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The impact of the cognitive acceleration strategy in the development of successful intelligence Art education teachers

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Abstract

The current research aims to discover:
The impact of the cognitive acceleration strategy in developing the successful intelligence of art education teachers. For the purpose of verifying the aim of the research, the following zero hypotheses were put forward: There are no statistically significant differences at the level (0.05) between the mean scores of male and female teachers in the pre-cognitive test and their average scores in the post-cognitive test after being subjected to the independent variable represented by the cognitive acceleration strategy. 2. There are no statistically significant differences at the level (0.05) between the mean scores of male and female teachers in the pre-successful intelligence scale and their average scores in the post-successful intelligence scale after exposure to the independent variable represented by the cognitive acceleration strategy. For the purpose of verifying the validity of the hypotheses, the experiment was applied in the research community consisting of art education teachers in Baghdad Education / Al-Rusafa Al-Awwal for the academic year 2022-2023, and on the research sample that consisted of art education teachers in the preparation and training department, who numbered 22 Teacher and teacher. The researcher adopted the one-sample experimental design with two tests (pre-post-test) as it is compatible with the research procedures in achieving its objectives after identifying the topics of the scientific material that were taught during the experiment by experts. The necessary adjustments were made. For the purpose of measuring its effectiveness, the research tool was prepared, which is a cognitive achievement test consisting of 30 items of multiple choice type and correcting the wrong phrases. In order to verify the validity of the test for the analysis of its paragraphs, its stability was calculated through the results of the sample teachers' answers and treated statistically.

Keywords: *Cognitive acceleration strategy, successful intelligence*

Introduction

Research problem

Our current era is witnessing remarkable and rapid progress in The scientific, cognitive and technical field, which poses a challenge to the teaching staff, especially teachers, as it is possible to build a curriculum and be extremely proficient and quality, but it will remain ink on paper unless a

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good teacher comes who can and with what he possesses of the elements to communicate and clarify information and knowledge in an easy way so that it makes the learners well-prepared so that they are able to rely on themselves They and interaction with this information, and studies that targeted the reality of the educational environment, such as the study of (ahlam, (2015) confirmed that the basic feature of the quality of the educational process in primary schools depends on the quality of the teacher's performance in the classrooms, as education is in an age. Information and communication technology, the knowledge economy, is a more vital commodity and a precursor to success and a driving force for change. Today's world deals with education in a way that differs from the past, where the success of nations and peoples and even their survival is linked to their ability to learn, and there is no room in society today for the unskilled who are not good at using sources of knowledge, identifying problems and solving them, and learning modern technology" (5, p. 43) Since the teacher is the important and essential element in the educational process, it is necessary to work on preparing teaching staff characterized by their high efficiency and ability to keep pace with this development, and this is through developing their cognitive, skillful, artistic and emotional abilities with a high degree of balance, focus and striving to develop their intelligence. 13, p. 20) The researcher sensed the problem of her research through her educational and educational work. The researcher relied on her previous experience as a teacher specializing in art education, as she gained her experience through her teaching of the subject for a period of seven years, where she sought the existence of some deficiencies or reluctance to use and apply modern strategies in teaching, which is likely to be caused by a decrease in their levels of successful intelligence. My knowledge of skill is not consistent with being a stage of listening technology, scientific direction, and through its review of previous studies, where it agreed with the study of Osama (2018), which confirmed the weak skills of art education teachers and their weak capabilities, especially with regard to the skill aspect, and what was confirmed by Hussam's study 2022 through the observation of the researcher during his field work as a teacher specializing in art education since the year2005 AD, and his monitoring of the reality of teaching art education. Those who are entrusted with the specialty of teaching art education. Where the percentage of teachers who have experience in the field of teaching art education through the follow-up of the educational supervision department for supervisors reached (60% of the total teachers of art education for the primary stages, and this prompted the researcher to establish the survey of the current study, which led her to question :

What is the impact of the cognitive acceleration strategy on developing successful intelligence among art education teachers?

Research importance

1. Developing the capabilities of art education teachers in teaching the subject according to modern strategies by developing successful intelligence
2. . The research is a response to the practical and cognitive development that included all fields

of science and knowledge, especially in the aspect of methods.

3. The research comes as a response to what modern trends call for the necessity of knowing modern methods and methods as one of the important and necessary outputs that must be taken care of during learning. Modern teaching.

Search goal

The current research aims to discover:

The impact of the cognitive acceleration strategy in developing the successful intelligence of art education teachers.

The following two sub-goals emerge from this goal:

1. Designing and building teaching plans according to the strategy of cognitive acceleration to develop the successful intelligence of art education teachers.
2. Identify the impact of plans based on the strategy of cognitive acceleration in the development of successful intelligence among students Art education teachers.

Research satisfaction

View Verification of the Research Objectives The researcher developed the following zero hypotheses:

1.There are no statistically significant differences at the level (0005) between the average scores of male and female teachers in the pre-cognitive test and their average scores in the post-cognitive test after exposure to the independent variable. The cognitive acceleration strategy.

