# The Effectiveness Of A Learning Tool Based On Concurrent Thinking To Treat The Distraction Of The Gifted With A Double Exception

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#### Introduction

Gifted students get high scores on IQ tests, and achieve achievement scores that place them 2-5% above their peers, so we find paradoxically that the gifted suffers from distraction disorders, and this has sparked the thinking of scientists and researchers. Double-exceptional students are defined as gifted, concurrently disordered students who score 120 and above on intelligence tests and advanced scores on tests of creative thinking, synchronous reasoning, critical thinking, and academic achievement. Identifying students with a double exception is not easy, as it requires an awareness of the unique relationship between the two sides of the exception, as well as knowledge and ability to use detection and diagnostic procedures that provide alternative perspectives for giftedness and disorders. This complicates detection and diagnostic procedures (Al-Samadi 2015)

#### The study Problem

Children with a double exception, where the individual combines talent and disorder such as attention deficit, which makes their behavior inappropriate, which negatively affects the level of their academic achievement and their possession of the basic skills necessary for success, and leads to the presence of many behavioral problems, which consolidates the child's belief in his weak self-efficacy, Inability to change, inability to control the behaviors he performs, and not showing his talent (Radwan 2011). Hence the study of the distraction of the gifted with a double exception, where the researcher designed an educational tool called the Concurrent Then this study was carried out to measure the effect and effectiveness of the method in treating gifted distraction with the double exception, as it is within the limits of the researcher's knowledge that the interaction between these groups is almost in the process of modernity and studies lack such variables. In addition to increasing the symptoms of distraction among these talented people so that they can be diagnosed early to determine the appropriate

intervention to develop and benefit from their abilities, through educational means to treat attention deficit on the one hand, and nurturing and enriching talents.

# The purpose of the study

To identify the effectiveness of an learning tool based on the theory of concurrent thinking in addressing the distraction of female students in Al Rayyan private schools in the Kingdom of Saudi Arabia.

# **Study question**

What is the effectiveness of the learning tool based on the theory of concurrent thinking in addressing student distraction in Al Rayyan private schools in the Kingdom of Saudi Arabia?

# Study hypothesis

There are statistically significant differences between the average ranks of the experimental group in the tribal measurement of distraction

Average scores of the same group in the post hoc measurement to the instructional medium (the concurrent thinking board).

# The importance of studying

The importance of the current study is that it dealt with the issue of gifted people with a double exception (related to Attention Deficit) by directing attention to this category, as most studies focus on the distraction of ordinary students, but rarely find a study looking at the distraction of talented people.

The importance of the study lies in the fact that it reveals an learning tool based on a modern theory, which is the theory of Concurrent Thinking, which helps teachers and mentors in providing an educational tool for general education students that addresses distraction and develops Concurrent Thinking.

The study seeks to provide researchers with knowledge and information through theoretical literature and previous studies on Attention Deficit and concurrent thinking.

#### Study methodology

The study adopted the quasi-experimental approach through the design of a single group, the experimental group. Measure, then compare the average increase between the two measurements, and test the statistical significance of the difference between the two measurements, with the aim of identifying the effectiveness of an learning tool based on the theory of concurrent thinking among talented people with double exceptions.

# Study variables

The independent variable: the educational tool based on the theory of concurrent

Dependent variable: Attention Deficit

thinking

# Terminology of study

Concurrent Thinking: Abdeen defined it as doing more than one mental task at the same time (Abdeen (2014), and it is procedurally known as the total score obtained by the subject on the Concurrent Thinking test

Attention Deficit: A neurological and behavioral disorder, manifested in the form of inattention and inability to focus for a sufficient period of time to carry out the required task (Ministry of Education, 1437)

The talented with the double exception: They are gifted on one hand in one or more of the talent areas, but on the other hand suffer from Attention Deficit, hyperactivity, or both (Jarwan 2008)

# The study sample

The sample of the study amounted to (30) female students from Al Rayyan Private Schools, and the sample was divided into (15) female students in the experimental group and (15) female students in the control group.

# The limits of the study

The study was limited to a sample of middle and secondary school students at Al-Rayyan Private Schools in Madinah, Saudi Arabia, during the first semester of 2020-2021.

