

The Effectiveness of a Training Program Based on Creative Thinking Skills in the Development of Self-Concept among Gifted and Outstanding Students at the Deanship of The Preparatory Year at Imam Abdul Rahman Bin Faisal University

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Article Info	Abstract
<p>Article History</p> <p>Received: November 17, 2020</p> <p>Accepted: January 02, 2021</p> <hr/> <p>Keywords Gifted; Outstanding; Creative Thinking</p> <p>DOI: 10.5281/zenodo.4411179</p>	<p><i>This study aimed to investigate the effectiveness of a training program based on creative thinking skills in the development of self-concept among gifted and outstanding students in the Deanship of the preparatory year. In order to achieve the objectives of this study, three questions were answered. The sample consisted of (55) male and female students in the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University. Moreover, a training program was designed based on creative thinking skills. It was applied to the members of the experimental group during the first and second semester of the academic year (2017/2018). The self-concept measure of Kilani and Abbas (1981) was applied on the control and experimental groups as pre and post scales by (6) training sessions each week to verify the effectiveness of the training program. After conducting the ANCOVA test, the study reached a set of results. In the light of these findings, the researchers recommend the need to pay attention to the skills of creative thinking and to conduct further studies on their use and benefit in all areas and at different stages of life.</i></p>

1. Introduction

One of the main objectives of education is to develop the thinking skills of the individual because the thinking process lies in finding appropriate solutions to the theoretical and practical problems faced by the student in his life. Therefore, those in charge of the educational process are motivated to search for new methods of teaching to help the student to overcome the obstacles that arise in front of him, which is likely to emerge in the future. The process of thinking (basic and higher) is an important element in the cognitive structure of the student, which helps to process information and reproduce new knowledge that can be done by thinking that is linked to basic skills (such as observation - comparison - analysis) in addition to the higher skills associated with problem solving and creative and critical thinking because of their importance in the learning process, where a view emerges pointing to the lack of thinking skills that is an indication to an educational problem.

Therefore, encouraging thinking through the student skills is a great educational goal that can no longer be ignored in the different educational patterns. Organized training in thinking skills can lead to effective learning in school, university and rehabilitation centers, which positively affects the achievements of any society. moreover, since thinking skills are an educational goal must be developed among students in general to ensure access to a degree of creativity, they increase the individual ability to cope with different life conditions and play an important role to facilitate development at the individual and society levels and in all areas of life (Jarwan, 2002; Qenaaz, 2011; Rababah, 2016; Cramer, 1991).

The observers of thinking skills education programs can see that these programs vary according to the theoretical and experimental trends that dealt with the subject of thinking. The most prominent of these programs are those based on cognitive processes or programs of super-cognitive processes and language and sensory programs where the most famous include (Debono to teach thinking) (Melhem, 2001; Wickmore, 2009; Croft, 2003).

Hence the process of developing thinking skills occupies a prominent place in the minds of educators, experts, curriculum makers as well as researchers because they are convinced of their importance. As our children face an increasingly complex future, they need to have high skills in thinking, decision-making, choices, problem solving and creativity, and taking initiatives as they face new situations (Al-Shibli, 2011; Katami, 2010; Harms, 2004).

From this point of view, we considered investigating this subject about the effectiveness of a training program based on the skills of creative thinking in the development of self-concept among gifted and outstanding students in the Deanship of the preparatory year.

1.1 Significance of the study

The importance of the study comes from the importance of the subject it deals with, as the subject of creative thinking skills is widespread where it can be found into several fields, including the field of education, management and knowledge as a whole. It intervenes strongly in education and helps in developing the capacity of ordinary and talented students in particular to the possible extent. It focuses on mental processes and how to pass our experiences to others where the use of cortex and six hats promotes improved thinking in individuals of all ages.

1.2 Study problem and questions

Many students in different stages of education face low self-esteem, and lack of motivation for several factors, such as: family, academic, school and other factors, which necessitated attention to the phenomenon and investigated by observing and discussing their way of thinking when doing something, especially since many students and others do not know the basic and higher thinking skills.

The problem of the current study is determined by trying to reveal the effectiveness of a training program based on creative thinking skills in the development of self-concept among gifted and outstanding students in the Deanship of the preparatory year. The study will answer the following questions:

1. Are there any statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the means of gifted and outstanding students in the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University who underwent the training program?
2. Are there any statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the mean of gifted and outstanding female students at the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University who underwent the training program on the post-self-concept scale of those who underwent the training program?
3. What is the effectiveness of the training program that was applied to the development of self-concept among talented and outstanding (male, female) students attributed to the gender variable?