2.There are no statistically significant differences at the level (0005) between the mean scores of male and female teachers in The pre-successful intelligence scale and their average scores in the post-successful intelligence scale after exposure to the variable The independent strategy of cognitive acceleration.

search limits

1.Art education teachers.

2. Cognitive acceleration strategy.

3. Rusafa Education Directorate (1) / Preparation and Training Institute.

4.The first semester of the academic year (2022-2023).

Define terms

1. effect:

- Impact idiomatically defined by (Hassan) et al. (2015): The effect that independent variables have

on the variables. Affiliate on which the design is based (6), p. (203)

- Procedural definition: It is the result of what the cognitive acceleration strategy causes and what appears from it in terms of a noticeable change in the behavior of teachers, their cognitive achievement, and the development of their levels and ways of thinking.

2. The strategy

- Known by Shubar et al., (2006) a set of procedures and means that are used by the teacher and their use leads to enabling learners to benefit from the planned educational experiences and achieve the desired educational goals (12, p. (21).

- The procedural definition is a set of sequential and organized steps used to organize and develop the educational process And raise students' motivation towards learning and develop the abilities of art education teachers in successful intelligence. Which is in favor of the educational process.

3. Cognitive acceleration strategy

- Razouqi et al., (2015) a set of organized and interactive steps, which lead to stimulating learners' thinking according to four steps: sensory preparation, cognitive conflict, paradoxes, metacognition, thinking (thinking, inking) for the purpose of achieving the desired goals. (8) p. 68) . --The procedural definition is a set of steps followed by the researcher for the purpose of developing complex successful intelligence the teacher Art education, so that it makes them think more about finding more effective teaching methods in achieving educational outcomes And within the objectives set for the purpose of development.

4. Development

- Al-Khatib, 2003. Organizational work is planned or intended by creativity, continuous renewal, and continuous change It is dictated by cultural and cultural variables and factors. (7, p. 43) .

- The procedural definition: It is the goal that the researcher aspires to achieve in the ways of thinking of teachers and their successful intelligence.

5. Successful intelligence

- Al-Jassim (2010) that it is an integrated system of a set of capabilities that an individual needs to succeed in life by identifying his strengths and weaknesses and achieving a balance between analytical, creative and practical capabilities. (3 p.: 100).

- Procedural Definition: It is the total score obtained by the trainee teacher by answering paragraphs The test is for the purpose of measuring the capabilities and dimensions of the three successful intelligences (analytical, practical and creative).

Chapter two- the first topic

"The constructivist theory considers learning as a continuous and purposeful construction

process, and it is based on the learner's invention of new knowledge structures or the rebuilding of his knowledge structures or system based on his view of the world. Educational activities occupy an important place in the educational process, and it is assumed that the information that is pumped to the learners is not a burden on them, but rather it should work to help them in practicing their educational activities such as observation, conclusion and measurement.

constructivist theory was based on four theories, namely

1. Piaget's theory of learning and cognitive development.
2. Cognitive theory in the student's (learner's) processing of knowledge and what it focused on influencing internal factors in the process learning.
3. Social theory in social interaction.
4. The humanistic theory in highlighting the importance of (the learner) and its role in discovering constructive knowledge.

the social Lebanese theory

The social constructivist theory is one of the theories that has gained wide appreciation in educational circles in recent years, as it focused mainly on the work of (Lev Vygotsky), who emphasized the role of the social and cultural context in the occurrence of learning and believes that the mental activity of the learner is the result of cultural learning and the development of social relations. Social constructivists emphasize the importance of the social context in learning Educated people are born with genetic characteristics that enable them to interact with the social environment organized by their parents according to their heritage. And during their growth, they participate with adults and peers in activities that help them introduce ways of thinking and values of society and gain new tools and symbols of culture, such as language, relationships, and numbers, which explain the process in which the learner's mind works, where mental processes such as perception, memory, attention, and thinking become under the emotional control of the individual. (10, p. 247).

Factors of social Lebanese learning

Viggo Tsky identified a group of factors that he believes can help the learning process and bring learners to a high level of competence and mastery of the educational task, which are as follows: Cognitive readiness of learners ... The teacher's desire to transfer responsibility to the learners and their self-reliance. Employing (feedback) as a strategy for evaluating performance, discrimination, and development that is observed on learners. Providing directions and guidance before providing assistance to learners. E. Finding a common definition for the task that is gradually transferred to reach a common cultural definition within the culture in which the learners live, so that cooperation between the teacher and the learners can be achieved and the two concepts they have are reconciled. (9: p. 367).

Dimensions of learning according to Vygotsky

general dimension: it means that the learner builds his knowledge when he is able to interact socially with the natural world and his relationship with others.

A special dimension

It means that learners depend on their interactions in the process of constructing meaning, according to their experiences such as social experiences or historical experiences.