# **Study tools**

- 1-Concurrent Thinking Board
- 2-The Attention Deficit Test (Radwan 2011)

#### **Previous studies**

Abdeen's study 2020, aimed to identify the level of Concurrent Thinking and its relationship to achievement motivation among students of the College of Business Administration at Taibah University. Honesty and reliability, the study revealed that the level of Concurrent Thinking was a percentage of low degree, while the percentage of motivation was a percentage of a higher degree. In teaching Concurrent Thinking and its relationship to managing emotions among university students, the study used the descriptive approach, and the sample of the study was 400 male and female students. In favor of females and the absence of differences in concurrent thinking according to the variable of specialization,

(Salal 2020 study), which aims to In order to know the effectiveness of an electronic educational program based on the theory of concurrent thinking in the achievement and development of technical skills among students of the College of Education, the study used the descriptive and experimental approach and the research sample consisted of 80

male and female students, and the sample was divided into 40 controls and 40 experimental.

(Abbas 2020 study), which aims to identify synchronous thinking and its relationship to managing actions, For university students, the descriptive approach was used, and the study sample reached 400 students, and the researcher adopted the Abdin Scale of Synchronous Thinking. The study concluded that the students have a high level of synchronous thinking, and there are differences in synchronous thinking according to the variable of sex and in favor of females, and there are no differences in synchronous thinking according to the variable of specialization.

In Al-Ahmadi's study (2018), the study aimed to identify the reality of teachers' use of electronic educational aids in teaching students with attention deficit hyperactivity disorder. To achieve the objective of the study, the researcher used the descriptive analytical method, and the study sample consisted of (140) male and female teachers in schools that contain distraction and hyperactivity programs in the city of Riyadh for the academic year 1439/1438 AH. The study concluded that the general arithmetic means of the dimensions of the reality of teachers' use of electronic educational aids in teaching students with attention deficit hyperactivity disorder indicates a high degree of practice. The study also found that teachers face many obstacles that make it difficult for them to use electronic educational means in teaching students with distraction and hyperactivity, where the dimension (obstacles related to the environment) ranked first among the dimensions of obstacles to teachers' use of electronic educational means in teaching students. Those with Attention Deficit Hyperactivity Disorder, followed by the dimension (obstacles related to the authority supervising the teacher), then the dimension (obstacles related to the teacher) ranked third, and the dimension (obstacles related to the curriculum) came in the fourth place, and the dimension (obstacles related to the student) ranked fifth. and the last

The study wronska, zapirain, zorrilla (2015) which aimed to use the iPad to improve the abilities of children with attention deficit hyperactivity disorder by developing a game based on exercises to enhance attention through reading, pictures, comprehension, and observation, the study was conducted on (6) children aged between (8) The results obtained from the participants in the game were analyzed with questionnaires regarding the possibility of using the system. An easy-to-use image, an effective tool, moreover, based on the feedback obtained from the participants, it was shown that the game may improve additional functions such as satisfaction and usability of the same treatment with other methods.

#### The talented with the double exception

The term dual-exceptional children refer to the category of gifted children with disabilities who have high abilities and potential in one of the areas of talent, but at the same time suffer from a disability or handicap that prevents the emergence of these

abilities. For example, they suffer from a movement or health disability, sensory disability, difficulties and slow learning, emotional disorders, autism, or developmental delay. These children are considered double exceptions, as the first exception is that these children are gifted in one of the talent areas that include the mental, academic, creative, leadership, performing and visual arts, or sensorimotor abilities, and therefore they need certain programs the framework of special education in order to be able to develop their talents and development, while the second exception is the fact that these children suffer from a disability or disability, which may be motor, health, academic, emotional or sensory, and accordingly, they need educational and rehabilitation programs within the framework of special education (Al-Ahmadi, 2018).