1.3 Objectives and justifications

This study aims:

- To reveal the effectiveness of the training program based on creative thinking skills in the development of self-concept among gifted and outstanding students in the Deanship of the preparatory year.
- Investigate the impact of the training program on the level of self-concept development of gifted and outstanding students in the Deanship of the preparatory year and investigate the impact of gender in the training program on the development of self-concept among students, male and female.

1.4 The limits of the study

This study was limited to the following categories:

- The study members, represented by gifted and outstanding students (male and female), students of the Deanship of the Preparatory Year.
- The study was limited to applying a program in creative thinking and creative thinking skills (fluency, flexibility, originality, sensitivity to problems).
- The researchers applied the study to the study members in the first and second semester, for the academic year (2017-2018).
- The self-concept was measured among gifted students of the Deanship of the Preparatory Year (Kelani and Abbas, 1981).

1.5 Procedural definitions

Creative thinking: The total score obtained by the student on the Torrance Test for Creative Thinking and Form B for the following dimensions (fluency, flexibility, originality, and details) and codified on the Jordanian environment (Raml, 2010; Baker, 2011; Jarwan, 2002).

Gifted Students: The gifted students are defined as the ones present an innovative project and creative ideas from the preparatory year students at Imam Abdul Rahman Al Faisal University. Each student in the study sample received a mean of 90 score and above on the school achievement tests at the end of the academic year or the end of the first and second semester 2017/2018.

2. Theoretical literature and previous studies

The researchers refer to previous references and studies on this subject to identify and divide this subject.

2.1 Theoretical literature

2.1.1 The concept of the training program

Baker (2011) and Croft (2003) define the program as a set of activities, interactions, experiences and experiments of group members as individuals and members of a group, where it is a tool not a goal.

Many authors (Raml, 2010; Al-Ghamdi, 2009; Baker, 2011; Mastropieri, 2005) defined it as “any mental activity, whether in solving a problem, making a decision, or attempting to understand an issue as thinking is a conscious process carried out by the individual consciously, but does not exclude the unconscious ”

The researchers believe from the above that there is no single definition that is inclusive and unanimous, although some convergence in vision can be found.

2.1.2 The importance of thinking

Early childhood is one of the most important stages of a person's life and most influential in his future, in that it is a stage of promising formation, in which the first seeds of his character are planted as his habits and interests are formed and his talent unfolds (Atrous, 2015: p. 74; Andersen, 2014).

The teaching of thinking is a vital necessity, as the mind, thinking and reflection of what Allah Almighty created and the insight into the realities of existence is one of the things that the Islamic religion preached. It also means to infer the existence of the Creator and greatness and unification is to draw lessons and express history (Fatami, 2010; Sorour&Eweidi, 2013; Bloom, 1985).

2.1.3 Levels of thinking

There is more than one classification of the thinking levels according to the educational literature. Thinking consists of the following three levels (Melhem, Joseph & Smarah, 2017; Jarwan 2002; Arlington, 2014):

1. Thinking strategies including (problem solving, decision making, conceptual thinking, conceptual formation, creative and innovative thinking)
2. Critical thinking.
3. Minor skills of thinking that include observation, recall, translation and reasoning, interpretation, conclusion, extrapolation, application, analysis, comparison, antithesis, evaluation and composition.

2.1.4 Creative thinking skills

By the researchers review of many researches, it was found that there is no agreement between the researchers on the creative skills and abilities, but there are skills and abilities many researchers agree that they exist as creative skills and abilities including; fluency, originality, flexibility, elaboration, analysis, risk, out of the ordinary, problem sensitivity, trend retention, ability to retreat, composition, focus, prediction, imagination, development and evaluation.

The researchers will present the creative skills and abilities associated with the subject of the study agreed upon by most researchers including (Baker, 2011: 85-87; Raml, 2010: 99; Al-Ghamdi, 2009: 117; Gur, 2012; Elijah, 2010) and these skills and creative abilities are:

2.1.4.1 Fluency

It is the ability to produce as many new ideas as possible, verbal and non - verbal, for a problem in a fixed time unit, as well as the ease with which ideas are called.

