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Create a digital learning space: Strategies to develop a visual imagination

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Abstract

The current study aimed to investigate Create a digital learning space Strategies to develop a visual imagination, determine the visual imagination skills needed for educational technology students, and define the criteria for the program based on a digital learning space to develop visual imagination skills. The sample is a group of 22 students, from the second year students, Department of Educational Technology, Faculty of Specific Education. The most important applied results that have been reached: 1) there is a statistically significant difference between the mean scores of the experimental group in the pre and post application of the achievement test in favor of the post application. 2) There is a statistically significant difference between the mean scores of the experimental group in the pre and post application of the visual imagination skills assessment card for the benefit of the experimental group.

Keywords: Digital learning space, Strategies, visual imagination, educational Technology

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Introduction

A teacher's understanding of his students' learning needs helps determine when to present general, targeted, or individual instructional strategies. For some students, comprehensive instructional strategies may be sufficient to meet their own In addition, visual imagination. More multi-strategy intervention programs that are rich in individual educational components need to be developed without having to put them in the mix and make them too complex for teachers to implement (Woolley, Gary, 2010, 109).

Where Abdel Moneim, Ahmed (2010,3) asserted that the communication patterns associated with the extent of the teacher's ability to direct the visual learning processes and train his students to carry out visual thinking processes associated with imagination. May collide with self-teaching methods of the teacher that resist the processes of imagination. In addition, creativity that the student practices to reach building patterns of imagination his own.

Imagination is preceded by many processes that take place between the mental images of the, individual which is the process of imagination that represents free activity or is similar to daydreaming that moves from one subject to another completely freely without commitment to links. System or laws, it is a break of logical or known boundaries and exit as for the ordinary, imagination is also a free activity, but it is directed indirectly at the same time towards a specific topic that supports the activity of visual thinking, around which all that confirms, supports and deepens it, such as images, memories, impressions and emotions, is gathered around it, as it is a form of memory that has been freed from its ties (Abdel Hamid, Shaker, 2009, 51).

The study of Eicher, Jones & Bearley (2009, 9) showed that when a person thinks, the proportion of what passes through the sense of sight to the brain reaches 80% of the input to thinking processes, while the proportion of what passes through the sense of hearing may reach 40%, and the percentage of what passes through the emotional senses such as touch, smell and taste may reach 50% of the inputs to thinking processes.

In addition, I confirmed. A study (Brown, A, & Voltz, B.D, 2005) on the importance of educational strategies and various methods that contribute to understanding the scientific foundations for organizing the cognitive structure within the learner's mind, and among these foundations:

- That the cognitive structure is found in all sciences, and that there is no meaning for any type of knowledge if there is no building and organization of that knowledge in the mind of the learner.
- That the cognitive structure is important and necessary for a proper understanding of scientific knowledge, as the individual organizes the human mind's perceptions of scientific knowledge, in order to facilitate its understanding and awareness of its various aspects.
- That the cognitive construction is necessary in solving problems, the more there is a strong correlation between the concepts and the cognitive structure of the learners, and this helps them in solving the problems.

Hence the role of various visual stimuli such as pictures, static and animation, and video, which work to attract the learner and the growth of his mental processes. By observing and distinguishing objects, knowing their visual characteristics and identifying the relationships between parts of the scene in order to discover their content and compare their components in terms of Aspects of similarities and differences in addition to deduction, description and inference, leading to sound thinking and achieving meaningful learning for the learner.

Learning environment is also the second most important element in the area of the transitional space for learning, so the creative teacher is that teacher who is able to prepare. In addition, organize an educational environment that stimulates creativity, and then employ the components of that environment to enrich the educational process in the field of art, and the influence of the learning environment extends to the learning levels of students in Art from inside the classroom and outside its spatial and even temporal framework. Hauptman (2010), and the study of Al-Qaramiti, A (2008) confirmed that there are factors that contribute to the development of visual imagination in digital learning spaces, namely:

1. Interest of digital learning spaces in representing information and making it visible and audible at the same time helps students to use visualization in remembering the information, which contributes to their later use of it in forming a vision of the movement of geometric shapes and what it will be in the next step.
2. Learners' response at work, and the meaningful participation of the attractions of digital learning spaces.
3. Teaching using digital learning spaces stimulates students' thinking; as it is a new method and stimulates thinking in the individual who deals with it.
4. Finding applications for digital learning spaces such as games preferred by young and old. Leads to students' interest in studying because of their constant sense of a new existence and adding it from their imaginations, in contrast to the traditional method that makes the student interested in preserving information more than imagining it, which negatively affects his perception of information later.
5. Students 'sense that digital learning spaces convey objects and components that are present in a visual and sensory manner. This helped ease students' perception of information.