Types of gifted double exception

talented Students with Physical Disabilities

talented Students with Sensory Disabilities

talented Students with Asperger Syndrome

talented students with behavioral and emotional disorders

talented students with learning difficulties

talented Students with Attention Deficit/Hyperactivity Disorder

talented and hyperactive students have difficulty focusing their attention, completing their work, following instructions, and organizing their school materials. At the same time, they reflect their talent through their advancement in ability and at high levels of performance, especially when it is in their area of interest and when the task poses a challenge to them (Al-Samadi, 2015) Nikola Tesla, the inventor who helped usher in electric power in 1881 was He has excessive activity and Attention Deficit, and one of the care programs developed for the gifted with the double exception that meets their needs is to focus on developing talent, as made the efforts for students with Attention Deficit. were focused on treating basic academic skills at a time when few opportunities were provided to develop students' talent Gifted people with a double exception, as research has shown that focusing on weaknesses in the field of gifted development can lead to negative self-esteem, loss of motivation, depression, tension and psychological pressures (Al-Ahmadi, 2018). What is distinguished is that these students need a stimulating educational environment that facilitates the full development of their talents and abilities, and the enrichment activities should focus on the weak points. and avoid them and highlight their abstract thinking and creative production. It is indicated in this regard to the interest in developing programs directed to gifted students with learning difficulties, which must focus on refining and developing talent and excellence More than the difficulty for these students will lead to good and tangible benefits (Al-Samadi 2015)

#### **Attention Deficit**

Students with distracted attention find it difficult to focus their attention, complete their work, follow instructions, and organize their school materials, so they need special care.

# **Symptoms of lack and Attention Deficit**

A child who is distracted often fails to pay attention to detail and often makes silly mistakes in work, home assignments, or other activities. Focusing his attention and holding on to tasks for a long time often finds difficult He Appears to be listening or paying attention to what is being said When we speak to him directly but he does not follow instructions given to him by others

The most important characteristics and characteristics of children with low attention

They show superior athletic ability

Their performance in one school subjects is very high

Significantly increased ability to think abstractly

They are faster than their peers in learning different tasks

They are distinguished by their skills in using metacognitive strategies (such as: categorizing, grouping, and organizing objects according to their pattern or spatial characteristics).

Show more specialized interests than their peers of the same age.

They perform similar activities in more complex ways and over time they become more efficient at performing such activities.

They have shortcomings in their social behavior.

They show a great interest in justice that reflects an advanced level of their moral thinking abilities (Radwan, 2011).

# Flint (2001), classifies gifted people with attention disorder into five areas in terms of behavior, and they are:

# First, the sensorimotor domain:

It's easy to spot kids with this high speed, as they love and rush into movement, have extra energy, have a high level of activity on their part, and are restless.

#### Second, the emotional domain

They are characterized by the intensity of their feelings, their ability to empathize with others and the physical expression of feelings, their ability to see all sides of the situation, the difficulty of making new friends on their side, and they cry because of any frustration, no matter how small.

#### Third, the mental field

It doesn't seem that what they learn in this field is important to them, no matter how good or interesting, but nevertheless they tend to think, question, and debate rather than get a ready answer as they show an appropriate amount of focus

# Fourth, the field of imagination (imagination)

Children in this area are characterized by their ability to indulge in detailed mental imagery, brilliance, and superstitious thinking, and the fertile imaginative side of these children appears to be a lack of attention on their part.

# Fifth, the sensory field

Babies in this area are extremely sensitive to touch and feel happy when they see or experience beautiful or cool things.

# concurrent thinking

The Thinking Concurrent Theory is one of the latest theories that research the science of thinking, and the theory first appeared in 2014 in the global database (SCOPUS), and although the theory is recent, it has been used in scientific research and in building programs for development Think Like in the City's Global Program for the Development of Synchronous and Creative Thinking (Al-Jabab and Al-Sharariyi 2016)

The theory of Concurrent Thinking is based on neuroscientific research. (Human Brain and Human Learning) for Hart Leslie is one of the first books on the brain from an educational point of view.

# The concept of concurrent thinking

The power of the brain promotes a new type of thinking that we can call Concurrent Thinking, that is, thinking of more than one thing at the same time. In the possibility of engaging in more than one conscious mental activity at the same time and performing more than one conscious mental process at the same time (Abdeen, 2014, in contrast to vertical thinking (which depends on sequences and successive steps) and lateral thinking Concurrent Thinking is a pattern of thinking patterns Sternberg (1994) believes that the thinking patterns used throughout life are not fixed and vary according to the different models that we imitate at different times in our lives and individuals differ in the degree of flexibility in moving from one type of thinking to the other and in the strengths of their known preferences, although an individual may have patterns of thinking that he prefers over others. However, these patterns are variable and not fixed, and Kolb believes that the thinking pattern of the individual is represented by the way in which he receives knowledge, information and experience and the way he arranges and organizes it An information and in the manner in which it records, encodes and integrates information and keeps it in its knowledge store and thus retrieves it in the way that represents its way of expressing it, either by a physical or semi-formal means or in a symbolic way through letter, word and number (Qatami et al. 2005) where the thinking pattern is known as the

