

The Impact of a Program Based on Fieldtrips in Reducing Behavioral Traits of ADHD learners: a Context of Saudi Arabia

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Abstract

Field trips are not as important feature in the educational system of Saudi Arabia as it is commonly observed elsewhere. Due to the access of alternate sources of learning and technological interventions, even Saudi Arabia is witnessing a quick reform in educational sector as well. The study aimed to assess the impact of a program based on field trips in reducing the behavior of Attention-Deficit Hyperactivity Disorder (ADHD) of the students with learning difficulties. The researcher followed a semi-experimental method that consisted of 60 students, 30 each for the control and experimental groups. The results showed significant differences between the pre and post measurement scores of the experimental group. There are statistically significant differences between the pre and post measurement of both groups in the reduction of the behavior ADHD, where the value of (t) of the experimental group 16.45 and statistical significance 0.00. The differences were in favor of experimental group. The value of (t) for the control group was 22.92 and the statistical significance was 0.00. There is a marked decrease from 22.92 to 16.45. This program highlights the merits of field trips which are easy to administer and the school counsellors can assist the teachers/educators to handle effectively the special cases of in the context of Arabic speaking community.

Keywords: training program, educational trip, ADHD, learning difficulties

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Introduction:

Attention- deficit Hyperactivity Disorder (ADHD, hereafter) requires serious attention as almost 3-7% of school-going children are affected with this disorder (Barkley, 2001). The ADHD cases encounter social as well as educational difficulties as this causes peer rejection, teachers' inattention, etc. which lead to various abuses. This gets intensified due to families' unawareness of such disorders and social rejection of the underachievers as the society expects the individuals to perform the best (Magyary& Brandt, 2002). There are various issues related to ADHD; one of them is Oppositional Defiant Disorder (ODD) co-occur with ADHD in almost 50% of the cases. This makes the case even worse for the teachers as

such features exhibit non-compliance with the prescribed rules and they outburst when the things don't follow their ways. There have been various intervention techniques developed such as behavioral management technique in a classroom setting, cognitive behavioral technique etc. The present study aims to propose a program, effective enough to deal with behavioral traits of ADHD cases of learners with learning difficulties. The ADHD Contemporary educational trends emphasize the need for effective teaching. The concept of teaching becomes a process that requires stimulating education, leaving impressions on students' behavior, determining their attitudes, attitudes and tendencies, and thus working to change their academic and intellectual skills.

Learning difficulties vary with respect to its appearance and intensity. This phenomenon affects the life and self-esteem, education, occupation, social adjustment, and daily life activities of an individual (Al Mafraji, 2011; Sulaiman, 2015). The role of specialists in psychology is to measure and diagnose learning difficulties, explain the role of learning theories and its impact on modifying behavior in educational programs, especially related to extra-curricular activities (Mahar & Charlmers, 2007). As the teaching strategies are the educational tools in translating the curriculum and the related elements into reality. They maintain a balance between the goals and content, and identify the methods and activities to be used. They also have to determine the role of both teacher and learner in an educational process. The need to develop these strategies has emerged as the recent trends of research works have considered the active and positive participation of the learners in the educational context (Al Din, 2013).

The field trips method is one of modern teaching methods based on a range of contemporary teaching ideas, developed in the field of educational psychology and learning. It is based on teaching ideas for understanding and selective learning. Meaningful learning, thinking skills and enriching learning are therefore a relatively modern and comprehensive methods compared to other teaching methods (Al Zeitoun, 2003a). As an integral part of educational program, a good field trip provides first-hand experience of the concepts to the learners, and thus provides a unique learning opportunity which is not possible to provide them with within a classroom situation. In these activities learners learn to build the connections between the content with the real life objects or situations which is found to have very robust impact on the learners' understanding of the content (Myers &

Jones, 2018). Based on the above, it has been shown that learning represents hierarchically organized processes that require mastering basic processes so that they integrate to form the bases for advance learning in science and other related disciplines.

