DESIGN AND EVALUATION OF A MULTIMEDIA PROGRAM ON SELECTED DAILY SKILLS AMONG CHILDREN WITH INTELECTUAL DISABILITIES IN AL-BAHAH, SAUDI ARABIA

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REKA BENTUK DAN PENILAIAN PROGRAM MULTIMEDIA KEMAHIRAN HIDUP TERPILIH DALAM KALANGAN KANAK-KANAK DENGAN KETIDAKUPAYAAN INTELEKTUAL DI AL-BAHAH, ARAB SAUDI

ABSTRAK

Memandangkan terdapat kekurangan kajian mengenai perkembangan kemahiran hidup dalam kalangan kanak-kanak dengan ketidakupayaan intelektual di Kerajaan Arab Saudi, kajian yang menggunakan kaedah gabungan ini mengkaji kesan program multimedia interaktif dalam perkembangan empat kemahiran hidup (penjagaan diri, penjagaan kesihatan, kemahiran mengelak bahaya alam sekitar dan kemahiran berfikir) dalam kalangan kanak-kanak kurang upaya dari segi intelektual di satu pusat pendidikan khas di daerah Al-Bahah di Kerajaan Arab Saudi. Kajian ini turut menyelidik persepsi enam orang guru di pusat tersebut mengenai keberkesanan program multimedia yang dijalankan selama satu semester. Sampel kajian ini melibatkan 44 orang kanak-kanak yang dibahagikan kepada dua kumpulan: 22 orang dalam kumpulan eksperimen dan 22 orang dalam kumpulan kawalan. Kumpulan eksperimen menggunakan program multimedia, manakala kumpulan kawalan menggunakan kaedah tradisional. Di akhir intervensi, prestasi responden dalam kemahiran penjagaan hidup dinilai menggunakan empat kad pemerhatian iaitu satu kad untuk setiap kemahiran. Selepas itu, enam orang guru telah ditemuramah mengenai persepsi mereka tentang keberkesanan program ini. Data kuantitatif dianalisis menggunakan ujian statistik, manakala data kualitatif dianalisis menggunakan analisis bertema. Hasil kajian menunjukkan bahawa program multimedia ini telah meninggalkan kesan yang positif ke atas perkembangan

kemahiran hidup (penjagaan diri, penjagaan kesihatan, kemahiran mengelak bahaya alam sekitar dan kemahiran berfikir) dalam kalangan kanak-kanak dengan ketidakupayaan intelektual. Tambahan lagi, analisis data kualitatif mendedahkan bahawa program multimedia ini sememangnya berkesan kerana program ini dapat membantu kanak-kanak dengan ketidakupayaan intelektual membangunkan berbagai-bagai kemahiran hidup. Dapatan kajian ini menunjukkan program multimedia kemahiran hidup ini mampu memberi sumbangan kepada penambahbaikan kurikulum untuk kanak-kanak dengan ketidakupayaan intelektual di Al-Bahah dan Kerajaan Arab Saudi secara umumnya.

DESIGN AND EVALUATION OF A MULTIMEDIA PROGRAM ON SELECTED DAILY SKILLS AMONG CHILDREN WITH INTELECTUAL DISABILITIES IN AL-BAHAH, SAUDI ARABIA

ABSTRACT

Due to the lack of studies on developing life skills of children with intellectual disability in the Kingdom of Saudi Arabia (KSA), this mixed-methods study examined the effect of a multimedia program on the development four life-skills (self-care, health-care, avoiding environmental dangers and thinking skills) among children with intellectual disability in a centre for special education needs in AL-Bahah region in KSA. This study also examined perception of six teachers in the centre about the effectiveness of the multimedia program which was employed for one semester. The sample of the study included 44 children who were divided into two equal groups: experimental and control. The experimental group used the multimedia program, while the control group used the traditional way. At the end of the intervention, the respondents' performance in the life-care skills were assessed using four observation cards; one for each skill. In addition, six teachers were interviewed regarding their perceptions of the effectiveness of the multimedia program. The quantitative data were analysed using statistical test, and the qualitative data were analysed using thematic analysis. The results of the study showed that the multimedia program had positive effects on developing life-skills (self-care, health-care, avoiding environmental dangers and thinking skills) among children with intellectual disability. Furthermore, the analysis of the qualitative data revealed that the multimedia program was effective in helping the children with intellectual disability to develop various life-kills. The

findings of this study can significant contribute to the improvement of curriculum designed for children with intellectual disability in Al-Bahah and KSA in general.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter is the introductory chapter which provides a background to the study and the statement of the problem. The hypotheses of the study and significance of the study are also presented in this chapter. The important key terms used in this study are also defined in this chapter.