2.1.4.2 Authenticity

It is the ability to produce new solutions and new ideas. The creative does not repeat the ideas of others, but we see a struggle to renew and see things a new vision from a new framework, revealing aspects not seen before, hence the ability to discover relationships between phenomena and objects, create a system of relationships between objects and arrange previously unrelated elements and rearrange them in a new formulation (Rababah, 2016: 99; Kenaz, 2011).

2.1.4.3 Flexibility

It is the ability to take different ways and think in different ways or with a different classification from the normal classification, and to look at the problem from different dimensions, which is the degree of ease with which a person changes a particular position or point of view, and not intolerance of ideas themselves (Katami, 2010: 118, Sorour and Aweidi, 2013).

According to Jarwan (2008) and Al-Shammari(2016), there are other skills for creative thinking, including: sensitivity to problems, retention of direction, risk acceptance, analysis (details) and connectivity.

2.1.5 Self-Concept

The self-concept is the cornerstone of personality, so the study of personality and understanding requires the study of the self-concept. Many scholar agreed that the primary function is to seek the integration and consistency of personality to be adapted to the environment in which he lives, and dyed by an identity that distinguishes him from others. Its importance is manifested in the fact that it determines human behavior, as it affects others to behave in a manner consistent with its characteristics. On the one hand, it determines the manner in which an individual deals with others, and at the same time determines how others deal with him. Self-concept plays a major role in mental health and harmony (Al-Qatanani, 2011: 50; Stocking, 2001).

2.1.6 The Gifted

Extraordinary groups are taking great interest currently as there are many recommendations for the Ministry of Education to work for the comprehensive integration of these groups in public education schools to close the door to the views of partial or total integration. As the emergence was just a spatial emergence. The

integration of these groups into public education is not easy and their education in the context of learning is not easy. Moreover, preparing the necessary programs for their education and rehabilitation is difficult because each child needs an individual plan (PLucker, Jondohan & Stocking, 2001).

The gifted group is considered as an important and vulnerable group if it does not find adequate and appropriate care from those around them, accept them, support them and meet their different needs, develop their teaching methods, and try to guide them. Developing the methods of teaching them, and trying to guide them, and mentoring those around them psychologically, especially parents, and teachers because of the emotional state, and the many transition capabilities that distinguish them from ordinary peers of the same age, and in order to do so it is necessary to reach a definition of who is the gifted (Al-Qadi, 2016; Crick, 2004; Bray & McCoach, 2001).

The talent term is intertwined, causing confusion and blurring, gifted, talented, creative, genius, insightful, talent (Bain, 2004; Rinn, Jamieson & Queen, 2009).

The researchers distinguish between the gifted and the outstanding from the educational and scientific standpoint, as the gifted is the one who has the willingness or ability of ordinary or distinct performance distinct from the rest of his peers in one or more of the fields appreciated by society, especially in the areas of mental excellence, innovative thinking, special skills and abilities and the areas that need special educational care, which is the high achiever. The gifted is who possesses some or all of the following abilities; "mental abilities, creative abilities, leadership abilities, visual abilities, kinetic abilities and high intelligence" (Rifai, 1433 AH; Yan et al., 2005).

The outstanding student is who enjoys outstanding performance and extraordinary abilities that exceed those of his colleagues, which distinguishes him with creativity and mental excellence, and increases his educational attainment. This makes him need special care by encouraging and motivating him to continue with the approach of excellence, such as organizing private educational institutions, as ordinary institutions do not provide appropriate standards for such students (Al-Qaisi & Tamimi, 2011).

The researchers believe that the gifted student is completely different from the outstanding student in that the gifted has a high abilities and a different way of thinking, and in an original and unique way from the rest of his peers as well as a variety of abilities and the outstanding student has cognitive qualities are: academic ability, and a strong desire to learn, awareness of excellence, entrepreneurship, curiosity, objectivity and open minded.

2.2 Previous Studies

This section presents the previous studies, which the researchers were able to access, and related to the following topics.

2.2.1 Arabic Studies

Lala and Lala (2013) conducted a study that aimed to identify the role of gifted care centers in leadership development, and identify the obstacles of leadership development in gifted care centers from students in Saudi Arabia from the point of view of their male teachers. The study sample consisted of (134) teachers enrolled in the Directorate of Gifted Education in the Ministry of Education in Saudi Arabia. The results, with regard to the role of gifted care centers in developing leadership among gifted students, showed that the following roles were primarily: holding competitions in the areas of leadership. The study also recommended a set of recommendations.