Confirmed by El-Sayed, Mustafa (2016) Digital learning spaces, including blogs, allow learners to express their opinions and ideas by listening to and watching the blogging material at a time that suits them, and acts as the custodian of the learning content, and provides permanent contact between learners and increases their motivation. as well as developing various skills among learners due to the increase and diversity of communication and learning opportunities, For learners, and this helps in developing the visual imagination of the learner.

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Create positive learning spaces for the classroom so that teachers design classrooms that foster collaboration and instill a sense of belonging among students, and students gain knowledge easily when the schoolroom conveys warmth, beauty and promotes harmony. Students learn best in environments that allow movement, provide access to learning tools, and enhance students' thinking and creativity, even with limited materials and equipment; a teacher can create a classroom environment to meet the purpose of teaching while developing a community of participating learners.

The teaching process based on the sharpening of the imagination is distinguished in that it is based on methods corresponding to the various aspects of the activity that the learner is expected to perform, as well as bringing about fundamental changes in the cognitive and psychological processes of the learner and in his attitudes, values and motivations towards learning. The teaching process in this way confirms on developing the learner's sense and ability to create and innovate "(Darwish, Zine, 1983, 43). Thus, the teaching process here becomes closer to being planned programs to teach creativity based on the sharpening of imagination ... more than a process related to developing the skills of generating ideas or solving problems specifically.

Learning is enhanced, deepened and more relevant when digital learning spaces provide opportunities for: "active and interactive participation, collaborative project work, information retrieval and sharing, discussion and presentation, production and generation of new knowledge, teacher and learner-led activities, contact with experts, formation Local and global networks, and personal learning".

From the foregoing it is clear that the imaginative ability of students of educational technology. needs a process of continuous refinement and the availability of an educational climate characterized by flexibility ability to renewal and change and be far from restrictions and rich in incentives and stimuli. In addition, from this logic it becomes clear the necessity to search for methods, approaches or teaching strategies that should help students to Developing their visual imagination away from the prevailing methods in the current educational institutions, which depend on memorization and indoctrination and do not address the mental abilities of students at the university. Therefore, the idea of the current research came, which is to develop some visual imagination skills through a proposed strategy in using digital learning, spaces to develop visual imagination.

Statement of the Problem

Many sources develop the visual imagination. Words, signs, lights, and colors constitute sources for the visual imagination. Therefore, meanings and their transmission tools are represented by the verbal language and the non-verbal language are sources of the imagination as well. Also, digital images and media are sources of visual imagination, as they stimulate students' passion, attract them, make their minds work and think, teach them ethics, values, tastes and investigate the smallest details, in addition to developing their creative factors by discovering relationships, and therefore the images and media that are represented in digital learning spaces must be chosen.

It develops the mental abilities of university students, specializing in educational technology, which fills them with imagination, beauty and visual human values, but the absence of such strategies in educational technology courses neglects several aspects to achieve a graduate who keeps pace with the developments.

of the times and skills of the current century and this is one of the requirements of the course on the basics of producing educational fees, so the current research sought to achieve This is done by answering the questions of this research:

"What is the effect of a proposed strategy for designing a digital learning space on the development of visual imagination among educational technology students?"

This main question is divided into the following sub-questions:

1. What are the Visual imagination skills appropriate for their development in educational technology students?
2. What are the steps for implementing a proposed strategy for designing a digital learning space to develop the visual imagination of educational technology students?
3. What are the components of the proposed strategy for designing a digital learning space to develop the visual imagination of educational technology students?
4. What is the impact of the proposed strategy on developing visual imagination among educational technology students?

Hypotheses

1. There is a statistically significant difference between the mean scores of the experimental group on the pre-post visual imagination test in favor of the posttest.
2. There is a statistically significant difference between the mean scores of the experimental group on the pre-post visual imagination skills assessment Rubric in favor of the posttest.
3. There is no effect of the proposed strategy on developing visual imagination among educational technology students.