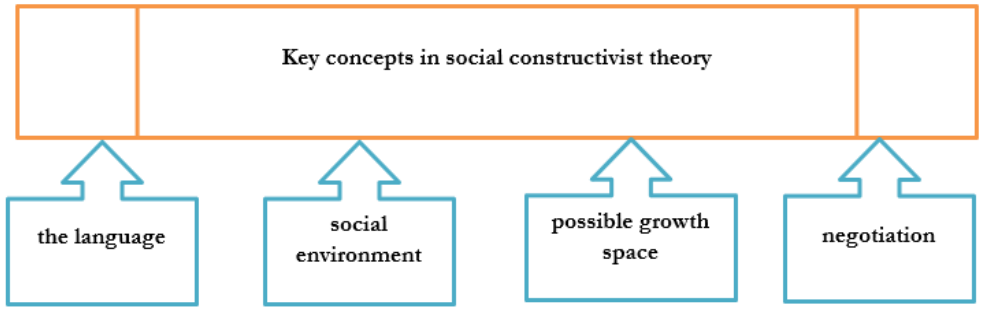

Figure (1) (chart of the main concepts in social constructivist theory)

Third - Knowledge acceleration strategy

The strategy of cognitive acceleration is considered one of the most effective teaching approaches in the classroom teaching process. This strategy was initially used in science and mathematics, and then used in other subjects. This strategy is based on the ideas of Piaget and Vygotsky in developing levels of mental growth by constantly training students to move up and move to higher mental and cognitive levels (11, p. 241).

In 1981, a team of researchers, including Michael Shire, Qalib Eddy, and Caroline Bates, devised and designed a project to solve learning problems, after they realized that many concepts need requirements that exceed the students' current thinking and mental capabilities. The world Vygotsky and the results revealed that there are differences between the patterns of thinking and the requirements of the curricula. (4, p. 24)

Steps of the cognitive acceleration strategy

It is four steps according to what each of: (Al-Najdi and others, 2005: 293) (17, p. 293) (Afaneh and Youssef. 2009: 6: (245-246) (14, pp. 245-246) (14, pp. 245-246) (15, p. 293) see They are as follows:

1. sensory setting.
2. Cognitive conflict
3. Metacognition (thinking about thinking).

4. bridging

The researcher has worked, relying on the steps of the cognitive acceleration strategy, to prepare daily study plans prepared for teaching the teachers of the experimental group, being directed and guiding them in preparing class activities that are consistent with the steps of the strategy, and by linking the sensory experiences of teachers with their previous information and through activities, then the cognitive conflict that generates a state of wonder and amazement in them so that it helps them to think and find solutions to this cognitive conflict, and by thinking about the reasons that led to the cognitive conflict to reach a solution to the problems they face, so teachers may find correlations between the new experiences and previous information they have.

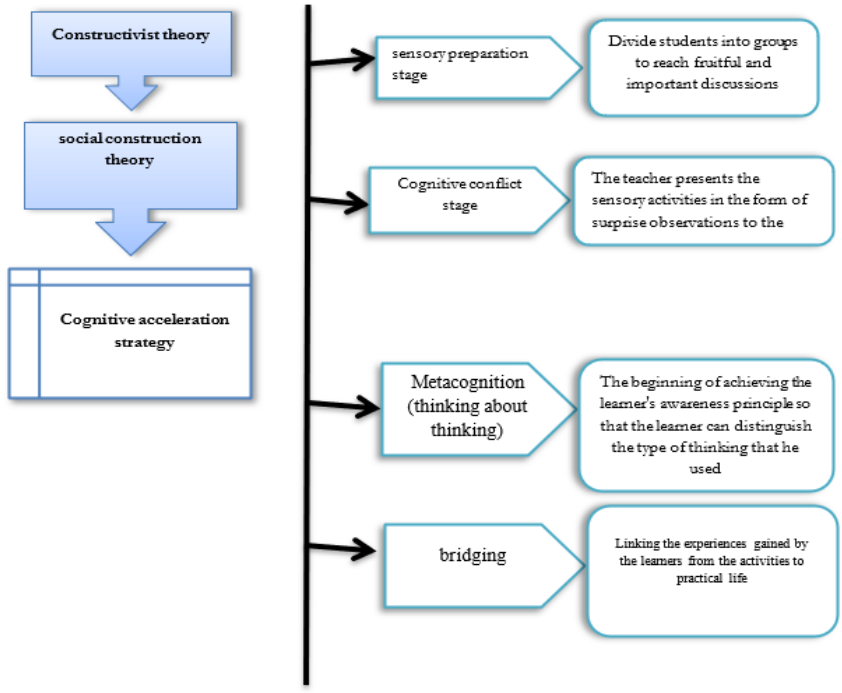

Figure (2) Scheme of the cognitive acceleration strategy

The teacher's role in the cognitive acceleration strategy

The teaching process is not limited to teachers directing their students using educational activities or teaching them lessons in closed classrooms. Rather, the role of the teacher has become guiding, guiding and supporting the students and the activities they carry out and the meaningful class participation they provide In light of the foregoing, the new roles of the teacher can be manifested in light of the requirements of the times and in the light of the cognitive acceleration strategy with a set of points identified by both(Affaneh and Al-Jaish 2009) as follows:

1. Stimulating students' imagination by asking the teacher a set of classroom problems

2. Managing class discussions with students and directing them towards mental conflict through activities that are prepared in advance.
3. Helping students to reconsider their thinking
4. Reorganizing the knowledge structure of the learners by linking their new experiences with what they have and building knowledge bridges to link them. (14, p. 241)

