognitive skills
- c) Teaching of main academic skills (i.e. reading, writing and mathematics)
- d) Training in safety and self-help care
- e) Improving the ability to build social relationships with others

The cognitive difficulties encountered by children with MID can be attributed to their restricted comprehension ability, poor short and long memory and distinguishing and deduction inabilities (Ysseldyke, 1997). As they exhibit specific cognitive traits, educators

must employ new and effective methodologies for these students to learn and acquire new skills. Janet (1997) iterated that these children cannot maximise their studying efforts due to ineffectual strategies. Memorisation difficulties and the inability to direct their lessons and utilise whatever they have learnt are several of the obstacles faced by these children because they require guidance to use information and skills and to follow instructions and steps accordingly.

Al Kahtany (2004) outlined several of the fundamental elements in the process of teaching children with MID.

- i. Use of corporeal items: Children with MID struggle to comprehend abstract conceptualisation and require tangible and clear instruction to understand new skills.
- ii. Exposure to familiar items: Familiar concepts and tools must be employed to teach new skills (e.g. introduce the colour 'green' by suggesting something similar, such as grass, to familiarise the child with the colour).
- iii. Constant review of learned skills: They have restricted memorisation ability and require constant and repetitive reinforcement of any newly learned skills.
- iv. Constant evaluation and monitoring: New challenges that hinder their skill learning abilities must be identified.
- v. Positive reinforcement: Direct and positive reinforcement is vital when these children show progress to motivate and ensure continuous development.

Other helpful tactics teachers can adopt when teaching these students include the following:

- Gradually encouraging these students to depend on their memorisation and problem solving skills via fading clues and prompts.
- Compartmentalising a task into small portions (i.e. task analysis) to help them adopt, utilise and master new skills gradually.
- Employing different activities to ease them into generalising new skills in different situations and settings.
- Employing repetitive drills and reiterations to help them remember new skills.
- Employing different settings, timing, materials, contents and support staff during lessons may assist them in generalising new skills.

Another element that requires attention is the effort to acquire a second language. Various studies have indicated that intellectually disabled children encounter difficulties when they learn a second language, especially because they already possess language deficits and had difficulty acquiring their mother tongue. Rondale (2000) believed that these students need to be taught a second language as soon as they are academically ready, but this task demands constant patience and training at home and in school.

Although the acquisition of receptive and expressive language skills is a relatively simple goal, especially with routine use of the new language, attempting to learn reading is a difficult process. Arabic students generally experience difficulty learning to read in English due to print awareness. English is written from left to write as opposed to Arabic's right to left, so students must familiarise themselves with reading and writing from the correct side. Furthermore, several letters appear similar, such as b and d, and reading is made difficult by the different alphabets and phonetic sounds each makes (i.e. H\W\P\B).

According to Carrasquillo (1994), students with intellectual disability require a methodical instructional curriculum when learning a second language, such as English, and educators must investigate any difficulties encountered during the acquisition of the first language. Learning English undoubtedly improves functional skills improvement, which is a must for living and succeeding in a community. However, the process requires learning activities that are tailored and individualised according to personal cognitive skills.

When teaching English, Toppelberg et al. (1999) recommended that educators engage with three points in mind: (1) consideration of a student's conversational needs, (2) consideration of a student's abilities in his primary language and (3) engagement with family members during the process of teaching target skills.

Students with intellectual disability characterised by various features. Several may have problems with expressive language, weak short-term memory, below-par meta-cognition skills and weak logic utilisation and organisation. Others may exhibit motor difficulties, which affect their handwriting and grip on reading materials (Rizopoulos & Wolpert, 2004). However, similar to normally functioning students, MR students also display different strengths, weaknesses, interests and motivations, all of which can be documented in their Individualised Education Program (IEP). Therefore, special education teachers should employ various approaches to teach reading to these students

Various attempts have been made to teach reading to students with MID and other groups of intellectually disabled students in a foreign country setting, but programmes in Arabic countries focus on other skills aside from reading. Nevertheless, Katims (2000) highlighted the incorporation of reading instructions in programmes that target children with moderate to mild MR. The majority of these programs employ either the sight word

method (i.e. teaching functional words by sight) or the whole-word method (Laurice & Seery, 2004).

