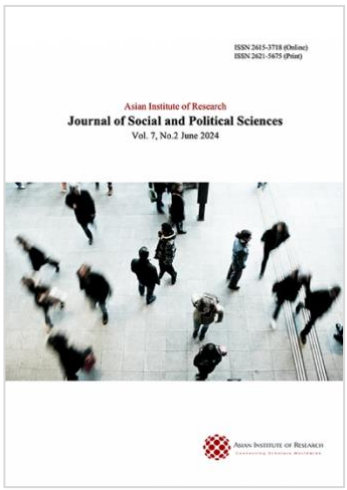

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Relationship between Educational Environments and the Creativity Learning Index in Children

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Abstract
This study investigates environmental factors and their correlation with potential influences on students' creativity and the reinforcement of creative behavior along the trajectory of primary schools. This attempt falls within the research that confirms the positive relationship between an active learning environment and its experiences, its connection to students' abilities and interests, and their future success. It explores how its flexibility allows for more opportunities for learner creativity. This study aims to identify common change or the degree of change in variables by examining the relationship between the educational environment and creative learning. A coefficient analysis was conducted to explore the relationship between creative thinking skills scores of students in both urban and rural environments, revealing a moderate positive correlation reaching statistical significance levels ranging from 0.56 to 0.59. Statistical methods, including arithmetic mean calculations and independent T-Test analysis, were employed to analyze the data. The results shed light on the significance of the environment in facilitating creative learning, showing statistically significant differences attributed to the environmental variable in favor of urban areas. Considering these results, it is recommended to incorporate thinking skills in curricula to enhance the potential of the environment and enrich it with possible programs that increase opportunities for creative learning.

Keywords: Child and Creative Learning, Learning Environments, Relationship with Creativity

1. Introduction

Teaching creative thinking skills is considered both a goal and a methodology to meet the evolving needs of individuals and society in the face of rapid changes in science, technology, and communication. The pursuit of adaptation to this transformation, for knowledge production and transfer, particularly in educational institutions, can contribute to the development of learning experiences and designs that encourage questioning assumptions, analysis, and interpretation as essential aspects of education. These skills are widely spread in future professions, requiring empowerment through intentional methods to provide effective learning and deliver best practices that enrich school learning activities and develop systems to prepare students, equipping them with knowledge and creative skills for the competitive market (Jacobs, 2012). Our goals in this study align with Gardner's interpretation (1993) that creative children possess higher-than-average intellectual skills and achieve high-quality outcomes. Creativity is seen as a fundamental skill for effective learning, and the study sample's exposure to a scientific program focused on creative thinking allowed learners to develop high-level skills such as planning, prediction, communication, productive thinking, and decision-making.

Creative thinking is a crucial skill that can help students transition into the future if we truly believe that there is time and space for creativity in our educational environment (Kaufman, 2015). Education is among the investments that can yield the highest returns for any country globally. It should be viewed as an integral part of the daily life experience that individuals undergo while employing their abilities in tasks that work to identify their potential within educational environments that nurture creativity.

Individuals are born with various predispositions, and the impact of the environment on children's development varies. Researchers have emphasized the contribution of culture, school, and home environments to individual creativity, Thomas, N. G., & Berk, L. E (1981). The study also revealed significant differences between children from rich and poor home environments, especially in variables related to curriculum constraints and work organization, which rarely stimulate creativity. There is increasing pressure on teachers to support and develop future skills.

School structures, characteristics, resource shortages, extracurricular activities, and inflexible teaching do not contribute to the development of mental abilities, and the development of best practices in education and professional training for teachers does not align with research results that link creativity to high levels of thinking. It requires a proper focus on them (Pamsy P. Hui et al. 2022). In this regard, Chan.S & Yuen.M. (2014-2019) has encouraged collaboration between teachers and school leaders to work together in formulating goals and plans that focus on discovering the passion of these children, contributing to the development of their latent abilities.