Research Problem

Teaching becomes boring in the absence of motivational stimuli for learning that makes students hate learning because it is filled with information that enters their minds without understanding or mastery, and evokes that information at the time of testing. This type of education has become frustrating in teaching science to school students. Therefore, it is necessary to think about a model of learning that will be an incentive for learning, understanding, mastering, thinking, enriching and evaluating. It is the method of field trips which is being studied by the researcher and its effect on reducing the behavior of excessive activity accompanied by distraction (ADHD) which would result in better achievement by the students.

Research Question

Is there an impact on the educational trip based training program in reducing the behavior of excessive attention-deficit activity in students with learning disabilities?

Importance of the study

Through the researcher's knowledge of the model of the field trips, it was found that this work is to motivate them to learn and participate and also to reignite desire to learn the new lessons. In turn they will acquire basic information and skills through the processes of understanding and mastery, which will further stimulate their thinking and enrich their learning too. The results of the study will serve as direction for the policy makers as well as the professional involved in special education to stimulate and enhance the learning experience of the learners with difficulties in public and private institutions.

Limitation of the study

The sample of the study consists of primary school students with learning disabilities in Saudi Arabia. The results of the study have been generalized in the light of the results of the study based on the program based on the educational trip to find its effect on ADHD students. The program was prepared and implemented by the researcher on the sample of 30 students only.

Technical terms

Field trips: The teacher's teaching plan, which is accompanied by the learning activity inside and outside the classroom situation, in order to achieve the teaching objectives, which makes teaching effective and makes learning a pleasurable experience to the learner. It enriches the learning of concepts, skills and also changes their attitudes towards teaching and learning process (Al Din, 2013; Zeitoun, 2003b).

Attention Deficits: Distraction of attention means the inability to follow and focus on selected tasks and stimuli that are related to the educational situation or may be overemphasized by situational stimuli (Mahar and Charlmers, 2007). The current study will focus on students with ADHD which is to be monitored by a notecard.

Literature review

Orion & Hofstein (1994) highlighted the challenges of the learning situations wherein both the classroom content as well as the outdoor activities play a significant role in building the conceptual foundation of the learners. There are other studies which emphasized on the preparations of the students for the field trips or out of school settings to yield better results (Anderson, Kisiel, & Storksdieck, 2006; Falk & Dierking, 1997, 2000). There is no dearth of literature that seek attention on the other variables that significantly affect the field trip's learning outcomes such as identity formation, learning value system, spiritual enhancement

and so on (Bell, Lewenstein, Shouse, & Feder, 2009). Research indicates that such informal learning environments do contribute to the knowledge and skill development of the learners, but not their achievement in standardized tests (Adams, Gupta, & DeFelice, 2012). Field trips are good for included in the curriculum and should be used as pedagogical tools in instructional framework; and there is rich literature available supporting this. Various disciplines such as science and allied fields indicate substantially the merits of field trips for regular schools and institutions for higher education. Be it creative arts or scientific learning or knowing the society and various forms of administrative system, field trips have its own importance in the reinforcement of the learnt concepts or principles, provided the trips are well organized and properly administered (Ballantyne & Packer, 2009; Dillon et al., 2006; Orion & Hofstein, 1994). Out of school learning not only facilitates conceptual and social learning, but also skill development (Falk & Dierking, 2000; Tal et al., 2014). It is well accepted that cognitive outcomes are only one part of the other merits of outdoor learning (Falk & Dierking, 2000; Schauble et al., 2002). There are cognitive (content related acquisition of new information) as well as non-cognitive (social interaction, interest and motivation) learning (Bamberger & Tal, 2008; Tenenbaum, Wormald & Pegram, 2015). In regular educational set ups, it is quite clear that field trips have merits to address all the related variable of learning outcomes such as gaining knowledge, enhancing thinking skills, attitude building, motivation and redirecting emotional drives (Mintz & Tal, 2004). Brody (2005) indicated the positive impact on sensory experience as well.

It has positive impact Suleiman (2015) conducted a study aimed at identifying teachers' knowledge of attention deficit disorder and

hyperactivity. The sample of the study consisted of (102) teachers at the Baba Educational Administration, Governorate of BeniSuef in Egypt. The researcher used the knowledge scale with attention deficit disorders (Sciutto et al., 2000; Salmelalein, 2002). The results of the study indicated that the teachers' knowledge of ADHD was very weak. The average knowledge of teachers was 43.71%. There were no significant differences between males and females in quantitative knowledge of disorder. There were no significant differences between teachers who have experience of disorder and teachers who do not have quantitative knowledge of disorder. The teachers, who attended professional training course, were found to be better than the ones without that. In terms of their respective qualifications, there was no difference as such.