Objectives

The current research OBJECTIVES is to:

1. Identify the visual imagination skills appropriate for their development among students of educational technology.
2. Identify the components of the proposed strategy for designing a digital learning space on developing the visual imagination of educational technology students.
3. Identify the steps for implementing a proposed strategy to design a digital learning space on developing the visual imagination of educational technology students.
4. Identify the extent of the impact of the proposed strategy on developing visual imagination among educational technology students.

Research importance:

The importance of the current research is evident in:

1. Shedding light on the importance of digital media and images for the development of visual imagination, according to a proposed strategy for educational technology students
2. Shed light on the importance of developing visual imagination in educational technology courses and enriching it at the university level.
3. Faculty members at this stage may drive to enrich this important aspect of students' lives through media and digital learning spaces

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4. Attention to one aspect of teaching that is clearly overlooked, which is visual imagery in educational technology.

Research Terms

Digital Learning Spaces

The researcher defines it as:

The free use of a set of services tools, technologies and social software by the learner, which enables him to manage the process of his education and build his knowledge in a visual context by presenting media. In addition, digital images using voice notation to build new knowledge and skills to create interaction and participation among learners regarding the content of a technology course Education.

Visual imagination

Researcher introduces visual imagery to the process of imagining some of the imperceptible and abstract biological and physiological processes in the course of producing means for students of educational technology, by recalling what has been stored in memory for the purpose of forming relationships and removing ambiguity and confusion in some concepts.

Strategy The researcher defines it as the ability of educational technology students when considering a digital environment by its ability to translate. In addition, interpret the information contained in the media elements and transform it into an expressive production from the imagination in accordance with the steps (introduction - reflection - analysis - challenge - application) by using digital learning spaces, notes in the course of producing teaching aids. To employ the capabilities of the Internet using sensory effects (graphics, animation and sound effects) in blogs to organize and sequence the content, it appears in the form of an integrated presentation for the teacher and is represented by interactivity.

Theoretical Framework

Digital Learning Spaces Digital Learning Spaces is "any digital resource that can be reused to support learning". (D. Wiley, 2000,7) “Learning spaces can be used in a number of ways to support learning in each subject area. For example, in mathematics, to help students practice long multiplication or equations; in the sciences to help students understand formative and other complex concepts; in language arts, to guide creative writing and critical thinking exercises; and in social studies, to clarify concepts in civic education and complex decision-making processes. Countless examples of learning spaces can also be found in the educational resources for multimedia for online learning and education (Falloon, G., Robin, J. & Annick, J, 2009).

In addition, in digital learning spaces. Reusable digital educational resources are being developed and applied in many disciplines and have resulted in significant contributions to effective teaching of programming, and these resources range from small activities or small lessons to open applications. Among them are Learning Objects that they are quite effective (Shank, J.D, 2003).

Elements of digital learning spaces

The elements of digital learning spaces are varied, including learning to display, which is according to Bloom's classification, which is represented by two levels (remembering and understanding), and learning elements for training: it helps in learning performance skills and skill movements and it represents the level of (application) and digital learning elements for simulation. Supporting it (application and analysis) and digital learning elements for relationships: This type is used to develop higher-order thinking skills associated with innovative thinking. Such as (linking parts, deduction and analysis), and information learning elements: This is done by pointing with the mouse cursor on any part of the learning element, then a group of information is displayed that helps the learner to learn, and this type of element may develop skills (collecting, linking and organizing data within the memory). To design this in digital learning spaces, the environment used should include: (Bentley, Appelt, Busbach, Hinrichs, Kerr, Sikkel, Trevor, and Woetzel, 1997).