Considering the field reality, the school education system in the UAE still emphasizes cognitive knowledge and provides fewer opportunities to develop those paths or adjust educational practices to create a valuable methodology that captures learners' interests in an active and engaging environment. Education is seen as playing a strategic role in driving learners to employ knowledge, solve problems, and persevere, encouraging them to form cognitive structures related to cause and effect and explaining their ideas with reasons (Bhakti & Astut, 2018).

In my belief, changing curricula alone will not help our schools, but developing thinking skills and characteristics provides the possibility that enhances the most successful creativity for future jobs, requiring a flexible work environment to deal with the impacts of the technological revolution and information globalization.

2. Study Problem

The current study explores a central role in creative learning, which is the role of the educational environment and its relationship with potential environmental factors that affect students' creativity and creative behavior or the supporting factors. This has added and extended value educationally and culturally as a priority towards excellence. The study aims to anticipate the responsible role of nurturing environments to expand, reflecting the growing needs in terms of educational interventions, training programs, requiring clear adoption of a mission and the declaration of its educational philosophy that enables development opportunities and creative confidence. However, these activities receive less attention, even though they represent a form of positive learning and help students overcome obstacles related to bullying, supporting their learning, and contributing to raising the level of life in their communities, especially in the presence of environments with social backgrounds influencing the concepts that students learn, such as preparedness for collaboration, communication, argument strength, and logic, which are pivotal points in enhancing creativity and awareness, varying from one environment to another.

Therefore, the problem of the study revolves around the methodology that explores the answer to the study problem, which is:

Is there a significant relationship/difference between the response of sample individuals, students in (urban/rural) areas, to the creative thinking test?

Do creative thinking skills differ among students, depending on the (urban/rural) environments?

3. Study Objectives

This study aims to:

1. Explore the relationship between the environment and the creativity learning index in children.
2. Determine the relative contribution of the environment type in explaining the qualitative impact of creative learning.

4. Study Importance

As briefly discussed above, this study is expected to shed light on an aspect that has been of great interest to many researchers, seeking to explain the roles of the environment and its quality in developing students' creative abilities and increasing opportunities for success. This is crucial in the development of future education for societies.

The presence and spread of creative learning in our communities, along with the lack of awareness of its importance in various aspects of life, especially in school education, contribute to the early repulsion of many student capabilities. Furthermore, no similar study has been discussed for children in the UAE, which represents an authentic aspect of this study. In addition to the geographical diversity of the UAE community environments, their environmental and social characteristics are essential factors. The awareness among individuals about nurturing creative potential encourages contributions to modifying the negative relationship between the roles of some environments that obscure creative excellence.

This study can be considered unique, as its goals attempt to explore the potential of learning environments and subsequently provide support for students in the early stages of education. It aligns with modern trends in a field that is highly significant by focusing on the role that the environment plays in developing, nurturing, and creating practices and specific interests in nurturing the creative potential of children.

Hu (2007) emphasizes that creative thinking plays an important role in the process of scientific knowledge production. Upon reviewing previous studies, it is evident that research has been conducted on the effects of educational practices on creative thinking in the UAE. It was observed that the educational practices developed in this study had an effective impact on developing creativity in children, making it a rare study in this regard.

5. Study Terminology

5.1. Educational Environment

The educational environment is one of the most influential factors in the success of the upbringing and cognitive growth of the child. It involves direct effects based on experience, adaptations of the learning environment, curriculum, teaching methods, and strategies that embody content modification. Additionally, it includes family culture, community events, and a wide range of activities that help learners grow and participate. Non-formal education not only brings multiple benefits to individuals but also provides a broader perspective on learning.

The quality of the environment is measured by its ability to provide an educational environment according to appropriate standards. This enables stakeholders and representatives of the community to supply students with the necessary materials to achieve their academic goals and continuously improve the educational outcome. This is achieved by focusing on preventing students from failing rather than revealing failure after it occurs, using appropriate statistical control methods (Dahar and Niwaz 2010).