There are studies related to Arab context but nothing as such related to the impact of field trips in educational settings. Al Sharif (2011) investigated the goal of learning the effect of using concept maps on achievement and adjusting attention deficit in special education students. The researcher used experimental design on a sample of fourth grade pupils in special education. This study was implemented in relatively smaller sample. The results showed significant differences between the average of the experimental group and the control group. The study recommended the use of concept maps in the education of special education for the teaching of science. Al-Mafraji (2011) studied storytelling and role play in dealing with the ADHD students. The sample consisted of 28 primary level students. After the statistical processing of the data, the results showed that both experimental groups showed significant improvement in the students' achievements. Ahmed and Al Din (2011) designed a program to reduce attention deficit hyperactivity in students with learning

disabilities for grades third & fourth graders in Khartoum, Sudan. He used Teachers' Assessment of Learning Disabilities Characteristics, Michael Best Scale for Learning Disabilities and Test of Colored Sequences for Children for his study. The study concluded that the intervention program had a statistically significant effect in reducing ADHD in students. The study also showed that there were no statistically significant differences in terms of their educational level and gender as such.

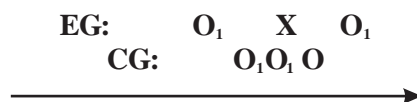
Mahar & Charlmers (2007) conducted a study on the teachers' perceptions of the students who get diagnosed with ADHD. Around 60% teachers responded that their initial referral play an important role in the initial detection of ADHD. This study also made generalizations about the teachers' perception of characteristic behavioral traits of ADHD cases in order to reach effective diagnosis. In a similar vein Ghanizadeh (et al. 2006) conducted a study on elementary school teachers' knowledge and their attitudes towards the disorder. The study was applied to the primary school teachers employed in Shiraz. The study found that teachers' knowledge of the disorder was relatively low, with 46.9% agreed that the disorder was due to genetic and 53.1% found biological bases as the cause of disorder. Around 64.8% of the teachers said that the use of punishment methods can be applied to special cases just like the normal cases. And 77.6% of them believed that children with ADHD found difficulties in maintaining the pace with their peers. There was a statistically significant correlation between teachers' knowledge of the disorder and their attitudes. Their knowledge of the disorder was found to be very low and their main sources knowledge were television, radio, friends, relatives, newspapers and magazines. A study by Julie, Richdale & Hay (2006) found that there is considerable evidence of academic and social difficulties with children ADHD. However,

there is little discussion on as

to what teachers can do with them. This article summarizes the evidence on ADHD students, their relationship with their teachers, the knowledge of ADHD teachers, and their pre-service and in-service training. The researcher did not find a study that was directly related to the title.

Research methodology

The semi-experimental approach was used with experimental and control groups. The design of the study can be expressed in the following outline:



Study model

Target: EG: Experimental group & CG: Control Group

O 1: Scale of hyperactivity with attention-deficit (before, after)

X: Processing (application of program based on field trips)

Tools

In the current research, the researcher relied on two tools:

First: A training program based on the educational trip. The training program included

students of learning difficulties in the Kingdom of Saudi Arabia. The program was built in light of the following principles:

- Determine the number of sessions and the duration of each session.
- Set a goal for each session, and indicate how to achieve it.
- Taking into account the current level of performance of the children participating in the study.
- Raise the motivation of children.
- Stability and flexibility in the application of the daily program, which provides children with safety and the ability to discipline.
- Allows modifications or improvisations if necessary
- Benefit from the available materials available in the surrounding environment according to the characteristics, trends and abilities of the study sample
- The researcher sits with the students exchange dialogue and ideas, and allow them rest periods to have their maximum attention during program implementation (Al Din, 2011).