Successful intelligence: The second topic

Successful intelligence is defined as the ability to learn and think using previously discovered models and relationships to solve problems. New problems in unfamiliar contexts (20, p. 213) and that the individual who has successful intelligence is more able to develop the skills necessary for success as he knows them and from his personal perspective and is able to reach success and achieve his goals through analytical, creative and practical capabilities (21, p. 267)

As for the importance of successful intelligence, it is evident in that the individual who possesses successful intelligence, to the extent that he faces new circumstances, to the extent that his capabilities develop and he is able to succeed and adapt to the changing circumstances around him, and as a result of the increasing interest in the subject of intelligence, Stemberg presented new ideas complementing what came by the scientist Gardiner, as he presented a new concept of intelligence and reduced it to three poles (analytical - practical - creative), as he did not deny what Gardner brought On the existence of a common vision between the two perspectives, for example, the individual can use practical creative and analytical capabilities according to the theory of successful intelligence in the linguistic or musical field and other fields identified by the theory (22, p. 233).

Sternberg and Grigorenko also distinguish successful intelligence from other types of intelligence in that it is an integrated system of a set of capabilities that we need as individuals to succeed in our lives within a specific context or a specific socio-cultural system. Successful intelligence provides teachers and educators with a set of teaching principles to help them develop solutions their problems, and transforming their ideas into practical practices that the learners can apply to benefit from them in their practical lives (23, p. 327 People who enjoy the intelligence of success are distinguished by their ability to adapt, choose, or form their evidence through their balancing process in the use of analytical, creative, and practical abilities (18, p. (128) and based on the realization of the limitations of intelligence as used in traditional intelligence tests. Sternberg later developed his theory of intelligence, and what he called Successful Intelligence, which is the intelligence necessary for success in all aspects of life in general, not only in the educational context. Successful intelligence) according to what Sternberg sees.) is to use mgmo. One of the capabilities necessary for success in life, as this success is determined in a specific socio-cultural context, and therefore Seter Nenberg, in defining the concept of successful intelligence, depends on the individual's ability to recognize his strengths and weaknesses. And I have to strengthen the strengths and correct or compensate for the weaknesses. (24p. 12).

considered "one of the most prominent cognitive psychologists who has studied the treatment of the concepts of intelligence, creativity, and talent from both theoretical and experimental perspectives, from what has been presented. It can be said that successful intelligence is a set of analytical capabilities Creativity and the process necessary to achieve success for the individual, as it enables him to benefit from the strengths and benefit from them and correct them after diagnosing them within the socio-cultural context and through the selection of the environment, its formation and adaptation his weaknesses with her.

Successful intelligence and its relationship to other

Successful intelligence differs from the multiple types of intelligence in several aspects, the most important of which are:

a. Selection, formation and adaptation Traditional views see that intelligence is the ability to adapt to the existing environment. This definition defines the intelligent person to the extent that he is able to adapt to the environment, thus giving the individual a negative side at the expense of the environment, as it neglects the people who put themselves Set goals and strive to achieve them during their lives.

b. Determinants of expected objectivity assessment B Sternberg believes that traditional tests and tasks, despite their wide variety, cannot measure successful intelligence, and that school marks also Do not confirm his reliability.

c. Practical performance in life: Bashir Stepper donated that the traditional tests of intelligence may focus on measuring students' performance in analysis and remembering, and it does not focus on their performance future practical after graduating from school, so these tests are not considered the best criterion for all aspects of school performance (19, p. 103)

intelligence is important for finding balance in the use of the three analytical abilities (the creative and the practical), and that individuals need to use these capabilities in order to be able to succeed and be effective in society according to a set of basic criteria as follows:

1.Successful intelligence depends primarily on a set of capabilities (analytical, creative and practical).

2.Success can be defined within the cultural and social context and according to criteria set by the individual and others.

3.The extent of the individual's ability to discern and make the most of his capabilities to correct and compensate for his weaknesses.

4.The ability of the individual to adapt, shape and choose the appropriate environment, in order to adapt behavior or ideas to suit his environment (23), pg. 231)

Theoretical framework indicators

The researcher found a set of indicators after completing the theoretical framework, which was

extracted in order to reach To research procedures and conclusions:

1. The strategy of cognitive acceleration is one of the most important educational approaches in classroom teaching, and in accelerating the work of the brain.
2. The cognitive acceleration strategy includes four main steps: sensory preparation, cognitive conflict, meta-knowledge (thinking about thinking), bridging).
3. (Jaris reduced the concept of successful intelligence to three main poles: analytical intelligence, practical intelligence, and analytical intelligence).
4. The importance of successful intelligence is evident in the ability of the individual who possesses this intelligence to face new life conditions and adapt. The surrounding environment.

