
THE EFFECTIVENESS OF SCAMPER'S STRATEGY FOR DEVELOPING CREATIVE THINKING IN THE SUBJECT OF HARMONY FOR MUSIC EDUCATION STUDENTS

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Abstract

There is no doubt that the strength and effectiveness of nations is measured by their creative, active minds capable of adapting and interacting with the challenges of the age and cognitive acceleration to benefit from it and contribute to its development, and this does not come only through minds capable of creative thinking, and therefore researchers were interested in the topic of creativity and defined: understandable, its stages His mental abilities, methods and strategies for training and development, and measures that measure it. Creativity is an integral part of all branches of music, as the musical scientist Berliner pointed out that creativity in music is "composing in real time" and "making an immediate decision in applying and changing musical materials and producing new ideas." Gordon (2001) emphasized the importance of creativity. Musician Whereas, "Teaching a music without creativity is a denial of the essence of music."

Keywords

Effectiveness, Scamper's Strategy, Developing, Creative, Thinking, Harmony, Music Education.

Introduction:

The National Association for Music Education (NAfME) emphasized that through the sciences of music education (listening and tasting, solfège, harmony, rhythm) students should be provided with opportunities to develop creativity.

The National Association of Schools of Music (NASM) affirmed that one of the accreditation criteria for musical education colleges and obtaining a bachelor's degree is "the application of creative thinking through improvisation, composition, and harmonic courses, and hearing and playing instrument training. Using creative thinking does not require a specific teaching material, and accredited colleges must include instructions for teaching creative thinking during the semester.

The College Music Society of the United States of America (2014) prepared a report entitled "Transforming the Study of Music from Its Institutions: An Account of the Gradual Change in Undergraduate Students' Preparation for Music". The report focused on the areas of creativity, diversity and integration in music education, and these three main pillars were described to ensure the suitability of musical education curricula at the university level. "And that the ability to creativity and improvisation is one of the basic skills necessary for the teacher of music education for the twenty-first century, and that many education students Musicals graduated

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without the ability to create and improvisation, and instead of adding new courses to accreditation requirements for colleges, applications of creative thinking can be integrated into current courses (improvisation, harmony, theories and authorship)

Several researchers point to the importance of creative thinking and improvisation in musical education. Creative thinking and improvisation are an essential part of all aspects of music education and musical styles in different cultures. Several studies have proven the effectiveness of creative thinking for students in the basic education stages (primary, intermediate and secondary).

Many studies dealt with the development of musical creative thinking among the undergraduate student (Khalil, 19, Muhammad, 2009; Muharram, 2009, Heiba, 2008; Al-Shawadafi, 2012). Several researchers have examined how creativity in music can be incorporated into the fields of improvisation; 1997, Nolan, 1995; Rooke) and authorship.

- The use of technology to help teach creativity

What may help persuade musical educators of the value of including creative activities in classroom planning is that creative activities allow students to build their own musical concepts through a process of proper exploration of musical sounds, change in the use of musical elements, and the creation of musical compositions as an integral part of learning. Meaningful musician essential for developing musical understanding.

Harmony is one of the basic subjects in musical studies, and its study is very necessary for any musician, whether a performer (player, singer), composer, or orchestral conductor, as it is a major factor in the perception and understanding of the musical language in general and the field of composition, distribution and musical analysis in particular. Putting the harmonic twists to the melody and accompanying it with the chords and linking them with each other through their sequence depends on the extent of the musician's ability to visualize the sounds of the damaged ones acoustically and imagine their effect on the harmonic distribution, and this is supposed to be acquired through studying the harmony. Harmony is one of the materials that helps to develop the ability to create musical creativity through immediate reading of musical exercises and reformulating them as musical sentences through the harmonic rules that were studied in the course.

The definitions of harmony have varied, and in the New Grove Dictionary, harmony is defined as "the method of collecting notes at a time, forming defects that have a relationship with another group formed in the same way. These successive discrepancies are related to certain relationships between each other within a specific Tonali center."

Studies have revealed many problems in studying Harmony:

First: The teaching methods used in teaching the subject (the traditional method, which does not suit the nature of the subject with its theoretical and practical aspects, and which needs interactive teaching methods to help students connect between theoretical aspects and their applications on the piano and to treat these problems, the studies used strategies to improve achievement and develop students' ability to creativity.