Sulaiman (2008) conducted a study aimed to identify the nature of the growth and development of innovative (creative) capabilities of a sample of female students in the primary stage, the sample consisted of 720 students randomly selected from twenty schools selected from five geographical areas in Riyadh (North, South, Central, East, West) with one semester per level. The results showed a clear decline and decrease in the creative abilities (fluency, flexibility and originality), the ability of students in the fourth grade compared to the rest of the grades. The ability of fluency was significantly evident among the students enrolled in the primary third grade, compared to the rest of the grades, and coincided with the growth and development of the ability of originality of students growth and development naturally, the higher the age and the academic level associated with this increase in the capacity of originality.

The Masa'ed study (2003) aimed at revealing the impact of an educational program of basic thinking skills on the development of these skills and on achievement in geography among sixth graders. The study dealt with basic thinking skills such as comparison, ranking, information representation, coding and retrieval. The experimental group was trained on thinking skills through direct learning method. The mean performance of the control group on the test of basic thinking skills for the benefit of the experimental group members as well as the presence of statistically significant differences between the mean achievement for the benefit of the experimental group.

Mansouri study (2009) aimed to detect the impact of a developed training program based on cognitive self-modeling mental development on the development of some basic thinking skills and to achieve the goal of the study he used an experimental design entailed the appointment of two experimental and control groups. The study sample consisted of 60 students at North Jeddah Educational School. The results of the study revealed that

there were statistically significant differences at the level of significance between the two groups on the total thinking test for the favor of the experimental sample members as well as the presence of statistically significant differences between the average achievement and for the favor of the members of the experimental group.

Matar (2000) conducted a study entitled "The impact of the thinking education program (unspecified talents) on the development of creative abilities, and self-concept among a sample of fifth grade students". The sample of the study consisted of (58) students from the fifth grade. The results showed that there were statistically significant differences between the experimental and control groups in favor of the experimental group on all dimensions of Torrance Scale and also showed statistically significant differences on the mental capacity of the self-concept scale. Differences did not appear on the other dimensions (social value, self-confidence, trend towards group, body and health, emotional balance, activity and aggression).

Raml (2010) aimed to reveal the effectiveness of enrichment activities in the development of creative thinking through the development of ability (fluency, flexibility, originality, details, and creative thinking as a whole). He also aimed to improve academic achievement through improving the level of knowledge in mathematics among the gifted fifth graders in public schools in Makkah. The researcher used a semi-experimental approach. The results of the study showed that the pupils of the experimental group outperformed their colleagues in the control group in the mean scores of creative thinking and post-academic achievement in all thinking abilities and cognitive levels to be measured. Therefore, all the hypotheses of the zero-grade study were rejected.

Baker (2011) conducted a study aimed at knowing the impact of problem-solving method in developing creative thinking and achievement among a sample of mentally superior in the tenth grade in Damascus city. The study population consisted of 90 students. The results of the experimental group exceeded the control group on the Torrance test for creative thinking in its four dimensions represented by the total degree of fluency, flexibility and originality. The members of the experimental group of male and female students were affected by the Torrance test of creative thinking in its four dimensions, and the study presented a set of recommendations.

Al-Ghamdi(2009) conducted a study aimed at knowing the academic excellence and ordinary in both thinking and the self-concept and motivation of achievement where the researcher used the descriptive approach descriptive correlation and causal comparison. The sample of the study consisted of (400) high school students in the cities of Mecca and Jeddah. The study reached the following results: the prevalence of rational thinking among the gifted and the spread of irrational among the ordinary, and there is a correlation of statistical significance between thinking and self-concept among the gifted and the total sample, while there is no relationship in the ordinary.

2.2.2 Foreign Studies

Crick (2004) aimed at investigating the impact of a training program on the development of creative thinking and self-concept among gifted students with learning disabilities. The sample of the study consisted of (108) gifted students with learning disabilities from the fourth, fifth and sixth grades in Texas. The study found that there was a statistically significant impact of the enrichment program in improving attitudes towards school as well as self-concept. It also found a statistically significant effect on the level of improvement of creative production among gifted students with learning disabilities. The study reached a set of recommendations.