Previous studies

The first axis is studies related to the cognitive acceleration strategy

a. study by Caesar (2022: The study aimed to investigate the effect of the cognitive acceleration strategy on the acquisition of historical concepts for middle school students. The experiment was applied in the first semester of the academic year (2021-2022). The research sample consisted of (61) students, with (31) students for the experimental group and (30) students for the control group, and they were chosen randomly. The researcher prepared behavioral goals for the scientific material, which consisted in its final form of (30) behavioral goals, and in the light of arbitrators. The researcher prepared two tools for research, the test to acquire historical concepts.

b. Obtaining the stability of its paragraphs by adopting the alpha-Cronbach equation, as it reached (0.95), and after the data were processed statistically and using the statistical bag, the results of the research showed that there was a statistically significant difference at the level of significance (0.05) between the average scores of the students of the experimental group who studied according to the cognitive acceleration strategy and the scores of the students of the control group who studied according to the usual method in the achievement test in the subject of history in favor of the average of the experimental group, and based on the results reached by the researcher, he developed a number of conclusions and recommendations He also suggested conducting subsequent studies to complement the current research.

b. The study of Abdul-Razzaq and Al-Azzawi (2020)

The study aimed to identify the effectiveness of the Cognitive Acceleration Model (CASE) in the ability of second grade students average on solving mathematical problems of physics and developing their physical exploration, and the research sample consisted of (78) Students from the second intermediate grade, and the students were intentionally chosen from the middle school (Martyr Ali Al-Ramli for Boys) in the city of Mosul for the academic year (2018-2019), the

researchers divided the students into two equal groups in the first number The experimental group was studied according to the Cognitive Acceleration Model (CASE) and the second was the control group It was studied according to the usual method, and the researchers rewarded the sample members in a number of variables: intelligence, Physical survey, science degree for the first intermediate gradeand to achieve the goal of the research and test its hypotheses, the researchers relied on two tools, the first is a test of physical issues prepared by them, and the second is the scale of physical survey prepared by Al-Taie (2016).

Then the two researchers assigned the subject teacher in the aforementioned school to carry out the research experiment in the second course, and after completing the experiment, the two researchers applied the two tools dimensionally, and the data was analyzed statistically using the second test for two independent samples, and the results confirmed:

- 1 - There is a statistically significant difference at the level (0.05) between the average ability of students of the experimental and control groups to solve physical problems and in favor of the experimental.

2- There is a statistically significant difference at the level (0005) between the mean of the development of physical reconnaissance among the experimental and control groups, in favor of the experimental group.

At the end of the experiment, the researchers reached a set of conclusions and recommendations, as well as proposals for future research.

The second axis: studies related to successful intelligence

a. Study of Al-Amer and Afaq (2022)

The study aimed to identify the impact of a proposed strategy on the achievement and development of successful intelligence for students of the fifth literary In the subject of principles of philosophy and psychology. The research sample consisted of (70) students from the fifth literary grade within the (Directorate of Education of Baghdad, Rusafa II).

The research tool was represented by an achievement test prepared by the two researchers, and a test of successful intelligence was adopted. The results of the research revealed the existence of an effect of a proposed strategy in the collection and development of successful intelligence in favor of the students of the experimental group at the level of statistical.

b. Al-Dulaimi study 2017

The study aimed to identify the effect of Karen's model on the development of successful intelligence for fourth-grade students in physics. For the purpose of verifying the objective of the research, the researcher formulated the following null hypothesis:

- There is no statistically significant difference at the level of significance (0.05) between the mean

scores of the experimental group students in the pre and post test of successful intelligence after applying Karen's.

The researcher chose the semi-experimental design with one experimental group with a pre- and post-test for successful intelligence. The researcher chose the research sample from preparatory students (Al-Tarmiya) for boys, the fourth scientific grade in the Al-Taji and Al-Tarmiya Education Department of the General Directorate of Education of Baghdad Al-Karkh, the third. The selection was done randomly and amounted to (34) students.

The researcher adopted the successful intelligence test, and the test was (36) items of the multiple-choice type. Cooper's equation, Pearson's correlation coefficient, Spearman-Brown's equation, and variance. As for the results, it was confirmed that Karen's model has an impact on the development of successful intelligence for fourth-grade students, and the difference was statistically significant in favor of the post-test for successful intelligence. In light of these results, some conclusions were drawn and a number of recommendations and proposals were made.

Research methodology and procedures

Since the current research aims to know the impact of the cognitive acceleration strategy in developing successful intelligence skills among art education teachers, therefore, the researcher adopted the experimental approach in designing her research procedures as it is appropriate. Research procedures, which is one of the scientific methods through which researchers try to treat certain factors under conditions finely tuned. (1, p. 98)

Research Community

The research community consisted of art education teachers in Baghdad / Rusafa First Directorate) for the academic year 2022-2023 Research.

Research sample

Based on the requirements of the research, the researcher contacted the preparation and training department in the Rusafa Education Directorate The first (being the body responsible for training teachers during service to select a sample of art education teachers for the purpose of Providing them with cognitive and performance technical skills, through the content prepared by the researcher according to the cognitive acceleration strategy.

To try to develop their successful intelligence skills as part of the training requirements for the profession of teaching art education at a rate (2) two hours a day in order to apply the experiment to them, as their number reached (22) male and female teachers.