5.2. Creative Learning

It is measured by the total scores obtained by the student on the creative thinking scale.

5.3. Creativity

The known perspective of creative aspects includes creative personality, creative environment, creative product, and the creative process. Torrance (1993) defined creativity as mental effort for multiple aspects involving problem-solving and knowledge gap filling.

Thus, we can say that problem-solving can be mediated by the ability for imaginative thinking. Intelligence is explained as the ability to solve problems, and this intelligence is linked to the creative process and creative behavior.

5.4. Creative Thinking

There are many definitions of creative thinking in educational literature.
-Aljughiman (2018[173]) sees it as the ability to generate unprecedented ideas closely related to knowledge, basic skills, and looking at problems from different perspectives than the prevailing ones.
-Torrance (1988) described it as the process of perceiving difficulties, problems, gaps in information, missing elements, attempting to solve deficiencies, evaluating and testing hypotheses, and coming up with solutions regarding them. Torrance also identified four dimensions of creative thinking: fluency, originality, elaboration, and flexibility.

- **Fluency:** Generating the maximum number of ideas in a limited time.
- **Originality:** Unique, unprecedented ideas.
- **Elaboration:** Adding details to the model.
- **Flexibility:** Producing different thoughts enabling creative curves (Runco, 2014). Divergent thinking is open to things and leads to suggesting multiple solutions to one problem. The concept of creativity development is associated with the quality indicator in the child's educational environment.

6. Theoretical Framework and Literature Review

The axis of global educational policies revolves around the challenges of artificial intelligence, its rapid evolution, and the extent of its effective investment. It aligns with the framework of the information and knowledge era, responding to the changing needs of societies, particularly the development of an individual's ability to recognize possibilities in environments. This empowers individuals to actively participate in and improve their communities, focusing on learning, problem-solving, and creativity (Barab & Plucker, 2002).

It is undeniable that the optimal way to link this evolution with educational environments is by adopting strategies for thinking skills and innovation (Mota & Scott, 2016). Our educational institutions need a revolution involving transformations in the style of education and appropriate teaching that students need for success. This enables us to use and deploy our natural resources in the future, employing good thinking and creative ideas to solve these problems, allowing them to make decisions to apply a practical and scientific methodology (Joe Y.E Lau, 2011). Creative learning supports this, emerging as one of the important aspects of learning design, recognizing the roles of the environment as an influential factor.

It is worth noting that most studies emphasize the importance of knowledge as a key determinant of problem-solving abilities in this field (Gagne, 1980). These studies highlight the importance of tasks that require intellectual activities and skills, stressing that separating creativity from academic learning does not contribute to the development of students' creative skills. Fair and inclusive education requires a broader understanding, including connections at different performance levels and relevant task situations in an educational environment that provides the best climate for nurturing; however, in our educational environment, it is unclear whether there is a relationship between it and the challenges faced.

The real motivation behind this study is that creative learning involves passion, curiosity development, thinking outside the box, and its application. Chan.S & Yuen.M. (2014) explain that all teachers need to be aware of the personal and environmental effects that may influence efforts to support creative learning in children, contributing to awareness of the difficulties they may face.

Hammouri and Alahmari (2020) indicated a positive relationship between providing an educational environment with suitable programs for learner development and the success of the educational process. Previous literature confirms that individuals with high abilities are more active in seeking new solutions, leading to innovative and new results under favorable environmental conditions (Renzulli, J.1977). Carpio et al. (2015) emphasize that

problem-solving is preferable to occur through training in situations with the greatest variation in problem-solving solutions. Another component is the relationship between the impact of the educational context and both diversity and challenge as characteristics that can be employed by learners (Fernanda Hellen et al., 2014). Teachers can include the discovery of facts and problem-finding in teaching practices "CPS" (Van Hooijdonk, et al. 2020), providing greater opportunities to meet the needs of most students in the learning environment.

