TITLE: The Impact of a Proposed Instructional Program Based on Image Analysis to Develop

Concepts of Non-violence among Upper Basic Stage Students

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PAGES: 115-126

Original Article

The impact of a proposed instructional program based on image analysis to develop concepts of non-violence among upper basic stage students

Görüntü analizine dayalı önerilen bir öğretim programının üst temel aşama öğrencileri arasında şiddetsizlik kavramlarını geliştirmeye etkisi

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ABSTRACT

The current study aims to examine the impact of a proposed instructional program in the field of Visual Arts that relies on image analysis to develop concepts of non-violence among the sample of the study upper basic stage students during the first semester of the academic year 2019/2020. To achieve this purpose, an objective test measuring participants' responses related to concepts of non-violence. The test consisted of (8) paragraphs divided into (4) dimensions: (2) paragraphs on formal analysis, (2) paragraphs on semantic analysis (2), paragraphs on constructive analysis, and (2) paragraphs on semiotic analysis. The sample of the study consisted of (52) students selected from the upper basic stage using a convenient sampling method. They were distributed to two groups: an experimental group of (29) students selected randomly and received the proposed instructional program, and a control group of (23) students received the traditional instructional program. The results of the study revealed a statistically significant difference in the test dimensions (formal analysis, semantic analysis, constructive analysis and semiotic analysis), totally and individually, between the responses of two groups, in favor of the experimental group members. Therefore, the study recommends the employment of this instructional program to develop concepts of non-violence.

ÖZ

Mevcut çalışma, 2019/2020 akademik yılı ilk döneminde üst ilköğretim düzeyindeki öğrenciler arasında şiddet karşıtı kavramların geliştirilmesi için görüntü analizine dayalı Görsel Sanatlar alanında önerilen bir öğretim programının etkisini incelemeyi amaçlamaktadır. Bu amacı gerçekleştirmek için, şiddet karşıtı kavramlarla ilgili katılımcıların yanıtlarını ölçen bir hedef test uygulandı. Test, (4) boyuta bölünmüş (8) paragraftan oluşuyordu: (2) paragraf biçimsel analiz, (2) paragraf anlamsal analiz (2), paragraf yapıcı analiz ve (2) paragraf göstergebilimsel analiz üzerine. Çalışmanın örneklemini, uygun örnekleme yöntemi kullanılarak seçilen (52) üst ilköğretim düzeyindeki öğrenci oluşturdu. Öğrenciler iki gruba ayrıldı: Rastgele seçilen (29)

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öğrenciden oluşan ve önerilen öğretim programını alan deneysel grup ile geleneksel öğretim programını alan (23) öğrenciden oluşan kontrol grubu. Çalışmanın sonuçları, test boyutları (biçimsel analiz, anlamsal analiz, yapısal analiz ve göstergebilimsel analiz) açısından toplam ve bireysel olarak iki grup arasında istatistiksel olarak anlamlı bir fark olduğunu gösterdi; bu fark, deneysel grup üyeleri lehine oldu. Bu nedenle, çalışma şiddet karşıtı kavramların geliştirilmesi için bu öğretim programının kullanılmasını önermektedir.

INTRODUCTION

The tremendous outreach of digital images to all groups and ages, educated and non-educated, and the disorganized diversity of the follower makes him have an illusion of living a wide variety of experiences, especially since images promote terrorism using the visual presentation records that view terrorists as prototypes having sincere goals and messages to the masses. In general, images have a prominent position in children's cognitive development and the formation of his/her thoughts and perspectives and culture. Cognitive development, especially the imagination formed by the image and colors, has an important role in sensory and procedural development, and thus the cognitive development in general. Due to this importance and with the development of communication and knowledge transfer means in our era, the term Image Culture or Visual Culture has established and became an integral part of communication means, not only at the social communication level but also at the educational level within educational and social institutions.

In the educational and cultural sphere, image is the mirror of the text. It conveys the entire text by depicting the character's behavior and mood. Julie (2014)indicated image and text are of a mutually influenced nature, as well as the unique and distinctive contributions of each medium in it as a result of the image's ability to cover all aspects of a theme or topic, with an efficiency that exceeds even the text itself. In a text, scenes can describe the characters, while an image can describe the situations contained in the text or the message in a complex form that text alone cannot do. This importance of the image is due to two factors: First, images' importance in social, economic and media institutions, and the second is the great development of visual technology, which raised many questions more than answers. Specialists in visual technologies, whether photography, cinema, television, and social media, attempt to fabricate reality. Therefore, this makes images to be an integral part of human contemporary life with their compatibility and their analysis of ethnicities, social classes, gender and nationality. Referring back to images is an integral consequence of culture as a response to human needs in organizing reality.

Furthermore, images in general, and instructional images in particular, have a privileged position in education curricula of childhood (Manovich, 2001).

Nowadays, humans also live in light of a powerful and dominant Image Culture; especially with the global openness of digital media and the accompanying measures and changes towards building and producing images. Compared to artistic compositions, images in general, and digital images in particular, have become more prevalent these days (Alsaggar, 2013). Using images with multiple orientations in the media also affects humans' cognitive formation, attitudes, opinions and behaviors through the massive and infinite influx of images with all their information, news and implicit and explicit messages that they convey. This caused individual's attitudes and opinions, whether consciously or unconsciously, by inspired by various media information and data provided by these images (Abdul Hamid, 2005).