1. Authentication: People must identify themselves with a name and password before they can access workspaces.
2. Version management: The documents in the workspace can be put under version control, which is especially useful for producing shared documents. An example is Google Drive tools.
3. Discussion forums: users can start a discussion on any topic they like and the system presents the topics in a user friendly way.
4. Access rights: The system contains a complex access rights model that allows, for example, that some users have complete control over an object in a workspace while others have only read access or no access at all.
5. 5. Search facilities: Users can define queries to find objects within digital workspaces, and this is done based on names, content, or specific characteristics such as the author of the document or the date the document was modified. Moreover, queries may be sent to web search engines and query result can be imported into workspaces.
6. Document Format Conversion: These facilities allow users to convert the document into a format of their choice, for example, proprietary document format to HTML, before downloading it.
7. Interface for simultaneous communication: Through this interface, users can define concurrent sessions and start their own tools, for example, audio / video conferencing software or shared whiteboard applications.
8. Customization: Through user preferences, users can modify the system interface to some extent, for example, whether or not they want to use the enhanced Javascript or ActiveX interface.
9. 9. Multilingual support: The system interface can be customized for a specific language via direct extensions. Several languages (such as English and Arabic) have been created by system users and are available to students.

The study of Shahin, A. (2020) recommended relying on digital environments to develop educational technology specialists' courses.

Visual imagination development

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human mind increases in its efficiency and effectiveness if we allow all its multiple physical manifestations, intellectual skills to work in harmony with each other instead of being separated, so besides its interest in the visual processing of information it is also concerned with the trend towards integration in the processing of information, so one side is not neglected at the expense of the other, brain is divided into two equal and identical halves, and each half in turn is divided into centers and regions that carry out various activities and functions, so we find that the left side is responsible for word processing, logic, analysis, as well as lists and sequences, while the right side is responsible for spatial processing, visual information, and imagination, colors, and gestalt (the overall image). Strategies to improve the right-hand side, which requires the totality, the visual, and the left, which includes logic and analysis, and by integrating both sides of the brain it is possible to fully develop thinking processes, raise many mental abilities and practice many different types of thinking and its different skills (Buzan, T, B, 1994, 12).

The study expanded Shaimaa, Khalil; Mohamed, Ali. (2018). To verify the effectiveness of information graphics in its fixed and moving modes in providing stereoscopic printing skills and visual culture among educational technology students, and to present complex data in a simple visual form that is effective through their use of graphics. The huge amount of information and huge data, so it is imperative for educators to specifically research how learners read each other's ideas and what mental processes happen to them while reading the content of the information graphics presented to them, because it is a very complex matter because it is linked to many factors affecting it, the most important of which is representation. The cognitive representation of information and its translation in memory, where cognitive representation is a cognitive mental process. That depends on the introduction, assimilation and accommodation of meanings, and ideas to be preserved to become part of the cognitive construction of the learner to represent a cumulative structure in which the information and knowledge of the learner interact with his direct and indirect experiences.

As for Zainab Al-Ajizi's study (2015), it aimed to identify the effect of employing the principles of visual culture in e-learning on developing the skills of digital image production and visual thinking among educational technology students that tolerate ambiguity and do not tolerate ambiguity. In addition, determining the standards for designing the e-learning environment in light of employing the principles of visual culture.

Visual culture among educational technology students is considered a basis for the development of visual imagination using digital learning spaces in light of the successive technological developments, which publish thousands of software, applications, technological tools and new technologies daily. Because dealing with technology depends primarily on the sense of sight, it was necessary that we shed light in the field of educational technology on the study of how the eye deals with these digital technologies, previously there were numerous studies in the study of visual imagination in its aspects that include learning, thinking and visual communication.

we have become .Today - in light of the widespread spread of technological technologies - there is an urgent need to study the impact of digital digitalization on the eye and how the process of learning, thinking and digital visual communication takes place through it, and more precisely than we find it now, so the concept of visual imagination must be expanded to include the study of digital and how learning is done Visual through it.

This is what has allowed the continuous development of digital technologies to live in a digital environment based on communications, which has also transformed the context of the educational process, and experiences show that digital technologies have affected the method of learning, and thus the method of teaching, and learning in the digital age is a complex process because it is a work. Multifaceted and diverse. Data is showing increasing importance, especially in the past three years, for research lines related to the Internet, education, visuals, computer programs, learning, digital media literacy, and educational technology (González-Zamar, M. D et al., 2020).

Methodology

Research Design

The study follows a multi-modal design (Mills et al., 2010), to help achieve the overall research objective and answer specific research questions. The study used data and systematic triangulation to enhance the exploration of the development of visual imagination in light of the digital learning spaces of the most prominent contributors to the Fundamentals of Instructional Production Course. The phenomenon is under study.