1.3 Statement of the Problem

The status of English as a globally accepted and leading language renders those who master it to become easily acknowledged by others. Kuwaiti authorities have issued a new handicap law in 2010 that encourages schools to teach students skills that are beneficial for their independence and social acceptance. A whopping 85% of the intellectually disabled community is made up of mild intellectually disabled students (DSM5).

For individuals with intellectual disability, the ability to read is an excellent means to be functional in a society, but learning to do so is one of the biggest obstacles towards achieving this goal (Maiorano & Hughes, 2016). Throughout history, the commonest intervention for is focused on sight words and basic vocabulary (Coyne et al., 2012).

Additionally, these students are known to have received inadequate attention for appropriate education for a long time (Copland & Keefe, 2007; Kliewer & Bilklen, 2001). Literacy education is a specific area that is commonly disregarded in education programmes (Copland & Keefe, 2007). Previous studies have highlighted that intellectually disabled students can be taught to read functional sight words, but educators have failed to teach them to decode and read simple words (Katmis, 2000). Several are also victims of zero literacy skill learning, which is worse (Kliewer & Biklan, 2001).

Researchers found that well-educated individuals are well acknowledged by their non-disabled colleagues and thrive well in society. The absence of literacy skills reduces

the ability of students to articulate their basic wants, needs, thoughts and feelings (Koppenhaver, Yoder, & Nance, 1997). Klienert et al. (2015) indicated that reading and other expressive communication skills are positively correlated with placement in unrestrictive settings, such as general education.

Reading has been put aside because it is too challenging for intellectually disabled students (Katmis, 2000). However, although educators have assumed that these children cannot read, various studies conducted in the last decade have shown that individuals with intellectual disability can learn academic skills, including reading.

Despite efforts, the Arab world still suffers from poor production in the field of special education. Hadidi and Al Khateeb (2015) stated that the relationship between research and practise in special education in Arab countries is very poor, and the potential of applying findings in the field is limited.

Al Shammari (2006) highlighted the inadequate special education research materials available caused by poor awareness of current issues and challenges for the education of special needs students in Kuwait. The author added that teachers have failed to sufficiently prepare teaching programmes according to their students' different needs. In Kuwait, special needs education takes place either in government schools or private schools. Private schools that are fully funded by the government are categorised into either Arabic or English (i.e. bilingual) schools. Considering that the fields of special needs and intellectual disability are largely unexplored, a suitable academic programme for intellectually disabled students has not been designed.

According to Carter (2011), the beliefs and assumptions of educators regarding literacy affect their techniques for teaching these skills. Teacher preparation is another

factor that influences the success of teaching literacy skills to students with MID. In Kuwait, individuals of different nationalities teach special needs students in the private sector. Most of those teachers are from different educational systems and possess different qualifications, which may explain their varying attitudes towards teaching different skills. Furthermore, Blakeslee (2012) opined that even in America, the courses designed for special needs teachers may not be effective in preparing them to teach literacy skills. Thus, an investigation of teachers' attitudes and ideas towards their preparation and studies is timely and essential.

An intellectually disabled student who lacks reading skills is likely to become less effectual in a society. Intellectual disability also limits chances for employment, social acceptance and self-care skills. Researchers in the special needs field worldwide have expressed that reading instructions are a neglected area in educational programmes, which primarily focus on vocational and life skills. Therefore, many intellectually disabled students may finish their schooling years yet remain unable to read. Moreover, Ruppard (2017) claimed that students who have intellectual disability and poor literacy skills are disproportionately denied access to the general education context; therefore, they lose opportunities to become effective members of the society.