Previous Study

In this study, the researcher focuses on the Arabic studies, in line with cultural environment of the current study and to approach education curricula and methods. Bin Abdullah and Omariya (2021), investigated the effectiveness of the indicative program in reducing school violence among primary school students. The Quasi-Experimental approach was used. The study sample included (24) pupils, questionnaire, indicative informative program prepared by researchers, and two research tools. The Mann–Whitney test was used for statistical analysis. The results showed the effectiveness of the indicative program in reducing school violence in the participants. In Saudi Arabia, Abu Nasser (2018) investigated the effects of the suggested photography program on developing creative abilities in third grade female students at the intermediate level in Dar Al-Rowad schools in Jeddah. The Quasi-Experimental approach was used; it was based on two groups; Experimental and Control groups. The sample included (42) female students from intermediate third grade in Jeddah. It comprised instruments of the suggested photography program for three weeks. Additionally, the researcher used creative thinking tests in the Aurora Battery. The research results were as follows: There was a difference

of statistical significance at the level of (0.05) between the average of the Experimental and Control Groups in the overall creative abilities. In addition, each component of its sub-components (i.e. quantitative, formal, verbal) which was in favor of the Experimental Group. Upon these findings, the researcher was able to reach the following recommendations to pay attention to the Intermediate Level Curricula in general, which includes mechanisms that would help students to develop creative thinking skills and to use a camera during the courses' applications.

In Jordan, Alnajaar (2018) investigated the effectiveness of the collective guidance program in communication, and its impact on reducing the level of school violence among students with learning difficulties in the first three grades in Amman. The sample consists of (48) disabilities learning students' from the first three grades of the basic level in the second Directorate of Education in Amman, who were randomly assigned to two groups: the control group which included (24) students, and the experimental group which included (24) students. To achieve the study objectives, a measurement of school violence which consists of (32) items distributed over three areas: self-oriented violence, violence towards others, and violence directed towards property and a collective indicative program in communication skills were used. The validity and reliability of the two tools were verified and they were applied to measure both groups; the program was applied with the experimental group, while the control group did not undergo of any analysis. Then the scale was applied dimensionally. The findings show that there are statistically significant differences between the experimental and control group in the post-measurement in favor of the experimental group.

A study by Sadiq (2018) aimed to examine the effectiveness of an training program based on habits of mind in reducing school violence among students of primary schools. The sample of the study consisted of (20) 4th graded students, were divided into two equivalent groups (experimental group and control group). To achieve this purpose, the researcher employed a Mind Habits Scale, a School Violence Scale, and the training program which is based on some habits of mind (prepared by the researcher). The results of the study revealed statistically significant differences between the two means scores of the experimental group and the control group in school violence's post-measurement, in favor of the experimental group, as well as statistically significant differences between the pre and post-measurement of school violence among the experimental group, in favor of the post measurement. The study also showed no statistically significant differences between the means scores of the experimental group in the post and follow-up measurements of violence against teachers and school property. Furthermore, there were also statistically significant decrease in the means scores of against-colleagues violence in the follow-up measurement compared

to post-measurement, due to the program's need to keep pace with activities and tasks development.

Al-Atoum, (2018) aimed to find out the effect of using concept maps strategy on the achievement of eighth-grade students in Art education of History of Art theme on a sample of (107) eight-grade students; (53) males and (54) females, distributing into two groups: the first group was disciplinary taught by using the usual method of teaching and it consisted of two sections. The second group was experimental, and it is consisted of two sections that use concept maps. The strategy was applied in the schools of (Bani Ubaid) district education directorate in Irbid governorate in Jordan. The study used two tools. The first tool; an educational material that use concept maps, and second tool; achievement tests consisting of (25) paragraph. The results revealed the existence of a statistical significant difference at the level of the statistical indication (α=0.05) between the arithmetical averages regarding the performance of the members of the study (the eighth-grade students) and their achievement test of art education (Art History) due to the teaching method variable. Therefore, the performance of the experimental group members who were educated by using concept maps was better. Moreover, there is an existence of a statistical significant difference (α=0.05) related the performance of the study's members regarding the achievement test due to gender variable and in favor of female students. There are also some statistical significant differences due to the bilateral reaction between the variables of teaching method and gender in favor of female students who were taught by using concept maps teaching method.

Olowo (2016) aimed to investigate the effects of integrating Peace Education subject into the Nigerian educational system. Four research questions were designed for achieving the study purpose. The researcher designed a instrument tagged: Questionnaire on the Impact of Integrating Peace Education (QEIPE). The total population of two hundred respondents spread across secondary schools and lecturers at higher educational institutions in Ondo State was used as a sample for the study. A 20-item questionnaire based on a 4-point scale was employed to collect data. The Means Score and Standard Deviation were used to answer the four research questions of the study. The findings of the study indicated a need for the inclusion of Peace Education in the Nigerian curriculum in order to reduce the rates of crime, violence and other social vices in Nigeria. The results also revealed no statistically significant differences between Peace Education and Social Studies, as well as no statistically significant effects for integrating Peace Education into school curricula on both teachers and students. Based on these findings, it was recommended to intensify teachers' training for enabling them to acquire the skills and knowledge for the effective use of appropriate techniques and methods related to Peace Education subject. It is also necessary, during the integration of Peace Education con-

cepts, to review the thematic approach role in restricting Social Studies curriculum to the field of Social Studies in a way that reflects and identifies the concepts relevant to Peace Education with in the educational system.