Requirements and research procedures The researcher applied a survey to know the appropriateness of the tools and their characteristics Benefiting from 30 male and female art education teachers from outside the basic research sample to be a second sample for the application Exploratory and testing tools, as shown in Table (1)

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	The sample	The number
1	The survey sample	30 male and female teachers
2	Basic sample (application sample)	22 male and female teachers

Table No. (1) shows the exploratory and applied samples of the research Experimental design: The researcher relied on the experimental approach, and on this basis, the experimental design with one sample with two pre-post tests was chosen, as it is compatible with the research procedures in achieving its objectives, as 22 male and female teachers were identified who were nominated from the Preparation and Training Department as an experimental group as shown in Table (2).

Post-test		The independent variable		pretest		experimental group
Successful intelligence	cognitive			Successful intelligence	cognitive	
×	×	Cognitive strategy	acceleration	×	×	

Research variables

according to the objective of the current research, which includes "the impact of the strategy of cognitive acceleration in the development of successful intelligence among art education teachers", the search variables were as follows:

The independent variable

It includes the cognitive acceleration strategy according to teaching plans designed in the current research that include technical and educational skills, as the experimental group was taught according to its contents, which included (six) Teaching plans prepared by the researcher for the purposes of the current research.

dependent variable

which is the successful intelligence, as well as the cognitive test.

extraneous variables

a. ***Controlling the training environment:*** the researcher was able to control this variable by selecting the research sample And it is limited to (22) male and female teachers of art education from the First Rusafa Education Directorate, which is consistent with the size of the The training environment, because the material adopted in this research is represented as educational technical skills provided within a period Preparation and training.

b. ***The level of knowledge and technical skills of male and female teachers :*** previous experience, as this variable was controlled after its disclosure, so all teachers are within one level as proven by the survey study, and this means They hold the same specifications in terms of knowledge and skill.

c. chronological age and conducting equivalence between male and female teachers of the

experimental group, as it has an important impact on the research procedures

Based on the foregoing, the researcher controlled the variables represented by:

gender variable

This variable fulfills the conditions for achieving equivalence through the distribution of the research sample with (8) male and (13) female teachers. in the sample, so the researcher did not take any measure in this variable.

Chronological age variable: Chronological age variable Since the current research aims to develop the skills of successful intelligence, so the researcher adjusted this variable for its relationship to experience and technical maturity, especially that they may have previous experiences through teaching them technical skills.Knowledge, educational, cultural... and others.

Therefore, equivalence was made between male and female teachers of the experimental group This variable by calculating the chronological age in years and extracting the torsion coefficient, and it was found that their ages are close and the existence .

Previous experiences In order to identify the accumulation of experiences that the research sample possesses, the researcher decided to control this The variable to stand at the group level in terms of the extent to which they have previous experiences and to determine the extent of their needs for vocabulary And the content of the research when applying the cognitive acceleration strategy plans, so there was a need to subject them to a test Cognitive and extracting the torsion coefficient, and it was found that there is homogeneity among the sample members with this variable, as shown in Table 3 below.

Table No. (3) shows the homogeneity of the research sample, the skew coefficients for the purposes of equivalence

Equivalent subject variables	Torsion values
Previous experience (cognitive test) tribal	1,354
Chronological age	0,456
Intelligence	0,638
Pre-compound thinking test	1,220
Tribal successful intelligence measure	1,434

Based on the foregoing, it was noted that the experimental group members stand on one line of initiation and there is a need To implement the content of the teaching plans designed with the steps of the cognitive acceleration strategy. Procedures for preparing teaching plans according to the cognitive acceleration strategy:

a. Determining the needs and prerequisites: The researcher conducted a pilot study on a sample of (30) male and female teachers who were selected from the preparation and training unit who were not included in the research sample, in order to verify their needs to study technical skills and achieve their goals and their needs for activities and events or tests that they see

might raise their motivation to acquire them. Determine educational goals. I And the necessary behavior of the components of the article.

b. Sweetness of the characteristics of male and female teachers (the targeted category): The first step in these plans is to analyze their characteristics and determine the extent of their willingness to receive the new educational experiences that will be presented by the content of teaching plans, and it may be difficult to analyze the characteristics of each teacher individually, in terms of psychological and educational aspects, but there are several elements (variables) such as (age sex, previous experiences, and these variables benefit the researcher in determining the level The appropriate topics for the preparations of male and female teachers, selecting educational content, activities and tests that are compatible with their capabilities and capabilities.

educational and behavioral goals

The researcher determined what should be obtained from the follow-up of the teaching plans and the selection of educational activities and events to achieve the educational goals and create an appropriate training environment. Included in the teaching plans in this research, which seeks to develop the skills of successful intelligence, and then derive Behavioral goals are among those goals and are observable and measurable.

achieve the educational

goals specified in the plans developed and came after the (researcher) analyzed the educational material and then reformulated it in the form of educational ideas according to clear, specific, sequential steps that start from the easiest and end with the most difficult, in addition to that all educational activities and events center around each behavioral goal of the specific educational goals for each educational item in these approved technical plans.

search tools

First - cognitive achievement test

The cognitive achievement test was built according to the requirements of objective tests, multiple choice, correction Wrong phrases, as the test included (30) test items.