Course

Digital timelines for the application of technology on a large scale in the Fundamentals of Production of Instructional Drawings course .to introduce students and engage them in creating digital course content and enhancing visual imagination In light of the new media age and a catalytic effect in terms of including the task of the digital timeline as part of the curriculum with a focus on elements that meet the principles of visual imagination such as text and images - different types of text method that suit different selections of images and an image (static, animated, etc.) - and considerations Spatial and sequential. The resulting final product is learner oriented and focuses on the necessary and relevant elements of the various visual materials.

Participants

The study included 22 male and female students, aged between 19 and 21 years, who were enrolled in the Basic Instructional Fees Production course at the Faculty of Specific Education in one of the universities. The results of the survey at the beginning of the course indicated that students have some knowledge of technically enhanced teaching science, but they lack visual imagination. In terms of developing and implementing educational strategies using digital technologies.

Designing learning spaces

The experimental treatment material consisted in providing graphics and texts related to the course content through the learning platform designed using blogs as a personal learning environment and its space from digital learning spaces, and this was confirmed by the study of Dowling, S. (2011). The instructional design model was chosen according to the following design stages where it can be using blogging to allow breakout sessions that can provide similar benefits, such as

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working in pairs or small groups in a physical classroom have included a digital learning space.

Figure 1. Steps of the Designing learning spaces model

Shape the digital learning space to develop visual imagination

The effectiveness of digital teaching and learning in a blogging environment included student concern, flexibility and a learner-centered approach to teaching. These efforts live in the classroom or the micro-level of the teaching context, where blogs are a learning space for navigating their digital learning environments. Educators are now seeking more flexibility in using tools, a variety of digital resources, and options for interacting with students outside of traditional LMS channels, which contributes to the ever-increasing choice of specialized tools for student engagement, digital feedback, collaboration, communication and more in the teaching tool list and has adopted a strategy for developing visualizations. Al Basri included:

Figure 2. Steps Strategic to develop visual imagination

This paper has provided a conceptual model for visual and performing education to teach visualization as one of the visual arts based on embodied physical practices and learning in a digital environment that allows for the development of visual communication competencies. In addition, in the transformative knowledge and the value of aesthetic knowledge achieved through making and communicating using images and video in the Basics of Instructional Drawings course. Especially in light of the use of digital learning spaces that exist in our contemporary mobile lives, it is imperative for every student to develop the ability to communicate using visual imagery. Implementing the strategy required working with (physical) materials: - which links students' physical experiences closely with experiences of seeing and feeling and shaping materials through techniques for the expression of ideas. Trust relationships. The learning environment in digital learning spaces is characterized by trust relationships between students and educators in the joint construction of knowledge, and an understanding of educational practices that support the development of visual imagination through expressive behaviors in technological and physical practices. This is confirmed (Denzin, 2005).

Data collection tools

Data sources the data sources for the study included a rubric test and card for visual imagination skills Included a knowledge test according to the content decided in the basics of producing educational fees and may include topics related to their courses, namely: 1. Types of educational fees. 2. Steps for preparing educational posters and leaflets. 3. The form of the educational brochure. 4. Programs for producing educational posters and leaflets. 5. Photographers.

Visual imagination Skills rubric

The environment designed for digital learning spaces included instructions that were accompanied by sound and verbal instruction consisting of words and texts, often before they were written, and aimed at directing the participants' attention to the purpose of generating visual images that precipitated a positive psychological and physiological response, and included increasing the performance and rate of performance of students. The card is composed of.

Table 1Visual imagination skills

General skills	Sub-skills	percentage
Image generation.	6	25%
Save the image.	7	29%
Examination of the image.	5	21%
Image transformation.	6	25%
	24	100%

Findings

Results these results are based on 22 respondents who have completed all elements of the course content study. The sample size was determined in the formative evaluation of the small group and the field user test sessions based on the mention of the possibility of using less than 20 participants in the evaluation of small groups and between 22 participants in the "field test" According to the performance evaluation. The data retrieved was then tabulated according to the objectives of this survey carrying the highest and lowest values for the data they represent (Table 2).

Table (2) .Demographic Information of Students

Gender	Number	Percentage

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Male	7	32%
Female	15	68%

The levels of engagement provided by the learning spaces and educational activities were measured according to the suitability of these spaces for group discussion, the educational session, and the use of presentations, photos, videos, and group activities on blogs. This was done through students' participation during the performance of tasks and activities, the most common time of use, and the results are shown in the table(3).