Abu Sitta and Al-Dalil (2016) investigated the effectiveness of picture reading in enhancing students' aesthetic sense of art of the Art Education Department at the Faculty of Specific Education. The study sample consisted of (40) male and students in the third grade at the faculty of Specific Education, department of artistic education at Damietta University. The methods of the study are proposed unit for developing the students' aesthetic sense via using picture reading in addition to scales of aesthetic sense. The results of the study revealed the effectiveness of using pictures reading in enhancing students' aesthetic sense of art in faculty of Specific Education Department of Artistic Education. There are statistical significant differences between students of the two experimental groups in the pre and pro application of evaluating aesthetic sense in favor of the post application. The proposed unit has achieved great success in increasing the students' skills of aesthetic sense as a main skill and the sub-skills that fall under it, in addition to; proposed unit has played a significant role in developing the skills of aesthetic sense. In another study, Al-Dulaimi (2011), examined to determining the indications of violence in students' drawing. A descriptive approach was used in a theoretical framework. To achieve the study objectives, the analysis content was used in children's drawings. The study sample consisted of (40) from students' primary school drawings' in the governorate of Babil, distributed as follows: (20) drawings in the center of the city of Hilla from its north, south, east, west, central and rural areas, and the districts of the governorate of Babylon, with (7) in the Hashemite district and its suburbs and (6) in the district of Al-Hawail and its suburbs, and (7) in the district of Al-Musayyib and its suburbs. The results of the study revealed the indications of violence in the students' drawings were in (political, social and behavioral types). Political violence dominates other types of violence, especially the violence of armed manifestations and terrorist operations. Some indications appeared in the students' drawings indicating behavioral violence, especially reckless violence and compulsive violence.

Children's Visual Perception of Images

What we call an "image" is largely inconsistent. The scope of this term is very broad and requires a series of clarifications. Sometimes, it means what comes as a result of visual perception. According to neuroscientists or their imaging strategies, visualization results are often referred to as "images" mediated by other senses (Wulf, 2014). Visual perception includes multiple cognitive activities, the first and most important of which is attention, as it is the individual who decides what to pay attention to. When a child reads a textbook, he/she quickly looks at the black symbols or cer-

tain words and letters without having meaning. And in the classroom, he/she focus on the noise or the whispers by the students at the back of the class. By focusing his attention, he has the ability to figure out the meaning of the information he gathered and linked to his previous experiences, since experience has a role in perception. On the other side, memory also has a role in the perception process, whereas the senses have the ability to store information for a temporary period, and one is able to compare the visuals, sounds, and other sensations with similar experiences in memory by decoding their meanings (Elkins, 2011). Information preparation or processing during perception gives meaning to the noticed stimuli through a comparison between past and present experiences to end up with interpretations and evaluations. Since these cognitive processes (attention, experience, awareness, memory, information processing and language) are intertwined to a large degree, one may start perception, since perception is a convergence of knowledge and reality, and the most central cognitive activities from which other activities emerge (Gage, 2010).

Images can be seen as understandable representations closely related to perception. They may refer to the appearances of things and are related to their outcomes. Images appear as soon as one gets out from the inner perception, and thus he/she can distinguish concepts of other images concluded by traditional empirical experience, as there are no representations of abstract concepts or ideas that do not have a starting point in the images of perception. Between the two concepts lies the crucial criterion of images; i.e. they make absent people and things "present" with the help of imagination. Thus, this is how images stand between perceiving things and visualizing perceived things. Accordingly, an image is understood by cognitive psychology as a "model of spiritual perception" characterized by its ability to preserve the cognitive information in a form of highly-perception structure" (Denis, 1989, p. 9).

Image and its Cognitive Performance

One of our present era features is that it is the age of the image, indicating its dominance as one of our world's most important knowledge, cultural, economic and media tools. Although its production is an ancient practice throughout history, images has shifted from a marginal position to a central one, and from a partial presence into dominating other cultural and knowledge elements. The image expresses the mental representation of a sensory experience, in which awareness of the image is formed. Mental image is not identical to the sensory image, since image, as a cultural value, came at a later stage of human history; verbally, writing and then the image which came as a cultural sign and a source of view, interpretation and response. The image came to bridge the gap, cultural barriers and class distinctions between categories, as it expanded the view circles to include all human beings. The popular base of culture has expanded, and everyone became familiar in identifying the

world, acquiring new knowledge and communicating with facts and cultures. Nowadays, anyone can recognize and understand what is going on via images, especially over the media and social communication platforms. These images remain in the visual memory and are easily retrieved due to their influence on the personality (Kir, 2019).