Indicators the validity of the test The validity of the test: gives an indication of the validity of the test in measuring the goals for which it was set, so the researcher presented the test picture to a group of experts in the disciplines of art education, educational psychology, measurement and evaluation, and teaching methods) to verify the validity of the test items in measuring the educational goals specified in the teaching plans, and in the light of their scientific observations and suggestions, this test was corrected and returned again to them to determine its validity in measuring what was intended to be measured, as the researcher adopted (80%) of the agreement To accept the paragraph in the test, and thus the cognitive achievement test is ready for application

in its final form. Indicators of test stability: Since the researcher relied on correcting the test by giving it (one point) for the correct answer and (zero) for the wrong answer, so he used the equation (Kyodor Richardson (20) in calculating the stability coefficient for the test items, as this is one of the types of statistical coefficients that are widely used in such types of specific tests with one answer (true or false) Therefore, the stability coefficient of this test was calculated after it was applied to a survey sample, if it showed equal (0.86), and this is a good indicator.

Correction of test items: according to a scale (0-1), as (one point) was determined for the correct answer and (0) for the wrong, left or incomplete answer, and thus the total score for the cognitive achievement test became equal to (30 degrees), meaning that the highest score obtained by the trainee is (30) and the lowest score is (zero). After a period of time, the researcher repeated the correction process to ensure the accuracy of the results.

conducted an experimental examination of the cognitive: achievement test on an exploratory sample consisting of (30) male and female teachers of art education in primary schools, as the grades they obtained through the experiment ranged between (37-26) for the lower group and (24-16) for the upper group, in order to identify the extent to which the paragraphs achieve the objectives of the research as well as to detect the coefficient of difficulty and the coefficient of discrimination as follows:

1. Difficulty coefficient indicators: was determined by calculating the percentage of students who answered the paragraph correctly. If the percentage is high (80%) or more, then it indicates the ease of the paragraph, and if it is low (20%) or less, then it indicates its difficulty. After that, the difficulty of each paragraph was calculated using the difficulty coefficient equation, as the score appeared to range between (68%-36%) for the cognitive achievement test, so no paragraph was excluded because of its difficulty or ease. Good if the grades of the level of difficulty of its paragraphs range between (20%-80%) (2,pg. 107)

2. Paragraph highlighting indicators

The item discrimination coefficient equation was used to find the power of discrimination for each item of the test, as it appeared that the coefficient Discrimination for the items of the achievement test defined in the range between (40%-76%). Ebel has indicated in this regard That the test items are considered good if they have a strength of distinction of (30%) or more.

Successful intelligence measure- To achieve the objectives of the research, the researcher relied on preparing the scale according to the following:

1. studies and literature
2. Discussion of the supervisor, experts and those with specialization.
3. Examine the skills of successful intelligence, the most prominent of which are (acceptance of others, cooperation with them, and the ability to bear Responsibility, leadership thinking and

constructive criticism..).

The drafting of the paragraphs, the number of which is (30) paragraphs, some of which are positive and the other negative. I presented it in its initial form to experts and specialists, and it was approved by most of them, with an agreement of 90%.

Number of response alternatives: Likert method requires the respondent to specify his response to each of the scale statements by marking one of the alternatives in front of him (strongly agree, agree, not sure, disagree, strongly disagree).

A sample of clarity of instructions, understanding of paragraphs, and time calculation: for the purpose of knowing the clarity of the paragraphs of the scale in terms of wording and meaning, and knowing the extent of clarity of its alternatives and instructions.

In order to detect ambiguous and unclear paragraphs and try to modify them, and to calculate the average time taken to answer the scale, the scale was applied to a sample of preparing the scale instructions: it was taken into account in preparing the scale instructions that they be clear and easy to understand, with an illustrative example representing how to answer the paragraphs, which helps the respondent to answer, and the researcher concealed the purpose of the scale so that the respondents would not be affected by it when answering, as well as alerting the respondents to the absence of a right or wrong answer.

A sample of clarity of instructions, understanding of paragraphs, and time calculation: for the purpose of knowing the clarity of the paragraphs of the scale in terms of wording and meaning, and knowing the extent of clarity of its alternatives and instructions; In order to detect the ambiguous and unclear paragraphs and attempt to amend them, and to calculate the average time taken to answer the scale, the scale was applied to the survey application sample, numbering (30) male and female teachers, and the answer was done in the presence of the researcher. The answer was given in the presence of the researcher, and it was found that the paragraphs of the scale and its instructions were clear and understandable to the sample members, and that the time it took to answer was between (25-35) minutes.

Correction of the scale and its total score: The researcher prepared the scale and, according to the directions approved by the arbitrators, distributed the scores to the alternatives to the answer as follows: (1,2,3,4,5) for the negative paragraphs and vice versa for the positive paragraph: (5,4,3,2,1)

First: The validity of the scale: In order to verify the validity and validity of the paragraphs of the successful intelligence scale, the researcher presented the scale in its initial form consisting of (30) items to a group of specialists in the fields of "Methods of Teaching Art Education, Education and Psychology, and Measurement and Evaluation". After the completion of the questionnaire of the opinions of the arbitrators, and the data dumping and analysis, it appeared that all the paragraphs remained the same.