1.2 Overview of the Study

In each society, every individual has the right of living. This can be considered for every individual. However, there is a category of individuals in each society that requires special attention so that they can be helped to cope with the environment where they live (Grant, 2000; Gaad & Khan, 2007). This category is referred as individuals with special needs. This group is in need of a special kind of education, with many associated services. This is due to their low performances compared to their peers, or due to their lack of ability to communicate with the others. Special attention that should be given to this category of students who requires the modification of educational programs offered to them (Mohamed, 2005).

Several countries have started to look after individuals with special needs. This type of attention given to people with special needs was evidence in providing them with the necessary skills that can help them to cope with several activities in their life. Similar to normal children, children with special needs need care and attention (Al-

Hosary, 2003). Among the categories of children with special needs, the category of children with intellectually disabled should be given more care and attention.

Intellectual disability is one of the disabilities that affect the capacity of the individual. It prevents the individual from getting benefit from professional and educational experience where normal individuals can (Schalock et al., 2010). Intellectual disability is a condition of being unable to perform physical or mental activities. It has a social, psychological, medical and educational consequence, which deeply affects societies, and need to be studied academically and scientifically.

Intellectual disability is a medical problem which requires medication and it is also an educational problem that requires special methods and approaches to deal with it (Moustafa & Alridi, 2011). Recently, intellectual disability is considered as a psychological and behavioural problem that describes a person who suffers from maladjustment and consequently some other psychological problems (Eisenhower, Baker, & Blacher, 2005; Altazran, 2010). It affects a large number of individuals including the individual himself/herself, his/her immediate family, and the community where he/she lives (Maulik, Mascarenhas, Mathers, Dua, & Saxena, 2011).

Intellectually disabled children are different from a normal child in mental development, thinking level, attention and memory, which can lead to a deficiency in the level of their cognitive processes of learning or training. Thus, intellectually disabled children need to learn through training programs and educational strategies that are suitable for their characters (Suleiman, 2006). Intellectually disabled children are in utmost need of a special kind of educational programs, rehabilitation and ability development, in order to be able to live, adjust and merge with society to cope in life

despite their limitations, which is one of their basic human right. The education and rehabilitation of intellectually disabled children should be understood based on the fact that they have their own needs and past experiences. Furthermore, similar to their normal peers, the psychological, physical and social growth of intellectually disabled children can be affected by various factors such as learning, experiences, skills and information.

According to Daily, Ardinger, and Holmes (2000), it is not easy to study intellectual disability due to its complexity, but it can be simplified as much as possible to achieve the overall educational interest. Classification is the foundation for any scientific field, and it has several goals. The classification base is the way to decide where to put the individual in the category. Early diagnosis of intellectually disabled children is important as it enables us to use the suitable methods and programs for those children. Moreover, the family plays an important role in early diagnosis of a child with intellectual disability through observation of the child's cognition, interests and his/her response to the environmental changes since birth. With early diagnosis, the appropriate programs to develop the intellectual processes and skills that are suitable for the child age and level of cognition can be applied (Al-Hosary, 2003).

Intellectually disabled children have the same needs as their typically developing peers and they gradually learn and acquire knowledge, skills and experiences. However, intellectually disabled children differ from their typically developing peers in their levels of cognition, attention and memory recall (Flanagan & Harrison, 2012). Previous studies have shown that teaching intellectually disabled children should be different from teaching typically developing children (Altazran, 2010). Although intellectually disabled children can learn simple cognitive processes,

they face difficulties in learning complex cognitive processes that need abstract thinking and cognition.

Intellectually disabled children are cognitively more impaired than their typically developing peers. Accordingly, teaching strategies should be designed to cope with mental abilities and learning capabilities for intellectually disabled children (Al-Sayed, 2004). Moreover, the curricula and instructions given to these children are different from that of the typically developing children in terms of content, teaching methods, educational activities and teaching tools, due to their need to special educational programs that are appropriate for their limited cognitive and thinking abilities. This can be done through giving them some activities that suit their mental abilities to develop their daily living skills (Ibrahim, 2003).