The importance of effectual educators in the process of teaching reading skills and their beliefs and preparation for such a career are factors that affect the extent to which they can impart reading instructions to their students. Hadidi and Al Khateeb (2015) claimed that special education teacher programmes in Arabic countries are not based on professional standards for practice. They suggested to include the collaborative approach, continuous professional development and evaluations of teacher education programmes. Al Jabery and Al Khamra (2013) emphasised the importance of including practical experience

in the training programme of special education teachers in university preparation courses. Meanwhile, Katmis (2000) stated that there is a lack of teacher training is one barrier to literacy instruction for students with .Additionally, he examined textbooks used in both general and Special education teacher preparation programs and found that only 13% contained information outlining academic characteristics, assessment, or instructional reading Strategies for students with intellectual disability.

The Kuwaiti educational system can be categorised into either government or private schools. The public authority on the handicapped in Kuwait has established that at present, intellectually disabled and other disabled students are allowed enrolment in 32 schools for special needs students, which may either be bilingual schools or schools utilising foreign curricula. However, the special needs field lacks adequate global research, especially in the area of reading instructions for intellectually disabled students (Katmis, 2000). Nevertheless, studies in the last decade have highlighted that these students can be taught to decode words and comprehend meaning from text. However, Arabic countries lack notable studies on reading skills, even in the Arabic language itself. Such an observation was reinforced by Al Muharab (2007), who noted the sparse research in the special needs field itself in Kuwait; most studies have concentrated on inclusion and stress among special needs teachers. Hadidi and Al Khateeb (2015) conducted a review of all studies and theses in the Arabic world in the previous decade. He accessed 216 theses and journal studies, a number that is much smaller than the number of countries in the Arabic world. Hence, current schooling practices need to be investigated when teaching intellectually disabled students so as to assess teaching and learning processes for this group of individuals. This task is particularly important due to the presence of the Kuwaiti handicap law that encourages schools to prepare students to become self-reliant in life.

Despite the widespread of bilingual schools which provides educational programs for intellectual disabled students in state of Kuwait, very little is known about the types of literacy programs in these schools. The need to study the teachers' beliefs about literacy is needed to improve the outcomes of these educational programs in the field of literacy. As reading is a skills that helps the mild intellectual disabled students to be successful in the society and independent. There is a dire need to study the case of teaching these skills to the students in these schools.

1.4 Aim of the Study

The main aim of the study is to determine the effectiveness of using the multisensory approach in teaching English literacy skills and to investigate the general attitudes of special needs teachers in foreign and bilingual schools towards teaching these skills to students with MID in Kuwait.

1.5 Research Objectives

- 1- To determine the effect of using the multisensory approach in teaching letter identification.
- 2- To determine the effect of using the multisensory approach in teaching letter sound correspondence.
- 3- To determine the effect of using the multisensory approach in decoding consonant vowel consonant words.
- 4- To explore the strategies and skills used by special needs teachers in teaching literacy skills to MID students in bilingual schools in Kuwait.
- 5- To investigate the challenges faced by special education teachers in teaching literacy skills in Kuwait.

1.6 Research Questions

To achieve the study's objectives, the following research questions are posed.

- 1- How effective is the multisensory approach in teaching letter identification?
- 2- How effective is the multisensory approach in teaching letters sound correspondence?
- 3- How effective is the multisensory approach in teaching decoding consonant vowel consonant words?
- 4- What are the strategies and skills used by special education teachers to teach literacy skills to students with MID in bilingual schools in Kuwait?
- 5- What challenges are faced by special education teachers in teaching literacy skills to students with MID in bilingual schools in Kuwait?

1.7 Research Hypothesis

H01- No statistical differences exist in the performance of students in letter identification between baseline and maintenance phases.

H01 No statistical differences exist in the performance of students letter-sound correspondence between baseline and maintenance phase?

H03 No statistical differences exist in the performance of students in decoding CVC between baseline and maintenance phase?

1.8 Significance of the Study

Questions have been raised about the importance of teaching academic skills to students with MID. However, in Arabic countries, very few studies have focused on this important field. Most studies in Kuwait have been conducted in other areas, such as inclusion, stress and burnout among special needs teachers in schools. Clearly, this study is a promising step towards discovering challenges in the process of teaching and learning for students with MID in Kuwait. No previous studies have investigated the challenges of teaching English language skills to this type of learners.