Table(3.) Skills rubric measuring activities and tasks

Levels	Grade	Student performance	percentage
High.	3	18	82%
Average.	2	1	5%
Weak	1	2	9%
Did not lead.	0	1	5%
Total		22	100%

The result of the question, and based on the studies of the researchers, the answer to the question was determined "What are the Visual imagination skills appropriate for their development among educational technology students?" table (4) visual visualization skills used in line with the course Basics of producing educational drawings

Table(4) Stages of visual imagination

Stage	description
Image generation	This involves generating mental images, from memory, from imagination, or a combination of both.
Save the image	This involves intentional sufficiency and preservation of images, without which a mental image undergoes rapid decay and does not remain long enough to proceed to the next stages.
Examination of the image	At this stage, once it is born and maintained, a mental image is examined and explored, worked out in detail, and interpreted in relation to the person. This often involves the scanning process, the person directing attention across and around an image, false shifts in perceptual perspective.
Image transformation	At this stage, the person transforms, modifies, or changes the content of mental images generated, in such a way as to replace images that evoke negative feelings, denote suffering and exacerbate psychological pain, or emphasize helplessness or weakness, for those that evoke positive emotions, and are suggestive. From autonomy, adaptability, increased degree of mental competence and physical ability.

The formation of the mental, visual and auditory image has worked, and this is what the environment designed according to the digital learning spaces enabled. Even with the remaining visual images, many scientific researchers have been conducted on visual imagination and some scientific literature has mentioned the term "visual imagination" but this term is rarely used in a sample, so they used the term." Guided imagery, which is commonly used by research books to refer to the generation, preservation, examination, and transformation of mental images in all modalities and in reference to visual image processing alone and specifically. In addition, some books use the term "visual imagery" interchangeably with "guided imagery". Meanwhile, others refer to the directed imagination in a way that indicates that it includes the visual imagination. Often they measure, analyze, and discuss the implications of both visual visualization and image orientation collectively and is an integral part of other mind-body interventions that are commonly combined, including music and meditation and is the focus of the strategy used in current research, guided meditation or application. Practical, notes to memorize or daily self-reflection for students.

The researcher verified that with an analogy:

There is a statistically significant difference between the mean scores of the experimental group on the pre-post Knowledge test in favor of the posttest.

Table(5) Pre-post Knowledge test

		Mean	N	Std. Deviation	t	df	Sig. (2-tailed)
Pair	Pretest	7.32	22	0.72	55.325	21	0.000
	posttest	20.64	22	0.79			

These results indicate acceptance of the first hypothesis of the study, which provides evidence of the effectiveness of the strategy used to develop knowledge related to the course on visual imagery using digital learning spaces for educational technology specializations in the second year. The general development of students' cognitive test can be illustrated in the following chart:

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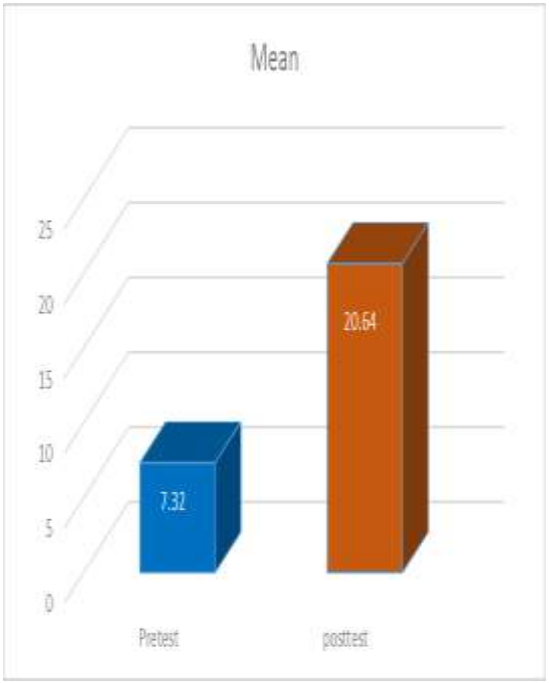