However, designing interesting and effective educational activities for children is not an easy task, especially for intellectually disabled children. Thus, when designing these activities, we should consider the learning characteristics of those children, using continuous evaluation to identify their points of weakness and strengths. Additionally, these activities should be connected to the problems and difficulties faced by the children in their daily life and help them in solving these problems (Al-Sayed, 2004). These problems are exposure to some risks due to some bad health habits, exposure to some risks due to lack of awareness of how to avoid environmental risks, feeling of uncertainty and fearing of people around them, and their inability to understand the moral behaviour that suits the norms of society.

In fact, previous studies in the field of educational technology for intellectually disabled children have confirmed that using various types of modern technologies can

help them several aspects. For example, modern technologies used with intellectually disabled children can address the individual differences that appear among various categories of intellectually disabled children. Additionally, using various types of modern technologies can help teachers to teach intellectually disabled children the socially accepted behaviours and good health habits, (c) increasing motivation of those children to learn, and (d) helping them acquire the necessary skills to adjust to the surrounding society (Njeh, 2003).

Zaiton (2003) stated that the use of technology in the lives of the disabled individual can make their life easier and helps them to meet their needs with less effort and trouble. Technology also has led to offer and provide many successful tasks for the disabled children. In her study (Al-Dahan, 2000) found that computer has many useful activities that help the intellectually disabled children (who are able to learn), as it gives them more space from the traditional education environment where they might feel the lack of self-confidence. In addition to the possibility of utilizing it as means of assistance to improve their abilities and develop their skills due to its diversity of colour, sound, multiple sound effects, educational games and self-learning programs. In addition, technology helps in increasing the motivational aspect of mentally disabled child. Moreover, Al-Kashif (2002) perceives that the use of computers with multimedia software helps in the development of essential cognitive skills of intellectually disabled children. Especially if conducted with the help of well-trained instructors to provide good training to the teachers to use the computer as a modern technique of learning technology. This can lead to minimize the teacher efforts in repeating the information, and provides teachers with many teaching methods that they can modify and use according to the teaching content. Several studies by Al-Kashif (2002), Khalifa (2006), Margo, Thomas, and Reweg (1997), Coles, Strickland,

Padgett, and Bellmoff (2007), and Rezaiyan, Mohammadi, and Fallah (2007) showed that the effectiveness of different teaching methods using computers helped to give and improve the skills of children with mental disabilities.

This study focuses on the effect of a multimedia program on developing a set of life skills among children with intellectual disability. Life skills include self-care skills such as eating, dressing, and bathing. These life skills are self-care skills, health-care skills, skills of danger avoidance, and thinking skills. Some researchers refer to these skills as home or family skills (Johnson, 2012). In this study, the selection of these daily life skills can be attributed to some reasons. First, these life-skills were selected based on recommendations of teachers in some Special Education Centres in KSA. The researcher visited some centres in Al-Baha province in KSA and other neighbouring centres in order to meet the teachers and directors of these centres to know from them the most important life-skills for children with intellectual disability. Second, the daily life skills are considered important because they are practiced by all people every day (Jaya, Haryoko, & Suhaeb, 2018). For children with intellectual disability, these daily life skills are also important. Thus, focusing on them in research can lead to important findings that can be considered by those included in teaching children with intellectual disability. Regarding this, stated that life skills can be critical to the success of individuals with intellectual disabilities. Third, life skills are important skills because they enable intellectual disabled children to be trained in a way that can help them to live in a safe and socially responsible manner. Fourth, an individual need to function independently in life can be improved through training them on various important life skills (Jaya et al., 2018). Based on these justifications, it can be concluded that these four life-skills deserve the attention of the researchers. Thus, in this study these four life skills were selected.

1.3 Statement of the Problem

The field of intellectual disability has received a noticeable attention among researchers in various contexts. Intellectually disabled children suffer from deficiencies in intellectual abilities where their disability is concentrated in the first place in the cognitive mental aspect, and where their IQ is lower than their ordinary peers (Siegel & Heaven, 1986; Al-Khatib, 2008; Alquraini, 2010). Moreover, the delay in the growth of their mental cognitive aspect leads to serious difficulties that significantly resulted in dropping their general cognitive skills level. These difficulties also reflected negatively on them and caused them learning obstacles resulted in dropping their life skills that hinder their adjustment with the environment in which they live, and affects their social and psychological adjustment as well. These life skills are used often by the children in their daily life tasks, which are assigned to them either by their parents or teachers for the purpose of learning and to prepare them to be part of the community (World Health Organization Unicef, 2012).