1.8.1 Theoretical importance

This present study has the following theoretical importance. As it is considered the first study to search for the effects of using multisensory approach in teaching literacy to intellectually disabled students unlike the previous studies which used the multisensory approach to teach only dyslexic students.

1.8.2 Practical importance

This study is important from a practical side as it introduced the multisensory intervention in step by step session using different tasks and activities to teach the main skills of literacy to mild intellectual disabled students. These activities are well designed to suit the students.

1.8.3 Importance for schools

Another part of the significance of the study is for schools. The qualitative part of this study aimed to investigate the perceptions of teachers about the process of teaching

literacy to students. Schools can use the results of these study to avoid the common complaints from teachers about the lack of resources and professional courses in the field of literacy and improve the skills of teachers to teach these skills.

1.9 Operational Definitions

The various common terms and variables used are as define below

1.9.1 Multisensory Approach

Rithcy and Goeke (2006) defined the multisensory approach in teaching reading as an explicit instruction provided in phonology, phonological awareness, sound–symbol correspondence, syllabication, morphology, syntax and semantics. The researcher defines the multisensory approach as a set of activities that are introduced to the learner using the different senses, which enable the student to master the new knowledge by practising these activities. It is mainly based on the principle of multisensory teaching linking learner visual, auditory, tactile and kinaesthetic receptors to make sense of the printed word (Moats&Farell, 2005). For example, students are taught through the use of visual activities that help them to memorize and remember different sounds. When students see that visual clues and use other senses to learn the new letter or sounds, it helps to trigger the memory of the student to memorize the new letter or sound.

1.9.2 Mild Intellectual Disability

Intellectual disability affects approximately 3% of the population. One of the most commonly used definitions of mental retardation is a ‘significant sub average general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period’ according to the American Association on

Mental Deficiency. A person with an IQ below the average of 70 have issues with communication and learning the skills that are required for daily living and working, and these issues become apparent before the person reaches the age of 18 (AAIDD). Approximately 85% percent of children with mental retardation fall into this range and are further classified as educable. These children might be able to learn to read and write at the 4th or 5th grade level, live relatively independently and work with special training (Khawla, 2015).

1.9.3 English literacy skills

There are different skills that come under the English literacy skills. In the coming paragraph the researcher defined the different terms that describe these skills Phonemes are the smallest meaning-signalling units of sounds in a language (weaver, 2002). The phonemic awareness is defined as the recognition that there are separated sounds in words and the ability to hear these sounds in the words (Weaver, 2002).

Decoding is defined as the ability to look at print and orally or silently respond with the proper sound translation; decoding is a print-to-sound process (De Graaff et al. 2009).

Phonics is defined as the letter sound relationships and the related skills used in analysing words in to phonemes or larger units and blending them to form recognizable words (Weaver, 2002). Letter identification is a skill that involves being able to say the names of both upper and lower case letters of the alphabet quickly, without having to think very long about each letter.

1.10 Limitation of the Current Study

A main limitation of this study is the ability to generalize due to short period time of the intervention and the small number of participants. Increased generalizability of the findings could be obtained through replication of the study for a longer period of time with a larger sample. This study focused only on student with mild intellectual disability in the state of Kuwait who are Arab speakers. One major limitation in this study was the small number of participants due to the inability to access to a large number of participants. Therefore, the researcher used the single case study method to collect the data. Additionally, the researcher encountered difficulties in finding a sample for the study due to the culture and traditions of the Arab society and the nationality of the researcher, who is considered a foreigner in the country. Most parents refused to let their son or daughter participate because they thought that the researcher would take pictures or videos of their children during the programme. Another limitation is also the research instrument which is used by the researcher as these types of studies are not common in the Arabic literature so the researcher designed the research instrument from three main resources in foreign literature.