Second - the stability of the scale:

In order to verify the stability of the successful intelligence scale, the researcher used the (re-application) method: this is done by applying the scale to a sample and then re-applying it after a period of time on the same sample, then calculating the correlation coefficient between performers in the two applications, and the scale was applied to the exploratory sample.

Then the scale was re-applied to the same sample after (14) days had passed from the first application, and by using Pearson's correlation coefficient between the degrees of the first application and the degrees of the second application, the success coefficient of intelligence reached (80.0). This value was considered a good indicator of the stability of individuals' responses to the scale of successful intelligence over time.

2- Cronbach's Alpha Equation for Internal Consistency

The researcher sought to find stability according to this method by subjecting the scores of the survey sample's questionnaires of (30). The stability coefficient of alpha successful intelligence reached (82.0), and thus it became possible to adopt the measure of successful intelligence.

Exploratory experience

The researcher conducted her initial experiment to examine the teaching plans units prepared in this research on a group of male and female teachers from the target group, who numbered (30) male and female teachers, in order to determine the effectiveness of their educational content and mechanisms, as a teaching plan was chosen for the examination process, as shown in Table (9).

Table No. (9) shows the teaching plans conducted by the researcher in the initial examination

day and date	place	Teaching plans	the time
Monday 7/11/2022	Directorate of Education Baghdad Rusafa first	Geometric decorative	2 hours
Tuesday 8/11/2022		types of lines	2 hours

After conducting the initial experiment (initial examination) of the content of the teaching plans, the researcher made an amendment to some of its components and the steps in its sequence in the light of the results of the experiment, and after that the scientific material was produced.

The final application of the content of the teaching plans

The method of teaching according to the plans requires measuring the level of effectiveness of its educational content in that subject to achieve the goals that it was prepared to measure, as the researcher taught the teaching plans to the experimental group Starting from Sunday, 13/11/2022, in a sequential manner, according to what it is in the design of the teaching plans, at a rate of (two hours), and finished teaching on Thursday, corresponding to 24/11/2022, as the post-cognitive achievement test + successful intelligence scale was conducted.

Statistical means

The researcher used a set of statistical methods to process the data and information she obtained in order to achieve the objectives of her research, namely: t.test

$$\frac{q1 - q2}{\sqrt{\frac{P21\ (N1-1) + p22(n2-1)}{N1+n2-2} \cdot \frac{1+1}{N1+n2}}}$$

The researcher used the t-test equation for two related samples to verify the scores of the pre and post tests

Q1 = the mean of the experimental group

n1 = the number of experimental group members

P21 = variance for the experimental group. Q2 = the mean for the control group

N2 = the number of individuals in the control group

p22 = variance for the control group

Difficulty coefficient equation

This equation was used to identify the degree of difficulty in the items of the cognitive achievement test:

$$De = \frac{N1-n2}{n} *100$$

Discriminatio

This equation was used to identify the degree of discrimination in the items of the cognitive achievement test:

$$De = \frac{N1-n2}{\frac{1}{2}\,n} *100$$

N1 = the number ot members of the upper group

N2 = the number of members of the lower group

1/2 N = half of the total number of the sample

Kauder Richardson -20 equation

It was used to find the stability by the split half method.

$$Kr20 = \frac{nk}{Nk-1} \left[1 - \frac{NR - NF}{S2}\right]$$

K.R. 20 = Estimated stability equation

NQ = the number of test items

NR = percentage of those who answered correctly

NF = percentage of those who answered incorrectly

S2 = test score variance

□ = total paragraphs

(1, p. 113).

5- Cronbach's alpha equation:

used to calculate internal consistency.

$$D = \left(\frac{n}{n-1}\right)\left(1 - \frac{P2\ Q}{P2\ Q}\right)$$

whereas :

C2N: The sum of the variance for each item of the test.

P2 Q: The difference in scores on each item in the test.

N: the number of test items.

6- Degree of sharpness: $\frac{T1 \times 3 + T2 \times 2 + T3 \times 1}{\text{Total iterations}}$

degree of sharpness

7-Weight Percentage = $\frac{\text{The highest weight on the scale}}{\text{The highest weight on the scale}}$

Interpretation of the results

1- The results confirm the effectiveness of the study plans prepared in the research and according to the strategy of cognitive acceleration in developing the knowledge information of the male and female teachers of art education.

2- The prepared study plans achieved compatibility between ideas, concepts, information, and theoretical and practical content that were presented during the development course.

Conclusions: The researcher reached a number of conclusions:

1- The success of the educational content of the plans prepared during the current research depends on the extent of the interaction of male and female teachers, which clearly contributed to achieving the current results.

2. The current results indicated that the process of developing successful intelligence can occur through building knowledge content in the light of their ideas and frameworks that are compatible with their experiences.

Recommendations

Based on the conclusions reached by the researcher, she can formulate the following recommendations:

1- Benefiting from the content of study plans in the current research, in order to prove their feasibility and usefulness in training male and female teachers.

2- Adopting the cognitive and skillful content of the plans as a continuous approach to training and developing teachers' skills.

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