Images are considered an outcome of vital processes that transform the world in all its objects, actions and humans into images. These images are formed via imagination and then become part of both individual and collective perception. Many of these processes are simulated and lead to a lack of consistency with others, environments, images and visions. Furthermore, in simulation, the outside world turns into an "inner world"; i.e. a world composed of images. And undoubtedly, this world of imaginary images contributes to shaping the outside world. Since these images are performative, they contribute to the emergence of actions and underline the nature of our relationships with others and the surrounding world. Imagination is the source of images, and thus the source of simulated operations that form the purpose of the images. At the same time, it is the starting point for images' simulated and performative energies. Imagination also has a key role in all forms of social and cultural activities, as it controls human behavior and actions through images, plans and patterns. An image is specific moments of increasingly important actions. This leads to the question (what constitutes the image and what types of images can be distinguished?) The answer, for instance, is that the mental images formed can be distinguished?). The answer would be, for example, the images formed manually and technically can be distinguished, the same thing for the moving pictures taken from static images (Wulf, 2014).

Many fictional images are purely collective images. They are like an icon derived from the field of religion and art, or verbal images derived from literature. Other images are products of rituals, institutions and media. Not only iconic or verbal images belong to imagination, but also phenomena of imagination, such as songs, musical compositions, motion pictures, dances, rituals or sports related to other senses. Likewise, the sexual effects of smell, taste and touch have a place in a culture's collective imagination. Phenomena, effects and images associated with emotional and social assessments are also transferred over generations to become a part of the youth's imagination, aspirations and customs (Wulf, 2009).

Image Analysis

All approaches of image analysis sought to examine the esthetics of visual arts, and to simultaneously view images with their real, direct and metaphorical indications, as visual forms as much as mental visualizer stimulated by seeing images or even language. Thus, most of these approaches view the poetic images, for example, in the same way as they view cover, nature, visual or photographs. This made it necessary to distinguish between different types of images

(text and visual) in terms of their relation to non-linguistic external realities with the aim of approaching the modern visual arts system, and reflecting on some of their technical features and their esthetic and functional applications in light of their dominance over our contemporary lives, and their guidance of the most important human strategies, making them the focus of meaning production in contemporary culture. They also turned those who have the ability to make, control, produce and market images into decision-makers, with the media acting as an advertisement and vice versa, as they guide opinions by stimulating the viewers' esthetic sensitivity. This has simultaneously revolutionized the delivery of information across global transmission networks of both visual and linguistic images (Parker, 2014). The following are the image analysis techniques and strategies as described in several studies.

1. **Rules of Formal Analysis:** Researchers of formal analysis has distinguished between the different types of non-linguistic images (Serrat, 2007), classifying them into five cases:
   a. People's photographs.
   b. Our direct view of them.
   c. The features of those absent people in our memories. Art pictures drawn for them.
   d. Their recorded movement on a videotape.

2. **Rules of Semantic Analysis:** Semantic analysis focuses on analyzing images of advertisements as one of the most appropriate types of images for analysis. The theoretical studies, for image communication, has also represented a vital area for semantic analysis. As for fixed images, the initial ideas of formal studies are still the basis for the formulation of appropriate analytical methods, consistent with the purposes of the analysis. Semantic analysis is based on the analysis of the signs in an image, because signs in the ads are considered complete, shaped in away makes it easy and straightforward to be recognized, even though they are curated, intentional and overstated. Ads are, at their essence, a communication image dedicated to a public reading, which makes them the optimal ground for monitoring the production mechanisms of meaning over the image (Plataniotis, 2018).

3. **Rules of Constructive Analysis:** Since the 1970s, Constructivism started to overshadow media research by questioning mechanisms representing reality and meaning construction in the media, based on the promise from which the theory is derived: "Everything is a representation, and every representation is a construction". Media researches also started to be more or less peremptory, according to the saying: "Media is the mirror reality", in addition to establishing an opposite thesis considers media as a cognitive encoding device addressing and reproducing reality. Therefore, the message conveyed by media can no longer be understood whether it

is a transition or simulation of reality, or even as a representation and a reconstruction of reality. The textual and dramatic formation of an event in media transforms the media contents into a linguistic and mental representation evokes the interaction between the human person, culture and the society concerned with the event, taking into consideration the various components of the meaning that would penetrate the intellectual, social and psychological structures of the viewer, and would adapted the intended message to the surrounding contexts. This also would make media content a symbolic formation of world's events, as its stereotyped structure creates linguistic patterns, mental representations and cognitive inferences consistent with the cognitive and contextual determinants of the addressee. Media discourse, therefore, is used as a symbolic system-maker represents the reality it conveys, and applies the collective knowledge to produce meaning and formulate ideas as required by the communication act, with the aim of creating collective awareness of events and phenomena as an absorbed reality pretending an excessive or super-situated realism, despite the fact that it is an industry of reality its makers want to hold recipients to account for the untold reality (Hirobumi, 2012).