However, due to the difficulties that the children are suffering from, and the problems caused by it, those children have many different needs, and the cognitive skill considered one of those needs. This was confirmed by many previous studies and researches. Therefore, those children are in great need for a program that concerns primarily in giving them the desired cognitive skills to improve the efficiency of the continued growth in their learning.

Several studies have confirmed the importance of the suitable programs for the intellectual disabled children that consistent with their potential and abilities, to provide a suitable environment that helps in developing their life skills according to

their daily needs (Hassall, Rose, & McDonald, 2005; Harrington, 2014). In the Saudi context, it has been shown that "the field of special education was developed because many students with disabilities could not benefit from the existing general public education system" (Aldabas, 2015, p. 1158). Unfortunately, the necessary skills that intellectual disable children are not taught through the current educational programs of the disabled children school in the Kingdom of Saudi Arabia. Furthermore, such programs are not included in the teaching strategies or curriculum of the available programs in the country.

In addition, the activities that are included in the current curriculum programs are presented in an improper way because it does not meet the educational and behavioural characteristics of target children and it lacks the use of any of the modern educational technology innovations. Focusing on special education in Saudi Arabia, Battal (2016) argued that "the special education curriculum is the same as the regular education curriculum, but with special modification and accommodation based on the type of disability" (p. 884). This shows that in the Saudi context there are slight differences between the curriculum used in normal education and special education. Thus, this reveals that what is used in teaching children with intellectual disability is traditional in that it does not employ new methods in teaching children intellectual disability. Based the researcher's visit to centres of Special Education in KSA, the researcher found that life skills are taught using demonstration by the teacher. Multimedia or computer are not used in such context.

Studies on intellectual disability in the Saudi Arabia have shown that children with intellectual disability do not get enough training on various life-skills (Alquraini, 2010; Aloraini, 2012; Alnahdi, 2014). These researchers have attributed these

problems to the curriculum applied in special education in the country. They highlighted the need for improving the curriculum and methods of teaching children with special needs including those with intellectual disability. In an obvious statement of the urgent need of using computers and information technology in special education in Saudi Arabia, Rana, Fakrudeen, Miraz, Yousef, and Torqi (2011) reported that "special students (focused group) are facing huge amount of problems during their study and the ICT is not being used in full extent to help them to get education in order to live independently in future life" (p. 534).

Nowadays, the use of computer has become of great importance in the educational process for all students including those with special needs. Mentally disabled students need special educational classes that use special curriculum according to students' needs to acquire academic and social life skills. These special educational classes are adopted from customized educational programs and should be supported by modern educational technology to help people with special needs. The use of computed based-Multimedia as one of the technological innovations has many benefits, potential and considered as an appropriate means to the nature and characteristics of intellectually disabled children (Wehmeyer, 1999; Mechling, Gast, & Langone, 2002; Coles et al., 2007; Reis et al., 2010; Tanis et al., 2012). Moreover, modern technologies, particularly computers and multimedia provide intellectually disabled children with several characteristics and capabilities that allow them to control the sequence of the displayed materials and learning activities that they receive. In addition, it provides excitement, as the excitement and motivation are important factors in the success of the learner, as the displayed shapes, their movement, as well as the learning games are considered as examples of the excitement elements (Langone, Clees, Rieber, & Matzko, 2002). In other word, it can be said that the

utilization of instructional technology is considered the contemporary technological solution that can help intellectually disabled children to learn and acquire new skills.

Currently, in the Kingdom of Saudi Arabia, no computed-based multimedia programs are used in the schools of Al-Baha governorate for disabled children to teach the daily life skills to the intellectual disabled children. The current curriculum used in teaching special education. Thus, it is hoped that through the use of multimedia, a set of life skills can be developed for the sample of this research by designing a multimedia program based on the proposed activities consistent with the educational and behavioural characteristics of intellectually disabled children.

Thus, intellectual disability is a multi-faceted problem that is worthy of study and research. The present study which is a mixed methods study consisting of two phases (quantitative and qualitative) aims to design a multimedia program to develop life-care skills among intellectually disabled children. A multimedia developer was recruited to develop the software program taking into account the design and nature of this study. The effectiveness of the multimedia program in developing a set of life skills was measured using a pre-test and post-test quasi-experimental study design (Cook, Campbell, & Shadish, 2002). In short, the current study examined the effect of a multimedia program on developing four major life-skills (self-care, health-care, avoiding environmental dangers, and thinking skills) among intellectually disabled children in Al-Baha in KSA.