Second: The difficulty of combining the skills required by Applied Harmony and their understanding of the cognitive aspect of the material and practical applications, as well as the speed of illusion reading, and playing the piano at the same time, which shows the discrepancy between students' abilities. To address these problems, the study used Therese's strategy to improve achievement and develop students' creativity.

The Harmony course requires the realization of the mind and thinking about applying the rules and punctuations in solving the harmonic exercises (applied, theoretically), which leads to the development of creative thinking and helps the student to replace solutions for Roman numerals and choose the best solutions. Exercises bus or soprano marked and unmarked, which connects the student in the end To create harmonic exercises that contain the characteristics of creative thinking by issuing the largest number of solutions for harmonic exercises (fluency), and that the categories of these solutions vary

For the harmonic exercises (flexibility) until he reaches the authentic composer (Al Asala). Harmony by its nature allows the development of creative thinking when the educational environment and the appropriate environment are provided that provides the opportunity for students to practice creative thinking in harmony (theoretical and practical) and to compose harmonic exercises characterized by novelty and originality, and to reach many solutions for different harmonic exercises. From this standpoint, educators began to investigate the effectiveness of teaching methods that help to implement creative thinking among learners in various school subjects, including harmony, and to gain them skills, experiences, and positive attitudes towards teamwork or creativity.

De Mille, author of a 1997 book entitled "Put your mother on the ceiling" aimed at developing students' imagination. Williams and his colleagues presented 190 a set of methods aimed at stimulating creative expression in students. These methods were based on two main dimensions, cognitive processes (originality, flexibility, fluency, and a tendency to detail), and emotional or affective processes (curiosity, and willingness to deal with risks. , And a preference for complexity, and intuition). Then Bob Eberle (18) blended all those previous experiences together to build the SCAMPER program and added them to Williams' methods so that he had a SCAMPER model for developing creative thinking, and he formulated games

and activities according to the de Mille style in developing the creative imagination. He has (the scientific model, the practical method, and the activities), so that all of this forms a three-dimensional cube component to stimulate ideas in a creative manner that combines branching and synthesis thinking, used to generate and develop ideas, and to develop the imagination. The idea is to be worked out in the future, and thus it is a tool for developing and enriching thinking.

SCAMPER means starting, running, jogging, or running away, but the word took a place in the educational field to become a way to develop creative thinking skills, and its letters combined to add the meaning of escaping from the rigid thinking that many people stand up to and contradict with a narrow idea, and creativity in this. The word is that it came out of its linguistic meaning so that each letter constitutes a sign of ten implications for my thinking performance. Rashon defines it as a strategy that helps students ask a set of questions about an object or idea by using brainstorming to develop ideas or objects or to confront and solve problems.

Numerous studies have proven the effectiveness of Scamper's strategy in developing achievement, brain skills and innovative thinking in many subjects.

The SCAMPER theory and the questions it contains can develop creative thinking and students' skills in Harmony by training them in creative thinking and better use of theoretical rules and harmonic exercises to help them combine the skills of initial reading, quick thinking, creativity and playing at the same time.

Research problem:

Based on the results of the questionnaire, which showed a decline in students' application of creative thinking skills, and the results of studies that showed many of the students' problems in the subject of harmony. Although many studies have proven the effectiveness of SCAMPER's strategy in developing creative thinking in many academic subjects, - within the limits of the researchers' knowledge - there is no study that has studied the effectiveness of SCAMPER's strategy for developing students' creative thinking in Harmony. The problem appears clearly in the necessity to design a program to improve academic achievement and develop creative thinking for music education students in the subject matter of harmony.

- The theoretical framework: the concept of creativity

Many researchers have tried to define the concept of creativity on the basis that it is: the personality traits of creators, a creative product and the characteristics of that product, a creative process. First: Creativity as personality traits The proponents of this trend see that creative people are distinguished by a number of personality traits. This is what Torrance stresses of the importance of studying the personality traits of creative individuals, which helps to know

individuals who have the aptitude for creativity in order to help them translate those preparations into actual creative performance. From researchers, they found a number of personality traits of musically creators, distinguished by their strength of intuition, fluency of expression, imagination, sensitivity to movement, rhythm and organization, enabling them to integrate thinking and feelings and express them in the highest degree possible. This musical creativity may appear in the field of musical composition or musical performance in general

Second: creative thinking as a product:

Creative thinking as a product is one of the most important aspects through which creativity has been studied. It is observable and more evident because it represents the physical or tangible aspect of creativity.