4. **Roles of Semiotic Analysis:** Semiologists have long paid attention to the textual and visual images presented in the media. They focused on the rhetoric used, and discussed the structural and rhetorical features of media language. They also focused on exploring the structural units of the communication system, as well as segmenting the components of these structures to see how similar or opposite they are as counterparts have significance in themselves, taking into consideration that the semiotic analysis was not subject to a specific method or techniques and unified steps of analysis, as this due to the difference in analysts' choices, and the differentiated nature of texts and images selected for analysis. For the analysis of images and media texts semiologically, Laurent Barth provide a set standards, which are: (1) Dividing the visual or written text into short contiguous units, called "reading units". Each unit includes more than three to four enumerated meanings, with an indication of the links. And each unit includes a few visual elements or a few words, so that relationships between these units may be established. (2) Intertextuality or Connotation: scientists affirm that a visual or written text does not have only a single meaning, but rather it is a complex web of meanings, within which a set of patterns interact in the form of symbolic and ideological quotations and references, as this due to the fact that each text consists of "what preceded it", i.e. what had previously read, heard or watched. This leads us to the concept of "intertextuality"; i.e., the overlapping of texts, as the semiotic analysis seeks to reveal a text's interaction with other texts and the cultural patterns from which its composition was derived. (3) Analysis and Identification: Each analysis processes a new text, called the "descriptive text", which is in fact the "original text" itself that has fragmented and divided, so that its meanings and connotations has became clear and revealed, especially since the semotic analysis is a "neutral" analysis does not deviate from the text frame, and does not search for meaning outside of it (Gaskell, 2000).

The Problem of the Study

They daily usage of images has affected the real-life structure of humans, and this would surely be greater in the near future. Brain research has long argued that children are now nurtured in light of images' apparent culture which evolves and is consistent with their brains to make their reality more clearly based on image culture, in a way different from previous generations (Pöppel, 2007). The problem of the study stems from its attempt to reveal images' contribution level in media, especially social media, in arousing sympathy towards scenes of violence. The researchers noted that there are no courses in Arts education curricula related to analyzing images that may help students to enhance their understanding of the images in a manner suits their culture. The current study attempts to answer the following main question: "Are there any statistically significant differences at (α=0.05) between the two means scores of the two study groups in the totally and individually domains of image analysis test related to non-violence concepts, due to the instructional program employed (traditional or proposed based on image analysis)?"

Objectives of the Study

The current study aims to develop and design a proposed program based on image analysis and to assess its impact on developing non-violence concepts among upper basic stage students at Yarmouk Model School (Boys). The main purpose of this study is to identify how to sort, understand and analyze images enhancing humanitarian concepts among upper basic stage students after experiencing an instructional program related to image analysis and reading.

Importance of the Study

The importance of this study stems from its attempt to address an old and modern established phenomenon (Image and Visual Culture) in our age dominated by "image culture". Furthermore, it focuses on identifying ways of analyzing and processing images from formal, constructive, semantic and semiotic aspects. Workers in the educational, cultural, media and literary fields may benefit from this study in answering questions concerning childhood. Additionally, it can be employed in developing programs and curricula designed for children in particular, and their education in general.

Research Limitations

The study was limited to addressing the effectiveness of image analysis training and the mastery of formal, constructional, semantic and semiotic analysis skills among students of upper basic stages (8th, 9th and 10th grades) at Irbid city during the first semester of the academic year 2019/2020.

Study Procedures

Research Methodology

To achieve the purpose of the study, a semi-experimental approach based on per/post-test of an experimental group was employed (Assaf, 2010). Differences between experimental group's grades in pre /post-application could be attributed to the impact of the designed program. One-group designe (pre-post) was employed, due to study sample few number on one hand, and the difficulty to have two equivalent groups on the other hand.

Study Population and Sample

The study community consists of all upper basic stage students (8th, 9th and 10th) of Yarmouk Model School followed at Irbid First District, who are enrolled in the first semester of the academic year 2019/2020. Upper basic stage was selected purposefully, due to its importance in the formation of the human personality as a transitional stage from adolescence to youth. The sample of the study consisted of (29) students selected using a purposeful sampling method, and their average age was (15).

Study Instruments

First: The Proposed Program of Image Analysis
1. Program Design

A proposed instructional program based on image analysis was developed after reviewing the previous studies, educational literature and techniques related to this topic, in addition to some Arab and international training programs and workshops focused on methods of image analysis in the educational field. The program consisted of a set of diversified lessons in the field of image analysis. The reliability of the proposed program was verified by a group of experts and specialists in the field of art philosophy, art criticism, curriculum design and art education. They were asked to give their opinion and recommendations for the program in terms of its comprehensiveness, time appropriateness of activities, content suitability for the program objectives, age, measures appropriateness and language appropriateness.

2. Program Content

In order to ensure the suitability of the program with the objectives of the study, Taylor's methodology in design was employed, as it requires:

1) Examining the intended behaviors and levels to be learned by students.
2) Exploring students' interests and tendencies towards the use of digital photography in a manner contributes to enhancing their thinking skills.

3) Examining the experiences that would help in obtaining information.
4) Examining the experiences that would develop trends, tendencies and interests.

3. Stage of Analyzing the Instructional Material

After the preparation process, it was necessary to find a complete visualization of the method that would be followed in teaching this program which was divided into several lessons. The behavioral and cognitive objectives of the instructional material envisaged in this program were also identified.

4. Stage of Presenting the Program

This stage came after the preparation of the instructional program, using a logical sequence in the program's development and presentation.