Regarding this, Khreiba's study (2020) pointed to a high level of creative learning, positive statistically significant relationships between the creative learning environment and positive personal learner characteristics. Also, there is a positive statistically significant correlation when positively interacting as one of the dimensions of the creative learning environment and the cognitive aspect of the learner. Moreover, unique temporal dynamics of cognitive processes are essential for coming up with original ideas. It is unknown, therefore, how the environment affects the temporal dynamics of creativity (Daikoku et al. 2021).

The study by Kleibeuker et al. (2016) provides important insights into teaching problems that require thinking outside the box, serving as a useful starting point for modeling the relationship between cognitive neural development that recognizes the complexity of functional brain growth during the transitional stage, and the underlying cognitive processes behind creativity in both verbal and spatial visual fields of performance.

In his study, Lin & Wei Wu (2016) urged teachers to develop more creative teaching methods to educate the new generation of students due to the evolution of communication technology. The important goal of education is to make children learn knowledge and apply it in life, and he emphasized that schools are the key to achieving this. While C. Yildiz and T. Guler Yildiz (2021) found that there is a somewhat positive relationship between the creative thinking scores of children and scientific process skills, and the creativity scores for children with a high-quality environment are higher. The creativity scores for children's thinking skills vary in favor of children with parents with higher levels of education.

Here, the researcher confirms the view that traditional education, which focuses solely on knowledge, represents a weak presence for capabilities and their potential for development (Rogers, 1962). This stands as a framework for thinking processes, whereas learner engagement in active learning can enhance the creative atmosphere of schools (Gagne, 1980). The roles of the educational environment and its adaptation to achieve goals and personal characteristics should reflect an elevated image of successful learning practices. When learners can reshape their roles and demonstrate their creative problem-solving abilities, it transforms the essence of the learning process for the educational unit into an interactive and stimulating environment. This encourages them to participate in planning and provides a principle for independence based on their intellectual and psychological interests. This is something that teachers need to create in learning environments (Bhakti, Y. B., & Astuti, I. A. D. 2018).

No wonder, as thinking programs serve as a source to provide individuals with a set of strategies, enriching the children's environment with knowledge and skills, and driving a passion for creative learning (Al-Salihin et al., 2020). An expert teacher allows children to deal with problems and the environment without interruption, as such interventions often hinder creative flows (Christina and Brendel, 2017). In this regard, Vivian M.Y. Cheng (2019) adds that high-level creative developments, such as new and innovative thinking, were found when expressing confidence in this type of learning. Students described learning strategies as a form of active and enjoyable learning that encouraged them to develop their curiosity, appreciate their ideas, and think on a broader scale. They considered it a better understanding of scientific knowledge, positive attitudes, and major gains for them.

In another context, studies have shown that educational environmental factors have a significant impact on individual creative performance and organizational preparedness, as evidenced by Delphi analysis (FDM) examining factors classified into four dimensions: individual and family traits, community elements, and school. The community is considered a criterion for the social and cultural education environment, being the most significant influencer in developing students' creativity. Results indicate that an improved social environment, which can create a suitable incentive from the external environment, establishes a preventive space for knowledge and creativity in line with the knowledge-based economic era. It instills diverse creative education in daily life, considering important skills for the local community that include valuable ideas. Programs related to the social

and cultural education environment were classified as helping to increase success (Mota & Scott, 2016[51]), which we believe are among the most influential factors in developing a child's creativity, as described by experts.

We argue in this research for a vision to enhance those potentials and practices that are more successful in the context of social and school education environments. It is crucial to realize that classroom environments are an important factor contributing to confirming a mentally rich learning community, and Bezerra et al. (2022) found a slowdown in reading acquisition due to social and economic variables.