Wilson asserts that the product of creative thinking must be characterized by:

Novelty: An innovative product is characterized by novelty in light of social and psychological factors. Usefulness: an innovative product helps solve a problem or meet specific needs.

Aesthetic value: it is intended that the creative product enjoys an aesthetic aspect.

Creative product takes many forms:

Mental creativity that is reflected in the form of creative ideas, theories, art, music, story or poem. Practical creativity: which is represented in quantitative forms such as mathematical expansion or reaching a new equation or record in a specific game.

Qualitative creativity: which is the application of a new or effective management of a talent.

In Music Education, David Elliott (190) described the creative product as: a set of creative musical concepts in which students participate through a set of actions such as composition or improvisation that reach the final product. This product is not considered creative unless there is a significant level of quality (Elliott, 1995), and Gordon (2009) explained that the degree of creativity in a musical product depends directly on the musical vocabulary that a person possesses from melody, harmonic and rhythm (2007, Gordon). Morin (2009) asserted that in order for students to display the creative product, they must have basic musical knowledge of melody, harmony and rhythm, and musical creativity is taught by expanding students' musical knowledge.

Third: creative thinking as a process:

Many models explain the creative process, the most important of which is the acceptance of the Wallas model of the stages of the creative process, which is the basis for most programs that train creative thinking in our time. As he indicates that the creative process passes through a number of stages:

Preparation Stage:

This stage requires identifying the problem or situation that the individual is dealing with, gathering all necessary information about this situation, and trying to examine the information, organize it, and build conclusions about the situation.

The incubation stage:

It is a stage represented by anxiety, fear and hesitation towards the situation and the individual's ability to solve or overcome the problem, and the individual may at this stage divert his attention from the situation, such as performing an activity completely outside of the situation, such as swimming, running, or eating to allow the information to latency and stability.

• Persistence Stage:

Where creativity requires a high degree of persistence to move forward in solving the problem and reaching creative solutions.

Illumination Stage:

It describes the moment when the solution to the problem suddenly arises, describing a state of cognitive integration between the elements of the situation and achieving a holistic, holistic understanding with a high degree of creativity, and this stage is accompanied by the individual's feeling of satisfaction and comfort over his creative respect, while some may feel a bit of astonishment and surprise.

• Verification Stage: The proposed solution must be verified and verified in an organized scientific way to ensure that the conditions and characteristics of the creative solution are met.

• Creative thinking skills

Most researchers and scholars agree that creative thinking includes three main skills, namely fluency, flexibility and originality that are included in the Torrance Test of Creative Thinking, in addition to two sub-skills, sensitivity to problems and details.

• Fluency: it means generating new solutions, coming up with alternatives, and remembering previous information. It also means the ability to produce a large number of good and correct ideas for an issue or problem. Fluency refers to the ability to use a stock of knowledge when needed, so it represents the quantitative aspect of creativity.

Fluency has three types:

Verbal fluency: It is the ability to produce several words beginning with a specific letter.

Intellectual Fluency (Meanings): The ability to generate multiple ideas related to a specific situation.

Fluency of shapes: the ability to quickly engineer a specific shape. Flexibility: it means generating unexpected and varied ideas and shifting from one type of thought to another when responding to a stimulus that challenges the individual's thinking, that is, it is the ability to

change the individual's cognitive state by changing the situation or its characteristics. Flexibility has two forms: Automatic flexibility: moving from an idea To another quickly and easily. Adaptive flexibility: successful behavior by changing to confront a problem.