5. Place of Implementation of the Program

Yarmouk Model School.

6. Duration of the Program

The duration of the program was divided into (8) section of (16) hrs. in total (2 hrs. per section), presented through presentations, practical explanations and hands-on activities.

Second: Image Analysis Test

The researcher prepared a test about images analysis. The test includes the following:

1. Forms of formal analysis, which includes each student's knowledge of:
- **Image's material and theme** (including images' cultural content related to the form's indications)
- **Type** (photographic, technical or digitally modified)
- **Visual formations** of objects and characters.
2. Forms of semantic analysis, which includes the following:
- **Analyzing the signs** of the image.
- **The message** conveyed by the image.
- **The visual composition** of the image in terms of color composition and arrangement of visual elements.
- **Identifying** the images main **theme**.
3. Forms of constructive analysis, which include the following:
- The letter and purpose of the image (does the image call for violence, terrorism, or revolution).
- The semantic doer; i.e. identifying the creator, photographer or artist
- War images (images between two warring parties), which is considered the most appropriate skills for constructive analysis.
4. Forms semiotic analysis, which includes the following:
- **Dividing the visual text** of the image into parts
- **Connotations of the image**
- **Analyzing and determining of the purpose of the image**; i.e. providing a description for the image by identifying its name or publisher, and analyzing its frame, whether it is rectangular, square or with an unspecified frame.

Table 1. The two means scores and the standard deviations of study sample responses on the paragraphs of the image analysis test and the images related to the concept of non-violence were measured according to the instructional program used

The instructional program used	Means score	The standard deviation
Traditional	17.48	3.01
A proposed program based on image analysis	18.41	3.12

Table 2. The results of the T-test for two independent groups in order to compare the two means scores of the study sample's responses on the paragraphs of image analysis pre-test related to the concept of non-violence individually and totally, and according to the instructional program used

The instructional program used	The means scores	The standard deviation	T value	Degree of freedom	The statistical significance
Traditional	17.48	3.01	-1.090	50	0.281
Proposal based on image analysis	18.41	3.12			

The Equity of the Study's Two Groups in the Image-Analysis Test Related to Concepts of Non-Violence

To verify the equivalence of the two groups in the pre-test of image analysis related to concepts of non-violence as a whole, the two means scores and the standard deviations of study sample responses on the paragraphs of the image analysis test and the images related to the concept of non-violence were measured according to the instructional program used (traditional, and proposed based on image analysis) as shown in Table 1.

Table 1 shows an apparent difference between the two means scores of the study sample' responses on the paragraphs of image analysis pre-test related to the concept of non-violence individually and totally, and according to the instructional program used. To know the statistical significance of the apparent difference, the t-test for Two Independent Samples Test were used, as shown in Table 2.

In Table 2, it is noted that the value of (T) of the instructional program used was (-1.090) with a statistical significance (0.281) which is greater than the statistical significance (α=0.05), indicating that there is no statistically significant in the study sample' responses on the total paragraphs of image analysis pre-test related to the concept of non-violence. Tis indicate the equity (experimental control) of the two study groups on the pre-test of image analysis related to the concept of non-violence. For a further statistical control, the accompanying analysis of variance (ANCOVA) was used.

Study Variables

The present study examined the following independent and dependent variables:

The independent variable, which is the instructional program used, and it has two categories (traditional, and proposed based on image analysis).

A) The dependent variable: It included the total dimensions of the image analysis test related to the concepts of non-violence, and that are expressed by students' responses on the total test paragraphs, and on the paragraphs of each dimension of the test individually (formal analysis, semantic analysis, constructional analysis and semiotic analysis).

Statistical Processing

To answer the study question, the observed means scores, standard deviations and the corrected means scores for the responses of the two study groups (control and experimental) on the total image analysis test related to the concepts of non-violence. To examine the significance of the differences between post means scores according to the instructional program used, one-way analysis of variance (ANCOVA) was used. standard deviations and the corrected means scores for the responses of the two study groups (control and experimental) on each individual dimensions of image analysis test related to the concepts of non-violence, and to examine the significance of the differences between the means scores according to the instructional program used, multivariate one-way analysis of variance (MANCOVA). The Eta Square indicator was used to see the effect size of the tutorial.

RESULTS

Results related to the study question: "Are there any statistically significant differences at (α=0.05) between the two means scores of the two study groups in the totally and individually domains of image analysis test related to non-violence concepts, due to the instructional program employed (traditional or proposed based on image analysis)?"

A null hypothesis stemmed from this question: "There is no statistically significant difference at the (α=0.05) between the two means scores of study sample responses on each dimension of image analysis test individually and totally, attributed to the instructional program employed (traditional or proposed based on image analysis)".