1.11 Summary of Chapter One

This chapter provided the background, problem, purposes, questions, hypothesis and significance of the study and presented definitions of the terms used herein. Chapter Two focuses on the theoretical framework of intellectual disability, reading and the Orton–Gillingham approach. Chapter Three describes the methodology that the researcher adopted. It includes the research design, population and sample, research instrument, procedures, statistical method and data analysis. Chapter Four presents the results of the

analysis, and Chapter Five provides a discussion of the findings, recommendations for future studies and conclusions of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Multisensory Approach

Samuel Orton is a neurologist who worked with the educators Anna Gillingham and Bessie Stillman. Together, they developed a teaching program which is now known as the Orton–Gillingham (OG) method. The OG method uses a multisensory approach to teach students with specific reading deficits to develop language skills.

Orton (1929) posited that a student’s perception of written language plays an important role in the student’s ability to master reading, spelling and handwriting. Orton supports the idea of developing various individualised instructional methods for teaching reading, spelling and handwriting.

Henry (1998) stated that Orton was influenced by the work of Grace Fernald and Helen Keller, who focused on the use of the kinesthetic–tactile method, and assumed that the use of a new approach consisting of the kinesthetic–tactile approach along with visual and auditory aids will help students overcome reading difficulties.

According to Davis (2011), Orton was one of the first to advocate the use of phonics to teach dyslexic students to read. Orton believed that when a student sees, says and writes the letters of words, he can overcome the problem of reserving images .Davis (2011) added that Orton was the first to establish the notion of sound blending, which is a technique to blend sounds together, when teaching students to read certain words.

Henry (1998) further indicated that the new method of blending sounds proposed by Orton was not used before, and the process of synthesising words and parts of the words

into a spoken unit would help students decode words. There are some differences between the various techniques and methods of teaching literacy and the use of the multisensory approach. One of these differences is multisensory approach focuses more in teaching the segments of particular word before a whole word is mastered. It means that children firstly have to be aware of the phonemes, in other words, they need to know the vowels, consonants, their blends and clusters. Consequently, they are taught to understand the relationship between grapheme and phoneme. In this way, the student through the use of this approach are learnt to identify the letters and their sounds and then to blend these sounds to decode words and then they are taught to read simple words and gradually, they move to learn other skills in the same gradual process.

2.1.1 Main components of multisensory approach

In this part, the researcher mentioned the main skills and components of the multisensory approach. It is highly recommended that the teacher must know the right and gradual process of the steps and he is not supposed to skip one activity to another. Following the steps accurately, is fundamental factor to master this method.

2.1.1(a) Phonological and phonemic Awareness

These two terms are mainly related to the letter sound correspondence. The difference between them is that phonological awareness is connected to the ability to separate sentences into words and words into syllables. When the child mastered these skills, he will be also aware of the fact that a word consists of particular sounds and all these sounds can be changed or substituted for different ones. On the other hand, phonemic awareness is a subset of phonological awareness and mainly related to the ability to distinguish phonemes. It means that when the student hears a sound, he will be aware that

they are different from each other. Consequently, then the children mastered this skills, they are supposed to separate whole word into particular phonemes.

During the use of the multisensory approach, the teacher should focus more in teaching these two skills gradually in the lessons and helps the students to understand the relationship between the letters and the sounds.

2.1.1(b) Phoneme-Grapheme Correspondence

In this part, the teacher taught the students to link between the phoneme and the grapheme. They are taught which sounds are represented by which letter and subsequently, they learn also to blend the particular letters into single-syllable words.

2.1.2 General Features of Multisensory Approach

Davis (2011) summarised the general features of the multisensory approach, which ensured that the use of all senses would help students remember new skills.

2.1.2(a) Language-based Instruction

The OG method can be described as an interactive approach to teach reading because it begins from teaching the basic sounds of letters in alphabets and then moves gradually to phonemic awareness skills focused on phoneme blending and other skills in phonemic awareness to help students master decoding skills. Furthermore, it is a goal-based, individualised, success-oriented system that requires positive feedback from teachers aside from the active involvement of students to ensure success. It is also a code-based intervention structure around phonics that reinforces the ability to identify sounds and blend them into words.