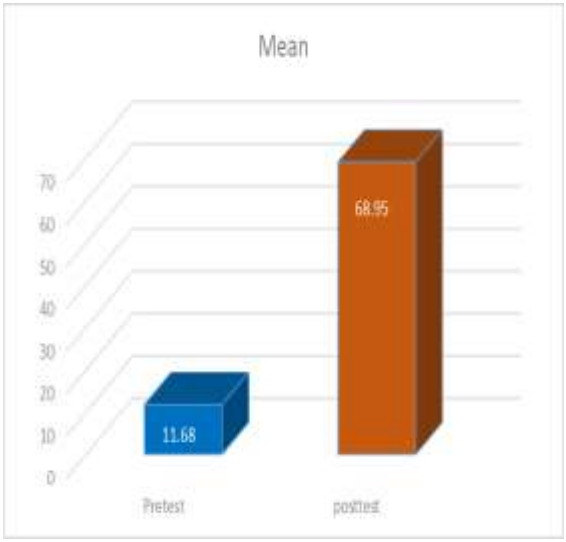
Figure(3) The mean scores of the experimental group pre and post tests on Knowledge.

There is a statistically significant difference between the mean scores of the experimental group on the pre-post visual imagination skills in favor of the posttest.

Table(6) Pre-post visual imagination skills

		Mean	N	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1	Pretest	11.68	22	0.99	139.06	21	0.000
	posttest	68.95	22	1.65			

These results indicate acceptance of the second hypothesis of the study, which provides evidence of the effectiveness of the strategy used to develop pre-pos visual imagination skills by using digital learning spaces in developing visual imagination skills for second-year education technology majors. The general development of students' skills can be illustrated in the following chart:



Figure(4)The mean scores of the experimental group Pre-post visual imagination skills.

There is no effect of the proposed strategy on developing visual imagination among educational technology students.

The researcher used the value (T) resulting from the pre and post application in order to calculate the values of the size of the strategic effect on the performance of students members of the sample of visual imagination skills.

Table(7) Effect size the strategy

Effect size	t	d	n^2	Effect size
Knowledge test	55.325	15.62	0.993	large
Rubric visual imagination skills	139.06	41.73	0.999	large

In light of what I suggested "Cohen that d = 0.2 be considered a 'small' effect size, 0.5 represents a 'medium' effect size and 0.8 a 'large' effect size". Thus, it becomes clear that the strategy used to develop visual imagination using digital learning spaces was of high statistical significance and thus accepts the third hypothesis of the research hypothesis.

Discussion

Often you measure, analyze, and discuss the implications of both visual visualization and image orientation in a course: Principles of producing educational drawings and working collectively or individually, and in order for students to study the course and benefit from visual imagination, they must be able to understand the course's concepts and special skills. Visual visualization related to students' performance and has been linked to digital learning spaces for comprehension and work with topics including "types of educational drawings, steps for preparing educational posters and brochures, the form of educational brochure, and programs for producing educational posters and brochures, and pictorials." Which worked on the process of processing visual images and the use of cognitive attention

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resources, and visual visualization as part of a multimedia strategy that combines other interventions in digital learning spaces because these methods can increase students' ability or ability to comprehend, enhance attention control, and replenish the required cognitive resources., Thus increasing the potential efficacy of visual imagination.

Conclusion

In this paper, we set out to lay the foundation for a research investigation on the most effective and effective design of digital learning spaces according to a strategy to meet learning activities and digital tasks to achieve visual imagination. The results may indicate that well-designed digital learning spaces are essential in educational technology departments. where indicated by a high percentage of respondents who wish to have a larger learning space and were designed using blogs. For future research, we should strive to understand more about the relevance of student time. The amount of time spent at the university using digital learning spaces, the group's amount of time spent on learning activities and in lecture sessions. In addition, this is in line with the hybrid learning style that universities seek to implement, or digital rotation according to classroom learning styles, or task-based learning that it will be the basis for educational aspirations and in line with modern learning systems.

With the right approach, learning can become according to the digital learning space. Our increasing understanding of how people learn affects the formation of learning spaces and the digital technologies that support them, and the constructive learning model replaces a tool for knowledge transfer as a guide to digital learning spaces, which encourages planning more space to stimulate student thinking. Especially the learning supported by digital media that develops the imagination and encourages visual thinking.

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