Roshel (1994) study entitled "Adolescents and the Gifted - Social Comparisons and Changes in Self-Idea when entering an intensive academic program in a residential environment". The study aimed to examine self-ideas and group comparisons of students when attending Indiana Academy of Mathematics, Science and Humanities. The researcher used the descriptive survey approach, and the study reached the results of: the possibility of differences in thinking and processes and the occurrence of changes in the cognitive process.

Williams, Harvey, and Lawson (2005) conducted a study aimed at revealing the impact of teachers' mental modeling on the development of basic thinking skills in students. The study was conducted on 153 students in secondary schools and universities who volunteered to study in the Sandnay area of the United States and showed that thinking is any process or activity that determines human acquisition and thinking occurs for multiple purposes: comprehension, decision-making, planning or problem solving, judging things and a sense of joy in enjoying and imagining.

Bain (2004) conducted a study aimed at researching the concept of social self, and the relationships of outstanding students with their peers, and the sample of the study consisted of fourth, fifth and sixth grade students, where the researcher divided them into two groups formed the first group of non-gifted. While the second group of gifted students was formed. The results of the study showed that there were statistically significant differences between the two groups in four out of five areas included in the scale used by the researcher. The results also showed a high social interaction rates for the group of outstanding students compared to the group of non-outstanding students, due to the efforts and ability of these students. The results also showed no statistically significant differences in the relationship with colleagues in both groups. The study recommended a set of recommendations.

Yan and Haihuin (2005) conducted a study aimed at revealing the relationship between the social environment and the self-concept on the one hand, and the self-concept and academic excellence on the other.

The study sample consisted of (135) students from secondary schools and (64) from a college student in China. The results of this study indicated that the excelling students in the academic year (1993) had a positive concept with regard to academic achievement more than non-excelling students. The study made a set of recommendations.

Swiatwk (2001) conducted a study aimed at identifying the methods used by outstanding students for social adaptation. The researcher used the Social Adaptation Questionnaire (SCQ) to measure the extent to which students use different methods of social adaptation. In addition to the use of (V) scale to achieve the same goal. The results of this study pointed out that differences attributable to the gender variable as having an effect on the adoption of the method of female denial and maintain high levels of activity in order to solve the problems they face caused by their superiority. While males were more inclined to use laughter, she further noted that the methods used by students for adaptation were more adopted than emotions or methods in which denial is the basis. The results showed also that when linking methods of adaptation to the self-concept and those methods based on emotional, especially those that rely on denial had a negative association with the self-concept in several aspects. The results also indicated that the most positive coping techniques are those that focus on problem solving, including helping others, and maintaining high standards. The study made a set of recommendations.

Rinnetal. (2009) conducted a study aimed at identifying the effects of social comparison, gender, grade, and the level of multi-dimensional self-concept on gifted adolescents. The sample consisted of (248) gifted teenagers (11-16 years), (131) males and (116) females. The researcher used the second self-description questionnaire test (SDQ) and the results indicated that social comparison and degree of effect level of emotional and physical stability, gravity and neutrality of subjective concepts, gender influences on physical ability, emotional stability, verbal, and the origin of relationships in self-concepts. The study indicated a set of Recommendations.

Our current study differs from previous studies in that it is a training program to develop the self-concept among gifted and outstanding students at the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University, as its quality applies to the gifted of the population and sample students of the preparatory year students, which differ from the Arabic and foreign studies.

3. Methodology

The researchers followed the experimental approach as this study aimed at investigating the impact of a training program based on creative thinking skills in the development of self-concept among gifted and outstanding students of the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University.

3.1 Population and sample

The study population consisted of all talented and outstanding students of the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University, for the first and second semester (2017/2018). The sample consisted of (55) male and female students from the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University. The number of males students was (27) divided into two groups randomly; experimental group (10) students and the control group (17) students, while the number of females was (28) students divided into two groups randomly; the experimental group (18) students, and the control group (10) students. Table (1) represents the distribution of the study sample members.