preferred method Sternberg (1994) The strength of this theory stems from the fact that it keeps pace with the tremendous speed of the cognitive revolution, which is one of the features of this era by investing the brain's abilities and energies to advance the individual in order to be able To keep pace with the rapid developments and meet the requirements and challenges of the current era, the student of today is not like the student of yesterday, and the brain of the student today is different from the brain of the student 10 years ago. Therefore, thinking in different and new patterns that accommodate the huge amount of changes of the era has become an urgent necessity in the world of thinking (Abdeen. 2015, Abdeen.) The theory of concurrent thinking does not talk about unconscious processes such as heartbeat or breathing or other unconscious processes that the brain regulates, but this theory focuses on the practical The multiple conscious mindsets at the same time, which is at the level of the conscious mind, such as hearing the news, browsing the net, writing a message, and talking with a person at the same time and with high efficiency. The channels that embody this, the individual may think audibly about the first topic and think about the second topic in a book on a sheet of paper, so we see that he thinks about the two topics, but the channel of embodying this is different. Many simultaneous conscious thought processes, because the brain contains millions of neurons. The thinking process takes place through the combination of groups of cells. Many other cells can be used and employed by other thinking processes, especially with the possibility of generating new neurons, in addition to processing sensory inputs and sub-level experiences. Consciousness, which calls for greater and broader use of the brain's capabilities (Abdeen, 2016).

# The importance of concurrent thinking

Practicing thinking means the optimal use of various thinking abilities. It has become very clear in light of the knowledge explosion and the acceleration of technology and in light of the increasing complexities of life and the presence of weakness in the use of thinking abilities and it has become keeping pace with life in light of the simple use of brain abilities and thinking abilities that meet our needs and requirements within the challenges of contemporary life (Abdeen, 2020) And since the brain's neurons are connected by nearly a million miles of nerve fibers, and since the brain contains a large unused area in the cerebral cortex (1994, Howard,), eliminating illiteracy is by practicing thinking, that is, by intensive training in different thinking patterns until it becomes Its use is a habit and its practice becomes automatic, which leads to investment and employment of the brain's dormant capabilities, so the gap between the power of thinking and the age of thought vanishes, and the shortcoming in the use of a larger area of the brain vanishes. Humanity suffers in general from a weakness in the practice of thinking, and since the human brain is not organically able to provide the intelligence and creativity necessary to produce a high level of intellectual processes (Abdul-Jalil 2006), teaching the individual how to think increases his ability to process information (Abdin Al-Balamfani 2009). 2014) Hence, the discovery of new patterns of thinking that help in the optimal use of the brain, positively affects the thinking process. The individual's

discovery of the brain's capabilities makes him adapt these abilities and select the best methods, and thus develops from how he performs and how many achievements he has, the theory of Concurrent Thinking, which is believed to work on employing the abilities of The brain to function in a better way in thinking processes (2020, Abdeen)

# **Development of Concurrent Thinking**

Academic educators see that there is a large gap between some theories and their practice and that theories lose a lot when applied, and therefore the gap between educational theories and practices must be bridged through complete clarity and knowledge of how to translate psychological theories and educational practices to educational practices (Abu Jadwa 2006.) The theory of Concurrent Thinking is one of the possible solutions to this problem By providing educators and academics with a strategy that is useful in training and teaching and helps in translating and transforming ideas into practical practices on the ground by providing a set of practical applications (Abdeen, 2020) the theory of Concurrent Thinking is characterized by its high applicability through its theoretical framework that provides the trainer, teacher, and educator with general and detailed guidance, and that In order to invest and employ his energies and potential in a larger and wider way. It can be trained through the synchronization strategy, which is a rational and logical method toward a diversified creative production that has its tools and techniques for carrying out multiple mental tasks at the same time. Abdeen,) and this needs training, as (Al-Salti 2004) indicates that the human brain is programmed to be creative, so patterns are examined in order to solve problems from the brain's specialty, but it needs practice and training, and we note that a scarcity of individuals possess this characteristic and it is a characteristic that individuals can possess through training and practice. This theory is not limited to talented and talented individuals, but it also includes ordinary individuals, taking into account the difference in the time taken for training and practice to reach the stage of mastery. (Abdeen, 2019) that Concurrent Thinking includes two capabilities, namely, 1- the ability to increase storage capacity 2the ability to speed information processing -

# **Characteristics of Concurrent Thinking**

And technology has become possessing higher skills and better capabilities in line with its age, so the optimal investment for those capabilities and energies lies through the Concurrent Thinking pattern that meets the needs of individuals. Concurrent thinking does not conflict with vertical, sequential thinking, nor with lateral thinking or other types of thinking. It is a new style and can even be applied with other styles (Abdeen) 2020.