The following field trip model was followed for the present study (Fig. 1)

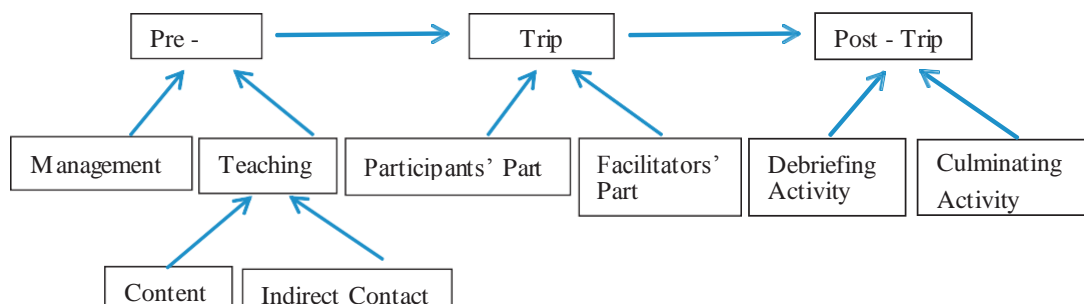


Figure 1. Framework of the study

A series of training sessions organized in time and prepared theoretically based on relevant literature and previous studies. The researcher conducted those sessions in order to reduce the behavior of excessive activity accompanied by attention deficit on the study sample. The strategy consisted of 10 sessions.

Rationale of the program

Among the most important reasons for this strategy, there is a need for cognitive enhancement of the learners with learning difficulties. Global professionals and educators involved in effective learning of special cases that have alerted to the importance of the stage of learning difficulties. The program is realistic and achievable in terms of transforming the theoretical foundations into a program through which the behavior of hyperactivity with attention deficit can be reduced in students with learning disabilities. There is an emphasis on the need to link theory and practical application, which aims to bring about changes and show their effects in improving the knowledge and performance of the sample members of the study. It aims to develop the spirit of participation through some activities where the participation of individuals with learning disabilities leads to strengthening the link among members of this group (Zhai & Dhillon, 2014).

Objectives of the program

The broad objective is to reduce the behavior of hyperactivity with attention deficit among the students with learning disabilities. The program also aims to develop the abilities of the individual with learning difficulties, and to improve learning while working within a group of his colleagues. Moreover, this activity encourages group work wherein all members help one another in overcoming difficulties.

Study procedure

The evaluation process is intended to determine the success of the proposed program

or its failure to achieve the overall objectives. Therefore, the current program ensures the activities that are suitable for the needs of learners with learning disabilities. It also ensures the consistency and integrity of content elements, its logical sequence as displayed in the form of activity in each unit. The skill to be learnt from each activity was also ensured well in advance (Morag & Tal, 2012). The researcher presented the program to a number of professors of education in the universities, especially professors of special education and educational psychology and asked them to arbitrate in terms of its suitability and the time duration allocated for the sample. To identify the impact of the application of the educational trip program, the researcher monitored the students by applying the measure of the behavior of hyperactivity accompanied by attention-deficit and verified its psychometric characteristics for the purpose of relying on the assessment. To ensure the authenticity of the tool was presented to a group of experts with rich experience for the overall development of the program. The study was initiated after taking the necessary formal approvals. Study samples to experimental and control groups were distributed in a random way. After identifying the sample of the study, their behavior of hyperactivity with attention deficit was calculated in the pre measurement of the study sample of both groups. The educational trip program was applied to the experimental group. After the application was completed, post measurements of their behaviors were calculated to perform appropriate statistical analyzes. Finally, the results were interpreted and discussed to make recommendations based on the results of the study.

Statistical Methods

To achieve the objectives of the research and to answer its questions, the arithmetic averages and standard deviations of the sample

scores were calculated for the experimental and control groups. Then the Paired Samples Test was conducted for samples to identify the differences between the pre and post-test scores for both groups.

Results & Discussion

Question: Is there an impact on the educational trip-based training program in reducing the behavior of hyperactivity with attention deficit in students with learning disabilities in Saudi Arabia?

In order to answer this question, the arithmetic mean and the standard deviations of

the pre-measurement and post-measurement of the control and experimental groups were extracted. The Independent sample T Test was applied to the independent samples to detect differences between the two groups on the post-measurement.