1.4 Research Objectives

The current study intends to address the following five research objectives:

i. To investigate the effect of a multimedia program on self-care skills among intellectually disabled children in KSA.

ii. To investigate the effect of a multimedia program on health-care skills among intellectually disabled children in KSA.

iii. To investigate the effect of a multimedia program on skills of avoiding environmental dangers among intellectually disabled children in KSA.

iv. To investigate the effect of a multimedia program on thinking skills among intellectually disabled children in KSA.

v. To investigate the perceptions of special education teachers regarding the effectiveness of the multimedia program on life skills (self-care skills, health-care skills, skills of avoiding environmental dangers, and mental skills) among intellectually disabled children in KSA.

1.5 Research Questions

There are five research questions addressed in this study as follows:

i. Is there any effect of the multimedia program on self-care skills (skills of preparing the dining table, eating skills, drinking skills, and skills in wearing clothes) among intellectually disabled children in KSA?

ii. Is there any effect of the multimedia program on health-care skills (skills related to eye safety, skills related to personal hygiene, and skills related to nutrition) among intellectually disabled children in KSA?

iii. Is there any effect of the multimedia program on skills of avoiding environmental dangers (skills related to avoiding dangers of edibility, skills related to avoiding dangers of insects, skills related to avoiding dangers of

medicine, and skills related to avoiding dangers of road-crossing) among intellectually disabled children in KSA?

iv. Is there any effect of the multimedia program on thinking skills (skills of classification, skills of finding relations with objects, and skills of identification) among intellectually disabled children in KSA?

v. How do the special education teachers perceive the effectiveness of the multimedia program on life skills (self-care skills, health-care skills, skills of avoiding environmental dangers, and mental skills) among intellectually disabled children in KSA?

1.6 Research Hypotheses

This current study addressed the following research hypotheses. The research hypotheses are presented here according to the research question:

1.6.1 Hypotheses of Research Question One

Ho1: There is no significant effect of the multimedia program on skills of preparing the dining table among intellectually disabled children in KSA.

Ho2: There is no significant effect of the multimedia program on eating skills of intellectually disabled children in KSA,

Ho3: There is no significant effect of the multimedia program on drinking skills of intellectually disabled children in KSA.

Ho4: There is no significant effect of the multimedia program on skills in wearing clothes among intellectually disabled children in KSA.

Ho5: There is no significant effect of the multimedia program on developing overall self-care skills of children with intellectual disabilities.

1.6.2 Hypotheses of Research Question Two

Ho6: There is no significant effect of the multimedia program on skills related to eye safety among intellectually disabled children in KSA.

Ho7: There is no significant effect of the multimedia program on skills related to personal hygiene among intellectually disabled children in KSA.

Ho8: There is no significant effect of the multimedia program on skills related to nutrition among intellectually disabled children in KSA.

Ho9: There is no significant effect of the multimedia program on developing overall health skills of children with intellectual disabilities.

1.6.3 Hypotheses of Research Question Three

Ho10: There is no significant effect of the multimedia program on skills related to avoiding dangers of household objects among intellectually disabled children in KSA.

Ho11: There is no significant effect of the multimedia program on skills related to avoiding dangers of edibility among intellectually disabled children in KSA.

Ho12: There is no significant effect of the multimedia program on skills related to avoiding dangers of insects among intellectually disabled children in KSA.

Ho13: There is no significant effect of the multimedia program on skills related to avoiding dangers of medicine among intellectually disabled children in KSA.

Ho14: There is no significant effect of the multimedia program on skills related to avoiding dangers of road-crossing among intellectually disabled children in KSA.

Ho15: There is no significant effect of the multimedia program on developing overall skills of avoiding environmental dangers among children with intellectual disabilities.

1.6.4 Hypotheses of Research Question Four

Ho16: There is no significant effect of the multimedia program on skills of classification among intellectually disabled children in KSA.

Ho17: There is no significant effect of the multimedia program on skills of finding relations with objects among intellectually disabled children in KSA.

Ho18: There is no significant effect of the multimedia program on skills of identification among intellectually disabled children in KSA.

H019: There is no significant effect of the multimedia program on developing thinking skills among children with intellectual disabilities.