- Originality: means the ability to express unique expression through the production of distant ideas more than common and familiar ones. Originality is distinguished by its ability to uniqueness and distinction.
- Sensitivity: means the ability to discover problems and difficulties and discover a lack of information before reaching a solution. . Elaboration: represents the ability of the individual to add new details to the ideas and positions available to him.
- Musical creative thinking skills: • Musical fluency: the ability to produce the largest amount of specific vocal, rhythmic or kinesthetic responses. Musical flexibility: the ability to generate different classes of responses to a specific musical stimulus. Musical originality: the ability to generate new and uncommon responses to a musical stimulus, and to perceive the relationships between musical stimuli.

research results:

1- The first question of the research was: What is the effectiveness of Scamper's strategy in the acquisition of musical education students of the cognitive aspect of the harmonic subject? To answer this question, it became clear from the research results of the first and fourth hypotheses that there is a statistically significant difference between the mean scores of the experimental group students in the pre and post application of the cognitive achievement test - in favor of the post application, and there is a statistically significant difference between the mean scores of the experimental and control groups in the post application. Cognitive achievement test - for the benefit of the experimental group. The results also indicated that the Scamper strategy has a great influence and effectiveness on the development of cognitive achievement in the subject of harmony, and this result may be attributed to: The use of the Scamper strategy in teaching harmony provides students with a classroom environment that depends on the learner's positivity and activity through brainstorming the questions used (replacement, adaptation, Modification, deletion), and applying the rules to find solutions to the hormonal exercises, which helped to increase the achievement of the students of the study group. . Increase students' motivation, excitement and excitement towards learning, as Skamber's strategy provides for conveying ideas and information in a more creative way. . The strategy helped to stimulate the students' previous experiences, especially that cognitive achievement in the subject of harmony requires the integration of previous experiences (the curriculum of the second and third classes that students have in solving the harmonic exercises. The activities included in the strategy

provided the opportunity for all students to participate at different levels of thought in the different solutions to the exercises. Harmonism, which enhanced their self-confidence. Learning is done cooperatively between students and they build on each other's ideas, which facilitated the process of producing new harmonic exercises. Using Scamper's strategy questions (replacement, adaptation, adjustment, deletion) helped to develop higher mental skills (application, analysis Harmony, evaluation, synthesis) related to the nature of the substance, which is used in the solution of hormonal exercises, thus it is evident from the results of the effectiveness of Scamper's strategy on developing cognitive achievement in the subject of harmony, and this result is consistent with studies (Hani, 2012, Ramadan, 2014, Saleh, 2010) that showed Its results are that the use of the Scamper strategy improves students 'academic achievement in many subjects. Thus, the two researchers have answered the first question: And to verify the effectiveness of Scamper's strategy in the acquisition of music education students of the cognitive aspect of Harmony.

2- The second question for the research was: What is the effectiveness of Scamper's strategy in the acquisition of musical education students of the skill side of the hormonal subject? To answer this question, it became clear from the results of the second and fifth hypotheses that there is a statistically significant difference between the mean scores of the experimental group students in the pre and post applications of the scorecard related to the practical harmony skills - in favor of the post application. There is also a statistically significant difference between the mean scores of the experimental and control groups in the post application of the skill performance observation card of the Harmony subject - in favor of the experimental group. Also, the Scamper strategy has a great impact and effectiveness on developing practical skills of Harmony, and this result may be attributed to: Through exercises on the questions of the Scamper strategy in practical harmony, the skills of problem-solving and immediate performance improve, as the frequent training and diversification in the harmonic exercises increases the skill of the student, both in The preserved part is because it repeats the exercise more than once with the required adjustments (rhythm variations, inventing jumps) or in the initial reading. The difference appears clear between the results of the experimental and control group in practical skills, because teaching in the traditional way does not allow students the opportunity to apply theoretical rules in practical exercises and to master the skills required in practical harmony adequately. Scamper's strategic questions helped to stimulate the students' previous experiences that were studied in the practical harmony curriculum in the previous academic years (second and third year), reaching solutions for practical harmonic exercises that require merging the previous experiences that students have, and integrating and

synthesizing ideas in a new way. The activities included in the Scamper strategy allowed all students of the experimental group (at different levels of thinking) to participate in generating ideas and solutions for hormonal exercises, which strengthened their self-confidence. The results show the effectiveness of Scamper's strategy in developing practical skills of Harmony. These results are consistent with the results of the study (Ramadan, 2013), which proved the effectiveness of Scamper's strategy for developing problem-solving skills, and (Abdul Qadir and Ismail, 2010, Abu Saif, 2012), which proved the effectiveness of Scamper. In developing writing skills. Thus, the two researchers have answered the second question and verified the effectiveness of Scamper's strategy in the acquisition of musical education students of the skillful side of the Harmony subject.