2.1.2(b) Multisensory Instruction

The use of the multisensory approach is useful and highly effective in small-group or one-to-one tutorial settings (Oakland, Black, Stanford, Nussbaum, & Balise, 1998). Consequently, the use of the multisensory approach depends on designing activities that are based on auditory, visual and kinaesthetic matters.

2.1.2(c) Auditory Method

The auditory approach refers to the phonological makeup of a language (Davis, 2011). It is focused on the ability of a student to identify different sounds in spoken language and to understand how these sounds are presented by symbols (Oakland, Black, Stanford, Nussbaum, & Balise, 1998). At this level, students should be trained to identify auditory sounds and to be able to point to a letter when they hear its sound, which will later help them identify these sounds in a word. One of the useful activities used at this level is to put letters in front of a student and then say the sound of any letter and ask him to point or circle the letter that makes that sound. Training students in that manner will help them master identifying the sounds of letters, which is important to reading well.

2.1.2(d) Visual Method

The second modality is the visual comprehension of letters. When a student understands that words are made up of different letters that will enable him to decode new words, learning the sounds of letters helps the student to read better. Once the student masters the identification of letter–sound correspondence, he can read words through the early skills of phonemic awareness. The visual method of breaking words apart and identifying the symbols of letters is a part of the multisensory approach (Davis, 2011).

Adaptation at this level in teaching mentally retarded children focuses on identifying letters or a grapheme from other graphemes. Several activities, such as giving student's different letters and asking them to point to or identify a specific letter from other letters, can foster the ability of students to master letter identification. Visual and auditory approaches can be combined to teach students to hear and recognise letters and say the corresponding sounds loudly. Using this multisensory approach in mastering letter identification and letter-sound correspondence helps students overcome phonological and orthographic deficits.

2.1.2(e) Tactile Method

The third sensory modality is the use of tactile strategies in teaching reading skills. Tactile is about the use of hands and fingers to help students stay engaged and focused, and it involves fun activities that motivate and encourage students to study. Students can learn to trace letters and say them out loud. In the multisensory approach, tactile activities can include activities that involve the use of hands, such as tracing letters with paint on their fingers or giving students several letters, asking them to close their eyes, touch a given letter and ask them to guess the letter. Davis (2011) argued that the physical engagement of touching graphemes enables students to stay focused, and it imprints the shape of the graphemes on the mind. Moreover, the teacher can ask the student to open his hand, use his finger or a pen to write the shape of a letter on the student's hand and ask the student to guess the letter.

2.1.2(f) Kinaesthetic Method

The fourth modality of the multisensory approach is the use of kinaesthetic when learning to read and write. Kinaesthetic refers to the physical movement of the body in space while performing a task. One of the suggested activities is to ask a student to write a

letter in air or use the spaces in the class and ask a student to match the lowercase and uppercase. Several teachers also draw letters on the ground of the class and ask the students to stick some paint or any kind of sand on the letter. Another activity is asking a student to copy letters from a white board and draw them in air while saying the sound of the letters. Using flashcards is considered a kinaesthetic activity because students are asked to look at the flashcard, memorise its content from his mind and write it in a book.

2.1.2(g) Structured, Cumulative and Sequential

The multisensory approach is structured around the abilities of students. Mason (2008) argued that the teacher in the multisensory approach adds materials sequentially such that a student cannot go to another level unless he masters the current level.

2.1.2(h) Cognitive Instruction

The OG method is a direct instruction in teaching because it uses a systematic means to teach students new skills. In an OG lesson, the teacher begins from a very basic skill, such as letter identification, then slowly moves to letter–sound correspondence. After the student is able to master these two skills, the teacher begins to teach the student phonemic awareness skills starting from blending skills then to higher skills, such as segmentation. An important part of an OG lesson is the continuous review of previous skills before moving to a new skill. The use of different multisensory activities and materials helps the student memorise and recognise new skills (Davis, 2011).

Each new skill is introduced after mastering the previous one to ensure that the student will not experience frustration nor become discouraged during learning. Mason (2008) stated that using such a systematic and direct instruction enables students to