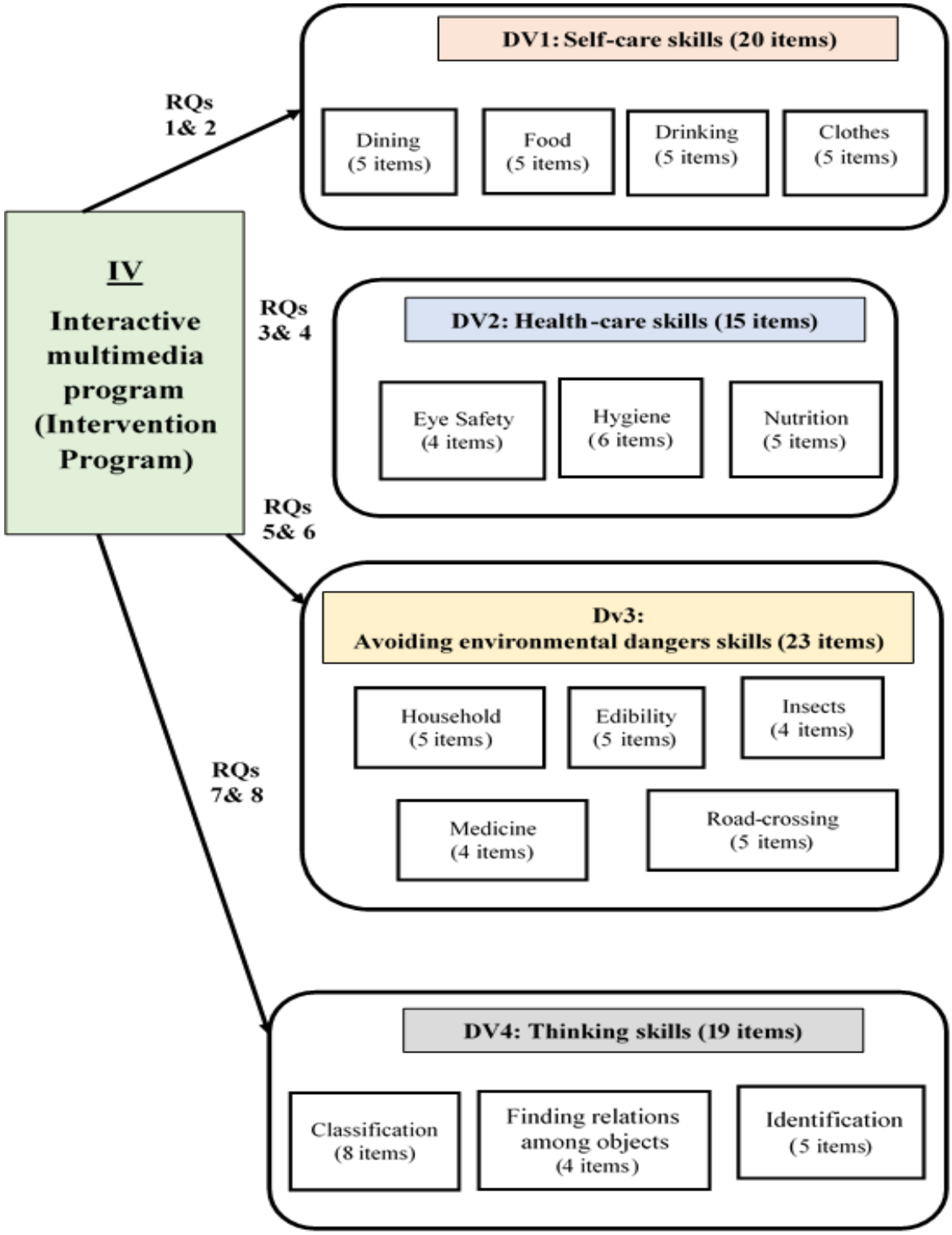

Figure 1.1. Variables of the study

DV = Dependent variable
IV = Independent Variable

RQ= Research Question

Figure 1.1 above presents the variables and the four main hypotheses of the study. The fifth research question was answered using qualitative data that were collected using semi-structured interviews.

1.6.5 Limitations of the Study

Similar to other studies, this study has some limitations. Scope, design and human limitations including time and place have been considered in this study. The researcher has taken these issues into account to be within a manageable framework. Limitations of a study are related to factors such as time constraints, generalizability of the findings, nature of the design, instruments employed to collect data, and the sample itself.