3- The third question for the research was: What is the effectiveness of Scamper's strategy in developing the creative thinking of music education students in the subject of harmony? To answer this question, it became clear from the results of the third and sixth hypothesis that there is a statistically significant difference between the mean scores of the experimental group students in the pre and post application to test the musical creativity of the subject Harmony - in favor of the post application. In addition, there is a statistically significant difference between the mean scores of the experimental and control groups in the post application of the musical creativity test of Harmony - for the benefit of the experimental group. Also, Scamper's strategy has a great influence and effectiveness on the development of musical creativity in the subject of harmony, and this result may be attributed to: The use of Scamper's strategy questions created a suitable environment for practicing creative activities while learning the lessons of harmony. Which increases students' motivation and enthusiasm to learn by brainstorming traditional ideas until we reach creative ideas: through training on the strategy of Scamper and the list of generative questions (replacement, adaptation, modification, deletion) the student replaces Roman numerals exercises marked and unmarked bus in the stairs Adapting the deleted Roman numerals, modifying the harmonic exercises, adding and deleting the tones to change the color of the exercise tones, and training on these questions required in-depth thinking to generate the largest number of ideas and solutions for the harmonic exercises (fluency) that belong to multiple categories (flexibility) and are characterized by novelty (originality) . Scamper's strategic questions helped to stimulate the students' previous experiences that were studied in the Harmony curriculum in the previous academic years (the second and third classes). Reaching creative solutions for harmonic exercises requires merging the previous experiences that students have, and integrating and synthesizing ideas in a new way. Skumber's strategy is based on developing and improving hormonal exercises, and

coming out of them with a new exercise, through a set of steps to change the training data and reshape relationships. In the theoretical harmony, students develop and improve hormonal exercises until we reach the largest possible number of variations of one exercise, and come up with new exercises. In the practical harmony, students perform the harmonic exercises with different rhythmic variations and the various gestures, until the students reach the production of many different harmonic exercises. • This result is consistent with the results of many studies that have proven the effectiveness of Scamper's strategy in developing creative thinking in many academic subjects (Sabri and Al-Ruwaithi, 2012, Hani, 2012, Ramadan, 2014, Mahmoud, 2012, Saleh, 2012, Al-Thunayan, 2010, 2017, Bakr, 2004; Fahmy & Qoura, and Hassan, Al-Jabreen, 2017). Thus, the two researchers have answered the third question and verified the effectiveness of Scamper's strategy in developing the creative thinking of music education students in the subject of harmony.

4- The fourth question of the research was: What is the correlation between students' scores in the achievement test, their scores on the observation card of skill performance, and their scores in the creativity test in the Harmonian subject? To answer this question, it became clear from the results of the seventh hypothesis that there is a positive significant correlation between the scores of the experimental group students on the cognitive achievement test and their scores on the skill performance note card and their scores on the musical creativity test for the subject Harmony. The correlational relationship is likely to be deduced from: the answers to the first, second and third questions, the results of which have proven that the strategy scamper has a great influence and effectiveness on the development of the cognitive, skill and creative aspect in the subject matter, which mainly depends on the higher mental skills of application, analysis, structure, which are used in the aspect Cognitive and applied in the skill aspect and mainly used in creative thinking. This result is consistent with the results of many studies that have shown a positive positive correlation relationship between the cognitive side, skill and creative thinking in many academic subjects (Al-Balshwi, 2009, Al-Youssef, 2011, Abu Al-Ala, 2010, Al-Jahmi, 2014, Al-Oweidi, 2014, Bugs, 2009).

Study recommendations:

In light of the findings of the research, the two researchers recommend the following:

Recommendations:

- 1- Study the effect of using the Scamper strategy on other variables such as reflective thinking skills, analytical thinking and divergent thinking.
- 2- The necessity of including teacher preparation programs on the Scamper strategy and how to design music education lessons in light of it.

3- Holding training courses, seminars and workshops for music education students to introduce the Scamper strategy, and its importance in improving academic achievement, scientific skills and creative thinking.

4- Searching for teaching methods compatible with the nature of Harmony.

5- Studying the effect of using the Scamper strategy on developing creative thinking skills in other musical courses.

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