Table 3. The means scores and standard deviations of the study sample pre and post-responses on each dimension of the image analysis test related to the concepts of non-violence according to the instructional program used

Level	Proposed instructional program	Pre-response		Post-response		Corrected post-response	
		MS	SD	MS	SD	CMS	SE
Formal analysis	Traditional	Mrz 52	01. Aug	04. Mrz	Jan 49	Apr 25	0.3
	Proposed based on image analysis	Feb 66	01. Jan	Jul 62	Jan 18	Jul 66	0.26
Semantic analysis	Normal	04. Apr	01. Mrz	Mai 48	Jan 78	Mai 87	0.26
	A proposal based on image analysis	Apr 17	Jan 44	Aug 62	0.82	Aug 31	0.23
Constructional analysis	Normal	04. Apr	Jan 19	Jun 35	01. Apr	Jun 66	0.25
	A proposal based on image analysis	Mai 38	Jan 59	Aug 93	0.92	Aug 69	0.21
Semiotic analysis	Normal	Mai 87	Feb 28	Jul 87	Jan 74	Jul 93	0.26
	A proposal based on image analysis	Jun 21	Jan 68	Sep 41	0.63	Sep 36	0.22

MS: Means scores; SD: Standard deviation; CMS: Corrected means scores; SE: Standard error.

To answer this question and ensure the validity of its alternative hypothesis, it is necessary to examine the significance of the difference between the two means scores of study sample responses on the total and individual dimensions of the image analysis test related to the concept of non-violence according to the instructional program used.

A) The Responses on the Total and Individual Dimensions of the Image Analysis Test Related to the Concepts of Non-Violence

The means scores and standard deviations of the study sample pre and post-responses on each dimension of the image analysis test related to the concepts of non-violence (formal analysis, semantic analysis, constructional analysis and semiotic analysis), according to the instructional program used, as shown Table 3.

From Table 3, it is noted that there are apparent differences between the pre and post means scores of the responses of the experimental group members, and that there are apparent differences between the post means scores of the responses of the study two groups (control and experimental). This result agrees with (Ahmed, 2018) in that there are statistically significant differences between the means scores of the two study groups (experimental and control group) in the post-measurement of school violence, in favor of the experimental group. To identify the statistical significance of the apparent post differences according to the instructional program used, after neutralizing the pre-differences in the study groups responses on each dimension of the image analysis test related to the concepts of non-violence (formal analysis, semantic analysis, constructional analysis and semiotic analysis), multivariate one-way analysis of variance MANCOVA was used, as shown in Table 4.

In light of the variance analysis's results shown in Table 4, it is noted that the values of the statistical significance for the used instructional program variable and all dimensions (formal analysis, semantic analysis, constructional analysis and semiotic analysis) are lower than (α=0.05). Thus, the first null hypothesis was rejected, and the alternative one was accepted, stating that: "There is a statistically significant difference at the (α=0.05) between the two means scores of study sample responses on each individual dimension of the image analysis test, attributed to the instructional program employed (traditional or proposed based on image analysis)". This is consistent with (Abu Sitta & Al-Dalil, 2016) in that the proposed unit has a significant impact on the proposed program, using the effectiveness of images reading in developing the aesthetic sense of Art Education students. It also agrees with (Dada & Ammariya, 2021) on the instructional program effectiveness in reducing school violence among the sample members. On the other hand, this result differs from (Al-Dulaimi, 2011) regarding the predominance of political violence over other types of violence, especially armed manifestations and terrorist operations violence. Some indications indicating types of behavioral violence, especially reckless violence and compulsive violence, appeared in students' drawings, as this due to the fact that the current study developed an instructional program attempts to improve concepts rejecting violence, not to only examine the violence situations expressed in children's drawings as in (Al-Dulaimi, 2011). Furthermore, it is revealed from the table of means scores that the statistically significant difference was in favor of the response of the experimental group members, who received the proposed instructional program based on image analysis, with a corrected means score higher than the corrected means score of the response of the

Table 4. Results of multivariate one-way analysis of co-variance with the means scores of the study sample responses on each dimension of the image analysis test related to the concept of non-violence according to the instructional program used

Source of variance	Dimension	Sum of eta squares	Degrees of freedom	Means of eta squares	F value	Statistical significance	Effect size
Co-variance (Pre-formal analysis)	Formal analysis	3.488	1	3.488	2.095	0.155	
	Semantic analysis	4.033	1	4.033	Mrz 23	0.079	
	Constructional analysis	0.042	1	0.042	0.038	0.847	
	Semiotic analysis	2.117	1	2.117	1.775	0.189	
Co-variance (Pre-semantic analysis)	Formal analysis	5.229	1	5.229	Mrz 14	0.083	
	Semantic analysis	7.804	1	7.804	6.251	0.016	
	Constructional analysis	0.001	1	0.001	0.001	0.973	
	Semiotic analysis	0.004	1	0.004	0.003	0.957	
Co-variance (Pre-constructional analysis)	Formal analysis	0.33	1	0.33	0.198	0.658	
	Semantic analysis	5.939	1	5.939	4.757	0.034	
	Constructional analysis	15.989	1	15.989	14.446	0	
	Semiotic analysis	1,538	1	1,538	Jan 29	0.262	
Co-variance (Pre-semiotic analysis)	Formal analysis	0.716	1	0.716	0.43	0.515	
	Semantic analysis	13.344	1	13.344	10.688	0.002	
	Constructional analysis	0.089	1	0.089	0.081	0.778	
	Semiotic analysis	18.632	1	18.632	15.623	0	
The instructional program used	Formal analysis	102.27	1	102.27	*61.421	0	0.572
	Semantic analysis	52.553	1	52.553	42.093*	0	0.478
Hotelling's Trace = 2.170	Constructional analysis	36.146	1	36.146	*32.659	0	0.415
Statistical significance = 0.000*	Semiotic analysis	17.95	1	17.95	*15.051	0	0.247
Error	Formal analysis	76.593	46	1.665			
	Semantic analysis	57.431	46	1.248			
	Constructional analysis	50.912	46	1.107			
	Semiotic analysis	54.86	46	1.193			
Corrected sum	Formal analysis	228.769	51				
	Semantic analysis	215.231	51				
	Constructional analysis	152.673	51				
	Semiotic analysis	108.231	51				

*: Statistically significant at (α=0.05).