One of the limitations of this study is related to the sample. In this study, the sample included only intellectually disabled children at the age of 6-10 years old and their mental age is about 4-6 years, with their IQ within the range of 50-70. Thus, the findings cannot be generalized to other categories and types of intellectually disabled children. Although the sample of the study included only a group of children in one regain in KSA, the findings related to the effectiveness of the multimedia program can be generalized to intellectually disabled children in other regions in KSA.

Another limitation of the study is that the multimedia program focused on only some life skills which are self-care, health care, safety skills, and some thinking skills. Taking this into account, cautions should be taken into consideration when considering other life skills that were not included in this study. Furthermore, each of these skills encompassed some minor or sub-skills. For example, the thinking skills focused on

only three processes which are classification, finding relationship among objects, and identification.

The third limitation of this study is related to the duration of the implementation of the multimedia program. In this study, the multimedia program was implemented for 14 weeks. An extended period of intervention may produce different results regarding the effectiveness of the multimedia program.

1.7 Significance of the Study

Taking into account that life-skills of intellectually disabled children in KSA have not been adequately addressed in previous studies, the findings of this study can be significant and important to several stakeholders in the country. The findings of the current study are significant for all individuals who are concerned about education of intellectually disabled children in KSA and other similar Arb contexts. First, the findings of this research can be useful for special education teachers in KSA. Teachers can find the findings of this study useful because the findings report important aspects concerning the effectiveness of using multimedia in teaching intellectual disability among children in KSA. The findings of this study can provide constructive feedback on the materials and curriculum used in special education centres all over the country. Thus, the findings of the study can be important for teachers who deal with intellectually disabled children because the study focused on important aspects related to the life-skills (self-care, health-care, environmental dangers and thinking skills).

Second, the current study can be useful for teachers at the schools of special education who teach intellectually disabled children to determine the educational

activities and daily life skills that are necessary for those children. The findings of this study can provide teachers with an additional method to teach such children these skills. This research is also of prime importance to designers of curricula for the intellectually disabled children to link what they learn with the requirements of daily life skills for the purposes of successful social adjustment.

The findings of this study are also important for children with intellectually disabled children. Children can find the multimedia program used in this study useful for them because it can help them to improve their daily life-skills. The researcher believes that children can find it interesting to learn life-skills through multimedia.

1.8 Definition of Key Terms

In this section, important key terms that are used in this study are defined. These terms are found to be important based on the concern of the study and the research objectives of the study. The definitions are given based on popular researchers and authors in the field of intellectual disability.

1.8.1 Intellectually Disability

Intellectually disability is an important concept in special education. It refers to "significant deficits in both intellectual and adaptive functioning that impair a person's ability to function in their current society without significant support" (Kryszak, Scherr, & Mulick, 2019, p. 14). According to Harris (2006), this term "refers to impairments in both cognitive functioning and adaptive skills whose onset is during the development period" (p. 3).

For the purpose of this study, this term is used to refer to the children at the primary schools of special education whose intellectual IQ range is (50-70), mental age is (4-6) years, and their chronological age is (6-10) years old (refer to Weis, 2017).

1.8.2 Daily Life Skills

Daily living skills is a term that is widely used in research in special education (Khaledian, Kalleh, Raaei, Sogolitappeh, & Baghteyfouni, 2017). Stabel (2013) defined daily living skills as "a wide range of personal self-care activities across home, school, work, and community settings. Most daily living skills, like food preparation and personal hygiene, need to be performed on a regular basis to maintain a reasonable level of health and safety" (p. 839).

For the purpose of this study, this term is used to refer to the abilities of intellectually disabled children to solve some daily problems and to depend on themselves to satisfy their daily-life needs through training them on living skills which can help them to successfully adjust themselves to the society. These daily living skills include self-care skills, health care skills, skills of avoiding environmental dangers, and basic thinking skills.

1.8.3 Multimedia Program

Based on Pinheiro (1995), multimedia program refers to software programs that use more than one method of communicating information to the user such as text, graphics, sound and video.

For the purpose of this study, multimedia program which is the intervention program refers to a set of digital activities in which content is prepared and designed by utilizing multimedia elements and displayed using computer in the form of an instructional program including the cognitive and affective domains of specific life skills for intellectually disabled children. This type of teaching was carried out under the guidance of their teachers during practice.