Paired Sample t. Test for Dual Samples: To identify the differences between the pre-and post-test measurements of each group to reduce the behavior of hyperactivity with attention-deficit. The following table illustrates this.

Group parity

Table 1 Independent sample T Test to identify the equivalence of the two groups in the written performance on post measurement (n = 60).

Domains of learning	Groups	Arithmetic Mean	Standard Deviation	T value	Degree of Freedom	Statistical significance
Understanding	Cont.	1.62	0.15	1.641	58	.106
	Experi.	1.55	0.17			
Emotional Learning	Control	1.52	0.17	.077	58	.939
	Experi.	1.52	0.16			
Meaningful learning	Cont.	1.45	0.16	1.873	58	.066
	Experi.	1.37	0.14			
Thinking	Cont.	2.15	4.02	.863	58	.392
	Experi.	1.51	0.44			
Enriching learning	Control	1.41	0.19	.728	58	.469
	Experi.	1.38	0.16			
Overall(in general)	Cont.l	1.63	0.78	1.129	58	.264
	Experi.	1.47	0.13			

The table 1 shows that the values of t are weak and not statistically significant at the α (0.05) level in pre-measurement. This indicates the

parity between the two groups (control and experimental) in the post-measurement.

Table 2 Independent sample T Test to identify the differences between the two groups in the written performance on the telemetry (n = 60).

Domains of learning	Groups	Arithmetic Mean	Standard Deviation	T value	Degree of Freedom	Statistical significance
Understanding	Cont.	1.23	0.16	- 3.176	58	.002
	Experi.	1.37	0.17			
Emotional Learning	Control	1.08	0.08	- 13.810	58	.000
	Experi.	1.43	0.12			
Meaningful learning	Cont.	1.22	0.13	-2.816	58	.007
	Experi.	1.30	0.10			
Thinking	Cont.	1.18	0.17	2.206	58	.031
	Experi.	1.10	0.11			
Enriching learning	Control	1.23	0.13	2.595	58	.012
	Experi.	1.14	0.13			
Overall(in general)	Cont.l	1.19	0.07	-5.646	58	.000
	Experi.	1.28	0.06			

The table 2 shows that the value of t is statistically significant at the level of significance ($\alpha = 0.05$) between the two groups (experimental and control). The differences were in favor of the experimental group. The control group indicates that the pupils not significant improvement.

Table 3 Paired Samples Test for double samples to identify differences in pre and post-test measurements of experimental and control groups in written performance

Domains of learn in	Measure- ment	Grps.	Arith meti Mean	Std. Deviation	T value	Degree of Freedom	Statistical significance
Understand ing	Pre	Cont.	1.2 3	0.1 6	- 3.17 6	58	.002
	Post						
	Pre	Experi	1.3 7	0.1 7			
	Post						
Emotiona l Learning	Pre	Cont.	1.0 8	0.0 8	- 13.81 0	58	.000
	Post						
	Pre	Experi	1.4 3	0.1 2			
	Post						
Meaningf ul learnin	Pre	Cont.	1.2 2	0.1 3	-2.81 6	58	.007
	Post						
	Pre	Experi	1.3 0	0.1 0			
	Post						
Thinking	Pre	Cont.	1.1 8	0.1 7	2.20 6	58	.03 1
	Post						
	Pre	Experi	1.1 0	0.1 1			
	Post						
Enriching learning	Pre	Cont.	1.2 3	0.1 3	2.59 5	58	.01 2
	Post						
	Pre	Experi	1.1 4	0.1 3			
	Post						
Overall(in general)	Pre	Cont.	1.1 9	0.0 7	-5.64 6	58	.000
	Post						
	Pre	Experi	1.2 8	0.0 6			
	Post						

From the table 3, there are statistically significant differences between the pre and post measurement of both groups in the reduction of the behavior ADHD, where the value of (t) of the experimental group (16.450) and statistical significance (0.000). The differences were in favor of experimental group. The value of (t) for the control group was 22.923 and the statistical significance was 0.000.

By looking at the figures, it can be noted that there is a marked decrease from (22.923) to

(16.450). This indicates the superiority of the group that received the program based field trips.