#### Results

The hypothesis "There are statistically significant differences in the mean scores of the measurement group in the pre-measurement of Attention Deficit and the average scores of the same group in the post-measurement"

To verify the validity of this hypothesis, the researcher followed the following steps

Applying the Attention Deficit Scale before applying the teaching aid to the experimental group

The use of the teaching aid (the Concurrent Thinking board) on the same group

Applying the Attention Deficit Scale to the experimental group after using the educational tool

Determining the mean and total ranks of the experimental group's scores in the pre and post-application on the scale.

Determining the differences between the pre and post-application scores of the experimental group on the scale and degree dimensions.

Table of pre-application of the attention deficit scale for the talented

Function	average rank	total ranks	Z value
Attention Deficit	0,00	0,00	2,899-

#### \*\* 0.01 Indication level

Post-application table of the Attention Deficit Scale for the talented

Function	average rank	total ranks	Z value
Attention Deficit	6,99	67,89	2,899-

#### \*\* 0.01 Indication level

It is clear from the previous two tables that there are statistically significant differences between the pre- and post-application of the experimental group z on the attention-dispersion scale. A function at the level of 10,0, in favor of the dimensional measurement, which indicates a decrease in the level of distraction. Table (1) and Table (2) showed an increase in the value of (Z) for distraction (-899.2). 0.74 in the pre-measurement, while in the post-measurement it reached 9.54. The results indicate a clear improvement among the sample members, as the level of distraction was reduced through the use of the learning tool (the Concurrent Thinking board) based on the theory of concurrent thinking to treat the distraction of attention

#### Discuss the results

This result can be explained in the light of the theoretical contingency of the study, which indicates that the use of treatment for distraction

Contributes to reducing the level of distraction, and the researcher used a treatment for distraction through the use of the thinking board

Simultaneously, the educational medium has been designed to suit the gifted with double exception who have dispersion

#### Attention

Therefore, gifted people with a double exception who suffer from attention deficit need special educational aids

To reduce the degree of dispersion and at the same time take into account the aspect of talent and excellence they have, and this resulted in

A noticeable improvement in the level of distraction, in addition to the development of their Concurrent Thinking, which led to the feeling of students

Excellence and superiority over their peers, which reflects the effectiveness of the Concurrent Thinking board in addressing what is suffering

Gifted people with double exception from attention deficit problems and at the same time developing their talents

This indicates the effectiveness of the learning tool based on the theory of concurrent thinking in addressing the distraction of attention

Students of Al Rayyan National Schools in Medina, Saudi Arabia

This result is attributed to the fact that the learning tool based on the theory of concurrent thinking aims to treat distraction

This also appeared during the exercise and training on the Concurrent Thinking board, which shows the ability of the synchronization board to treat

Attention Distraction This result is in agreement with the results of the study (2010.al et D).

# Recommendations

Conducting more studies that investigate the treatment of distraction among the - gifted with a double exception

Conducting more studies that look at teaching aids based on the theory of concurrent - thinking in the light of

Other variables

Training students on activities that develop Concurrent Thinking

# **Summary**

The study aimed to find out the effectiveness of an learning tool based on the theory of concurrent thinking for gifted students with a double exception in Al Rayyan private schools in the Kingdom of Saudi Arabia for the first semester of 2020-2021, and the study sample consisted of 30 students. The quasi-experimental approach was used and the study sample was divided into two experimental groups, each group containing 15 students. The learning tool was applied to the experimental group, attention dispersal was used as a pre and post measurement tool, and the data were processed using the SPSS statistical package. The results of the study indicated that there were statistically significant differences in favor of the experimental group that applied the learning tool, which indicates the effectiveness of the method in treating distraction. In these results, the study recommended conducting more research and studies to study the theory of concurrent thinking. It also recommended studying the effect of the learning tool on other academic variables.

**Keywords:** concurrent thinking theory, pedagogical style, gifted with double exception, distraction

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