1.9 Chapter Summary

This chapter has provided important background to the study. The statement of the problem, research objectives, research questions and hypotheses of the study are also dealt with in this current chapter. Additionally, this chapter presents the significance of the study and the definition of the most important key terms used in this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides literature review and the related theories. It starts with the concept of intellectual disability and what it refers to. This is followed by explaining the multimedia and its uses and importance in education. In this chapter, the conceptual framework of this study is described along with visual representation of this framework. Related studies are reviewed at the end of this chapter.

2.2 Intellectual Disability

Intellectual disability is not a disease in itself, but an indication of many conditions and diseases, whether it is genetics or acquired. According to Johnson (2012), it refers to limitations in intellectual functioning and other associated skills of communication, self-care, and social skills. In fact, it is not one image but images and multiple degrees. Researchers have shown that intellectual disability can be too difficult to be recognized or detected due to the presence of other hidden or clear disabilities such as vision or hearing disability as well as communication problems (Morgan, Leonard, Bourke, & Jablensky, 2008).

The concept of intellectual disability is not new for human beings because it is one of the phenomena that are known since the ancient times. Through the centuries, these phenomena have identified this problem as a social and psychological problem that needs to be dealt with. Psychologist and specialists have worked to define and

identify the reasons behind it, in order to help the child and teach his parents to deal with him. According to M. Ibrahim (2003), intellectual disability is a deficiency in the intelligence rate of the child leading to his incapability to cope with himself and his surrounding environment. This can be seen through failing to take care of himself and his inability to build social relationship with people around him.

2.3 Educational Program for Children with Intellectual Disabilities

The preparation of any educational program requires some steps, and the first one is the determination of the basic requirements for the preparation of this program. The following reviews are some of these requirements, followed by the most important life skills necessary for children research sample through the practices of a range of scientific activities designed in the light of the behavioural characteristics.

2.3.1 Educational Program Requirements for Children with Intellectual Disabilities

According to Shakir (2005), there are a range of steps that should be done prior to the implementation of the program among children with intellectual disability. These steps are:

i. Medical, psychological and social examination of the intellectually disabled child so that every child has a special record that includes all of the required data to diagnose his condition and also include the intelligence, speech, social and personal adjustment tests.

ii. Organizing the class room, taking into account the homogeneity as much as possible, as it should contain a small group of intellectually disabled children to study each case separately.

iii. The necessity of giving specialist teacher with appropriate professional educational preparation. The instructor or the teacher should have experience to deal with intellectual disabled children and the activities that fit with their abilities.

iv. Provide the necessary tools such as equipment and aid tools for the disabled.

v. Provide adequate facilities for students within the school building and focus on their staying on the first floor.

vi. Prepare classrooms to fit the intellectually disabled and to be appropriate to implement appropriate activities, in terms of area or lighting.

vii. Choose and prepare the appropriate stimuli that require the child responses.

2.4 Life Skills for Children with Intellectual Disabilities

In spite of the abilities of human beings, some individuals with remarkable capabilities in their field fail to face many of their daily life situations, due to the lack of life skills that are fit with their willingness, abilities, and their life requirements (Khawla & Magda, 2005). Jones (1999) believes that there are three entrances to the definition of life skills:

i. Life skills are defined as the performance and personal choices that causes, increases happiness, usefulness and wellbeing of individuals.

ii. Life skills are defined as mental and sensory abilities that are used to achieve individual desirable objectives.

iii. Life skills are defined as a set of processes and procedures by which an individual can solve a problem or face a life challenge.

While Dawson (1998) said that life skills are the desire, knowledge, and the ability to solve personal life problems, social problem, face the daily challenges or make modifications and improvements in the style and quality of life of the individual and society. In addition, the strength and the weakness of the life skills of the individual measured by estimating the strength and weakness of individual choices.

The life skills for children varied whether in school, family or in their contact and relationships with others. Therefore, the possession of these skills is the way to happiness, acceptance of others to live with them and to achieve the adjustment with others. However, without these skills, the disabled child will be unable to communicate and interact with others (Abdel Razek, 2004). In this sense, Hassouna, (2007) confirms that a child's success in gaining multiple life skills not only help him in the social adjustment, but it is considered as a requirement of the necessary conditions to solve any problems facing those children in the daily life situations.

In this regard, educators see that despite of the importance of life skills for children in general, they represent more importance for children with intellectual disabilities as these skills can help those children to cope with their daily needs. Rihani (1992) defines life skills for children with intellectual disabilities as the skills that help to provide opportunities to strengthen both physical and mental health, in addition, to providing opportunities for self-help, social growth and the growth of motor skills.