Table (1): Distribution of study sample members according to the group and gender variables

Variables	Experimental	Control	Total
Males	10	17	27
Females	10	18	28
Total	20	35	55

3.2 Study tools

This study relied on two tools:

1. The Self-Concept Scale (Kilani and Abbas, 1981).
2. The training program based on creative thinking skills (fluency, flexibility, originality, details)

3.2.1 Validity and reliability of the self-concept scale

The researchers extracted the indications of validity and reliability of the scale as follows:

3.2.1.1 Validity of the study tools

Al-Kilani and Abbas (1981) considered that the method of constructing the scale constitutes an indication of its logical validity; besides, the scale combines semantics in two other ways. The first relied on performance comparison on each of the sub-scales of two groups of children, the first of which was selected on the basis that arbitrators' observation of their behavior classifies them as highly adaptive (upper group). The second was chosen on the basis that the arbitrators classified their members as a non-adaptive group (lower group), so that the classification was based on the knowledge of the arbitrators students. The researchers then compared the performance of the two groups on their self-concept scale, using the "T" test to examine the differences between two means. The values of the "T" test were statistically significant at the significance level

($\alpha \leq 0.05$) on all dimensions in favor of the upper group. With the exception of the social value after which the mean performance of the upper group was higher than the mean performance of the lower group, but no statistical significance was shown at the significance level ($\alpha \leq 0.05$) of the differences in this dimension.

3.2.2 Reliability of the study tools

The researchers extracted the reliability signs of the sub-grades and the total degree of the scale in two ways: the half-fractionation method, and the return method. The reliability coefficients ranged from half-fractionation after adjusting the eight levels of the sub-scales for males and females (0.12-0.67) while the value of the stability coefficient was for the total score on the scale using the same method (0.79) for males and (0.83) for females.

The return values for the scores of the eight sub-scales levels ranged between (0.43-0.86), while the value of the coefficient of stability of the total score on the scale using the same method was (0.86). Then, the researchers considered that these indications acceptable for the purposes of their study.

The researchers found the reliability coefficients of the scale and the dimensions of the eight sub-scale levels of the survey sample, using the return method where the value of the reliability coefficient of the social status was (0.84).

For self-confidence it was (0.79), for mental ability (0.92), for activity (0.91), for body and health (0.83), for aggressive dimension (0.88), the trend towards the group (0.78) emotional balance (0.89), while the reliability coefficient of the total score on the scale was (0.90).

The researchers believe that the reliability and validity coefficients extracted for the scale by "Kilani and Abbas", in addition to the extracted reliability in this study are suitable for the purposes of this study.

3.3 Study variables

The following are the study variables:

3.3.1 The independent variables

1. The group that has two levels:
 - Experimental group: a group that its members have been subjected to the training program in creative thinking skills.
 - Control group: a group similar in characteristics to the experimental group, but its members was not subjected to a training program in creative thinking skills.
2. Gender: It has two levels (male and female).

2.1.1 The dependent variables

This study was performed on the Self-Concept Scale. It has eight sub-dimensions in addition to the level of the total score on the scale. These levels are: the sub-scores on the eight dimensions that make up the scale and these dimensions are (social value, self-confidence, mental ability, body and health, Activity, group orientation, emotional balance and aggressiveness).

2.2 Procedures and data collection

For the purpose of collecting the necessary data for the study, the researchers applied two study tools: the Self-Concept Scale for Kilani and Abbas (1981), and the training program designed in creative thinking skills (fluency, flexibility, originality, details). The researchers worked on performing the data collection process in the best form. The following is an explanation of the procedures for the application of the two study tools:

2.2.1 The exploratory Study

Before starting the implementation of the current study, the researcher conducted a pilot study on a sample of gifted and outstanding students from the Deanship of the Preparatory Year at Imam Abdul Rahman Al-Faisal University. The number of its members reached (55) male and female students. Some of the procedures related to the training program were verified as follows:

- Applying several positions of the training program used in the current study, for the purposes of checking: the clarity of the program for students, the extent of their interaction through it, the appropriate concepts used in it to the level of students and the appropriate duration of each session.

2.2.2 Applying the self-concept scale

After the Self-Concept Scale was adopted for Kilani and Abbas (1981), the study sample was met from both groups (experimental and control), and the scale was applied to them before application. After the application of the training program was completed, the members of the experimental group was met again with members of the two groups (Experimental and control) where the scale will be applied to them after the application, note that the time between the prior and post-application was (14) days, and for two weeks.