In order to identify the impact of an educational field trip-based program in reducing the behavior of ADHD in students with learning difficulties, ANCOVA was applied. The following table illustrates this.

Table 4 ANCOVA results to identify the differences between the two groups in reducing the behavior of hyperactivity with attention to the telemetry with the presence of the accompanying pre-test

	Total Squares	Average Squares	Degree of Freedom	(f) Value	Statistical significance
Groups	0.127	1	0.127	31.392	0.000
Pre-Measurement	0.001	1	0.001	.160	0.691
Errors	0.230	57	0.004		
Corrections	0.358	59			

The results showed that there was no difference in the reduction of the behavior of the hyperactivity with attention in the pre measurement, which confirms the equivalence between the two groups. Pre measurement indicates that the improvement of the experimental group was caused due to the impact of the program based on the field trips, since the statistical significance of the pre measurement with 0.691, and the significance of the group was 0.000.

The result of the present study is in line with the results of each study conducted by Al Mafraji (2011), which showed that the results of the first and second experimental groups were superior to the control group in dealing with ADHD cases. It is also consistent with the research of Ahmed and Al Din (2011) who concluded that the intervention program is statistically significant in reducing ADHD

among students. There are works point to the merits of this strategy, but there are shortcoming as well which need to be addressed well while looking at its scope in the curriculum. These findings have implications for the educators and the professional trainers involved in special as well as regular school education). Since the learners exhibit more behavioral issues in low structure settings which result in punitive measures by the school administration and in some case harsh punishments as well (Barkley, 1997). Therefore, the teachers are required to prepare the field trips wherein the learners get exposed to high structure settings and exhibit positive behavioral traits as required for active learning. The sample of the present study was limited to 30 individuals with ADHD that reside in Saudi Arabia. It is not clear as whether this is equally effective for the girls as well or not. Although the previous studies carried out on

other variables, showed no significant difference as such in terms of gender, there is still a need to replicate similar sort of study on larger samples with as many variables such as gender, location and ethnic background of the participants. However, this study serve as an initial framework to assess the effectiveness of field trips in an educational setting as the professional still carry on with their traditional method of instruction. There are many cultural issues attached to such practices which prohibit the professionals to incorporate such progressive strategies. Gender segregation, women only and access to public places prohibition based on gender restrict many new models to be fully explored in Saudi Arabia. Nevertheless, the changing dynamics and the laws would bring in many things possible for all and will certainly yield many reforms in the educational practices as well.

First of all, these outdoor activities are expensive so this would incur extra financial burden on the institutional budget. These activities make the teachers passive wherein they find themselves as caretakers or discipline keepers (Morag & Tal, 2013; LavieAlon & Tal, 2015). Despite of its merits, many variables are still yet to be explored in order to assess its effectiveness in dealing with learning difficulties of the special cases. The affective aspects of learning among special cases are yet to be explored in detail, especially in the Arabic speaking individuals who live in a social system where gender segregation is a way of life. The social interaction level is too low and the field of special education is not fully evolved in terms of professional practices.

Conclusion & Recommendations

Extra care and attention is needed for the learners with learning difficulties, especially the ones who suffer from ADHD. Recognize centers and the institutions involved in should give them priority so that the most effective curriculum can

be designed. They should also encourage the use of field trips in their intervention programs so as to have the benefit from them. Moreover, the professionals involved in teaching and training should be made aware of the consequences of ADHD as they form the first stakeholder to diagnose timely the symptoms so that proper and most effective remedial measures could be taken to meet the desired educational objectives. Though these activities are expensive in nature and the teachers also need to be very well prepared in advance about the learning settings, a proper planning can definitely yield encouraging outcomes. A successful field trip requires the teachers to plan the venue, staff and the activities before the trip. The teachers should form the groups in advance and brief them about the activities related to the content already discussed in the classrooms. Thus the learners should be aware of their responsibilities and the activities to be carried out. No matter whether the school is located in urban, suburban or rural set up, learning from the nature through real life activities is possible anywhere (Lei, 2010). There is a lot to learn from the real life situations and various contexts add to multiple perspectives for the learners to enhance their skills.

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