Table 5. The means scores and standard deviations of the study sample pre and post-corrected responses on the total dimensions the image analysis test related to the concepts of non-violence according to the instructional program used

Proposed instructional program	Pre-response		Post-response			
	MS	SD	MS	SD	CMS	SE
Traditional	17.48	3.01	24	4.32	24.25	0.62
Proposed based on image analysis	18.41	3.12	34.59	2.11	34.39	0.55

MS: Means scores; SD: Standard deviation; CMS: Corrected means scores; SE: Standard error.

Table 6. Results of the analysis of the variance associated with the means scores of the study sample responses on the total dimensions of the image analysis test related to the concept of non-violence according to the instructional program used

Source of variance	Dimension	Sum of eta squares	Degrees of freedom	Means of eta squares	F value	Statistical significance
Pre-test (Co-)	108.002	1	108.002	12.393	0.001	
Instructional program used	1288.03	1	1288.03	*147.795	0	0.751
Error	427.033	49	8,715			
Corrected sum	1972.519	51				

*: Statistically significant at (α = 0.05).

control group members, who received a traditional instructional program. This result agrees with (Mufleh, 2018) in that there are statistically significant differences between the experimental group and the control group in the post-measurement and follow-up measurement, in favor of the experimental group. The Effect Size was measured using Eta Square, whose value for dimensions of the image analysis test related to violence-denouncing concepts (formal analysis, semantic analysis, constructional analysis and semiotic analysis) was (0.572, 0.478, 0.415, 0.247), respectively. This indicates that there is (57.2%, 47.8%, 41.5%, 24.7%) of the variance (improvement) in the post- response of the study sample on each dimension of the image analysis test related to the concept of non-violence (formal analysis, semantic analysis, instructional analysis semiotic analysis, due to the proposed instructional program based on image analysis.

B) Responses on the Total Dimensions of the Image Analysis Test Related to the Concepts of Non-Violence

The means scores and standard deviations of the study sample pre and post-corrected responses on the total dimensions the image analysis test related to the concepts of non-violence was measured according to the instructional program used (traditional, and proposed based on image analysis), as shown in Table 5.

From Table 5, it is evident that there is an apparent difference between the two pre and post-means scores of the responses of the experimental group members, who received the proposed instructional program based on image analysis, and an apparent difference between the two post-means scores of the responses of the experimental groups. To identify the statistical significance of the

post apparent differences according to the instructional program used, after neutralizing the pre-differences in the responses of the two groups on the total dimensions of the image analysis test related to the concept of non-violence, one-way analysis of co-variance (ANCOVA) was used, as shown in Table 6.

From the results of the variance analysis shown in Table 6, it is noted that the value of the statistical significance of the instructional program used was (0.000), which is less than the statistical significance (α=0.05). Thus, the second nul hypothesis was rejected, and the alternative was accepted "There is a statistically significant difference at the (α=0.05) between the two means scores of study sample responses on the total dimensions of the image analysis test, attributed to the instructional program employed (traditional or proposed based on image analysis)". This result is consistent with (Al-Atoum, 2018), which revealed that there are statistically significant difference at (α=0.05) between the two means scores of 8th grade students' responses on the art education achievement test (art history domain), due to the teaching method used, in favor of the experimental group who studied using Conceptual Map Strategy. It also agrees with (Abu Nasser, 2018) in that there are statistically significant differences at (α=0.05) between the means scores of the experimental group performance in the total and individual domains of Creative Abilities Test (quantitative, formal, verbal), due to the proposed instructional program, in favor of the post-test. Furthermore, it is revealed from the table of means scores that the statistically significant difference was in favor of the responses of the experimental group members, who received the proposed instructional program based on image analysis,

with a corrected means score higher than the corrected means score of the responses of the control group members, who received a traditional instructional program. The Effect Size was measured using Eta Square, whose value for the dimensions of the image analysis test related to violence-denouncing concepts (formal analysis, semantic analysis, constructional analysis and semiotic analysis) was (0.751), indicating that there is (75.1%) of the variance (improvement) in the post- response of the study sample on the total dimension of the image analysis test related to the concept of non-violence, due to the proposed instructional program based on image analysis. This finding is consistent with (Olowo, 2016) in that there is a need to include a new subject concerned with Peace Education into the curriculum, as this would reduce the rates of crime, violence and other social vices in communities.

Ethics: There are no ethical issues with the publication of this manuscript.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Financial Disclosure: The author declared that this study has received no financial support.

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