2.2.3 Applying the training program in creative thinking skills

In order for the program to be implemented well, some preliminary actions were required:

1. Addressing students through the week of preparation and introducing the training program.
2. Presenting a questionnaire to students to present their creative projects.
3. On 24/10/2017, a preliminary meeting was held with gifted and outstanding students of the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University, numbering (55), in order to

introduce the program and organize the application procedures. As of Sunday (4/11/2017), it was agreed that the dates of the sessions would be as follows:

These dates were the most suitable for the majority of students according to their lectures, which numbered (55) students, they formed a sample of the study, who were randomly distributed to two control and experimental groups, while the rest of the students (55) students, who did not match the dates of the sessions for certain circumstances have been assigned as an exploratory sample.

- The hall was equipped with all the necessary requirements for training, and after the completion of the preliminary procedures mentioned above, the program was started on Sunday 4/11/2017. The application lasted until Wednesday 4/6/2018 in 24 weeks (4) hours every Tuesday.

2.3 Statistical analysis

To answer the questions of the experimental study, and to verify the hypotheses, the collected data were processed and entered into the computer according to (SPSS), and the statistical analysis was conducted on them through the analysis of the common monotonous (ANCOVA), and extract the means and percentages.

3. Results and discussion

Results related to the answer to the first question which reads: "Are there any statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the means of gifted and outstanding students in the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University who underwent the training program?"

To answer this question, the means and the standard deviations of the performance of the two study groups on the self-concept post-scale and their prior marks were extracted, and Table (2) shows that.

Table (2): Means and standard deviations for the performance of the two study groups on the achievement test and their prior-scores

Group	Number	Highest grade of the test	Prior self-concept		Postself-concept	
			Mean	SD	Mean	SD
Experimental	10	224	141.30	10.68	168.70	2.541
Group	18		143.72	3.83	163.56	5.638

It is noted from Table (2) that the mean of the experimental group who studied using the training program based on creative thinking skills in the development of self-concept among gifted and outstanding students on the Deanship of the Preparatory Year at Imam Abdul Rahman bin Faisal University. The self-concept scale dimension was the highest (168.70), while the mean of the control group of students who were not gifted and outstanding who learned in the usual way was (163.56). To determine whether the differences between the mean of the two study groups were statistically significant at $\alpha = 0.05$, the researchers applied ANCOVA, and the results of the associated variance analysis as shown in Table (3).

Table (3): ANCOVA results of the differences between the means of the achievement of the two study groups students

Source of variance	Squares sum	Freedom degrees	Squares mean	Calculated F value	Level of significance
Prior applying of the self-concept scale	21.743	1	21.743	0.942	0.341
Training program	186.180	1	186.18	8.069	*0.009
Error	576.801	25	23.072		
Adjusted total sum	768.679	27			

* Statistically significant difference

Table (3) shows that the value of (F) for the training program was (8.069), with a level of significance equal to (0.009) and this value is a statically significant at ($\alpha = 0.05$), which indicates that there are statistically significant differences between the performance of the two study groups on the dimension of self-concept scale. The adjusted means were extracted to find the group differences, the results are shown in Table (4):

Table (4): Adjusted means and standard errors for the performance of the two study groups on the self-concept post scale

Group	Number	Mean	Standard Error
Experimental	10	168.90	1.533
Control	18	163.44	1.138

It is noted from Table (4) that the mean of the experimental group that learned using the the training program based on creative thinking skills in the development of self-concept among gifted and outstanding students at the Preparatory Year Deanship at Imam Abdulrahman bin Faisal University was the highest (168.903), while the mean of the control group of students was (163,443), this indicates that the difference was in favor of the experimental group who learned using the training program.

The results related to the answer to the second question which states: "Are there any statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the mean of gifted and outstanding female students at the Deanship of the Preparatory Year at Imam Abdul Rahman Bin Faisal University who underwent the training program on the post-self-concept scale of those who underwent the training program?"

To answer this question, we have extracted the means and standard deviations of the performance of the two study groups on the post self-concept scale and their prior scores, Table (5) shows that.

Table (5): Means and standard deviations for the performance of the two study groups on the self-concept post scale and their prior scores

Group	Number	Highest grade of the test	Prior self-concept		Postself-concept	
			Mean	SD	Mean	SD
Experimental	10	224	141.20	10.70	166.90	4.771
Group	17		142.18	4.39	161.65	4.227

It is noted from Table (5) that the mean of the experimental group who studied using the training program based on creative thinking skills in the development of self-concept among gifted and outstanding students at the Deanship of the Preparatory Year at Imam Abdul Rahman bin Faisal University who underwent the training program on post-achievement test were the highest (166.90), while the mean of the control group was (161.65). To determine whether the differences between the mean of the two study groups were statistically significant at the level of significance ($\alpha = 0.05$), the researcher applied the analysis of the common variance (ANCOVA). The results of the associated variance analysis are as shown in Table (6).

Table (6): ANCOVA results of the differences between the means of the achievement of the two study groups students

Source of variance	Squares sum	Freedom degrees	Squares mean	Calculated F value	Level of significance
Prior applying of the self-concept scale	44.333	1	44.333	2.383	0.136
Training program	161.463	1	161.463	8.680	0.007*
Error	446.449	24	18.602		
Adjusted total sum	664.519	26			

* Statistically significant difference

Table (6) shows that the value of (F) for the training program was (8.680), with a level of significance (0.007), which indicates a statistical significant differences between the means of the achievement of the two groups on the self-concept post-scale. The adjusted means were extracted to find the differences were in favor of which group. The results are shown in Table (7).

Table (4): Adjusted means and standard errors for the performance of the two study groups on the self-concept post scale

Group	Number	Mean	Standard Error
Experimental	10	166.78	1.36
Control	17	161.71	1.04

It can be noted from Table (7) that the mean of the experimental group that learned using the training program based on creative thinking skills in the development of self-concept among gifted students outstanding students in Deanship of the Preparatory Year at Imam Abdul Rahman bin Faisal University was the highest (166,788), while the mean of the control group was (161,713), this indicates that the difference was in favor of the experimental group that learned using the training program.

Results related to the answer to the third question, which states: "What is the effectiveness of the training program that was applied to the development of self-concept among talented and outstanding (male, female) students attributed to the gender variable?"

To answer this question, we have extracted the means and standard deviations of the performance of the two study groups on the post self-concept scale and their prior scores, Table (8) shows that.

Table (2): Means and standard deviations for the performance of the two study groups (males and females) on the self-concept post scale and their prior-scores

Gender	Number	Highest grade	Prior		Mean	SD
			Mean	SD		
Male	10	224	141.30	10.68	168.70	2.54
Female	10		141.20	10.70	166.90	4.77

It is noted from Table (8) that mean of the experimental group who studied using the training program based on creative thinking skills in the development of self-concept (Males and females) on the scale of the self-concept-dimension as the mean male was the highest (168.70), while the mean for females was (166.90). In order to determine whether the differences between the mean of the two study groups were statistically

significant at $\alpha = 0.05$, the researchers applied the ANCOVA, and the results of the associated variance analysis are shown in Table (9).

Table (6): ANCOVA results of the differences between the means of the self-concept post scale of the two study groups students

Source of variance	Squares sum	Freedom degrees	Squares mean	Calculated F value	Level of significance
Prior applying of the self-concept scale	1.628	1	1.628	0.106	0.749
Training program	16.250	1	16.250	1.057	0.318
Error	261.372	17	15.375		
Adjusted total sum	279.200	19			

*** Statistically significant difference**

It is clear from the previous table that the value of (F) for gender was (1.057), with a level of significance equal to (0.318). This value is not significant at $\alpha = 0.05$, indicating that there are no statistically significant differences between males and females.

4. Conclusions

- The results of the first question showed that there were statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the experimental group and the control group on the post achievement test on the self-concept scale for the benefit of the experimental group members.
- The results of the second question: the presence of statistically significant differences at the level of significance ($\alpha \leq 0.05$), which indicates the absence of statistically significant differences between the performance means of the two study groups on the scale of the self-concept scale. This indicates that the difference was in favor of the experimental group that learned through the training program.
- The results of the third question: the absence of statistically significant differences at the level of significance ($\alpha \leq 0.05$) on the self-concept post-scale attributable to the gender variable (males, females), which indicates the absence of statistically significant differences between the male and female means.

5. Recommendations

In the light of the findings of the present study, the recommendations can be formulated as follows:

1. Conducting more studies that deal with creative thinking skills and their relationship with the self-concept on other samples of students from different age groups.
2. Conducting comparative studies dealing with the dimensions of the self-concept among ordinary, gifted and outstanding students.
3. Conduct further studies that take into account all the limitations of this research for possible circulation.
4. Conducting training courses for creative thinking skills programs for teachers so that they can help students develop different positive skills.
5. Introducing and employing creative development programs in the curriculum.

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