7. Educational Environments

Elevating educational environments and their performance requires providing development opportunities for programs that focus on education aimed at meeting and developing learners' needs and problem-solving. It involves offering projects that help expand interests and classroom educational activities and experiences in and outside the school environment. Teachers should possess a wide range of skills that increase success opportunities. According to Hoy, W.K. (2003), the school environment's climate permeates the entire school and is invoked through the common perspectives of all stakeholders. The level and type of personal communication in the school have an impact on children's cognitive, social, and psychological growth, encompassing all personal exchanges among teaching staff themselves, between students and teaching staff, among students as a whole, and between the school and families. Readings on primary classroom environments revealed two interrelated environmental factors: (a) the school and (b) the community. Creativity in these environments can be achieved through a mix of special teacher characteristics, proper preparation to reduce potential issues in their planning, management, and a supportive school environment, as well as understanding parents (Dikici & Soh, 2015).

Recent experimental research has provided evidence that students engaging in tasks in a creatively rich environment yield better results than their peers in an environment lacking the application of creative thinking skills (McCoy & Evans, 2002). Cognitive processes such as planning, prediction, hypothesis generation, experimentation, problem-solving, and result interpretation are closely related to creative learning (Hu, 2002).

The experience available in the environment is crucial for developing high-level thinking individuals, indicating the quality of the learning environment and the mental health of learners. It provides opportunities for developing communication and expressing creative ideas in the future (Davis, 2014[435]). Research on these students has consistently shown differences in school adaptation. For instance, students who are new to school may not have a significant connection between school adaptation and achievement attempts (Yoleri & Tanış, 2014), while the ability for self-regulation in learning in relation to academic performance (Lindner, R. W., & Harris, B., 1992), Self-regulation in learning is related to the level of environment, education, and awareness, allowing them to facilitate cognitive advancement and concept formation (Azur, 2015). Additionally, students who have social and learning goals for task performance achieve greater success (Wentzel, K.R. & Asher, S.R.1995).

According to UNESCO, the characteristics of educational environments involve possibilities for directed learning towards achieving a sustainable future for communities. Development is more than just increasing or decreasing national income; it involves creating an environment where individuals can develop their full potential, increase their experiences, and live a fruitful life according to their needs and interests, appreciating the life they lead (Mota & Scott, 2016[206]), which is the essence of development.

In this way, it is important to understand that children cannot access services in the absence of high-quality learning and care. Natural potential quickly disappears, and an environment that creates suitable and stimulating conditions for discovery and learning provides an effective platform for enabling and flourishing talents (Callagher, 1994). The latent creativity within a child may be undermined and never revealed if there is a lack of community and environmental support and response to recognizing and employing it at each stage. Attention to the learning environment begins early by finding alternatives and options that support small creativity (Craft, 2001). The balance between environmental components and thinking skills remains crucial for creating and fostering creative learning, as it is linked to thinking and problem-solving exploration (Sternberg R.J, 1998).

8. How can we study creativity?

According to literature that has addressed creativity, those dealing with this issue affirm that the cultural and environmental context is a significant factor in determining the conducive conditions essential for the development of creative activities (Sternberg & Lubart, 1990). This is particularly crucial for nurturing creative thinkers and leaders. In this context, educators are urged to contribute individually and collectively to provide opportunities for students to explore their interests more deeply. They should then refer these interests for further developmental support, recognizing potential as an entry point for profound and positive growth. The curriculum should incorporate beneficial practices for thinking skills and problem-solving, considering the consensus in literature that creativity can be improved (Amabile, 1996; Baer & Kaufman, 2006; Kropfli, 1992; Kaufman, Beghetto, 2009; Torrance, 1968, 1995).). Based on this, deviating from it has consequences. Isolation in traditional classroom settings, away from the broader world, may be one of the causes of leaving talented individuals to learn. Therefore, developing the roles of teachers and their beliefs in their ability to change teaching methods is a cultural imperative (Margaret L. et al. 2021[155]), to align with both the curriculum and modern strategies.

Furthermore, recent research has indicated that the design thinking methodology is considered one of the best ways to prepare future students for creative development, yet it is often overlooked. Hence, it can be said that the learning environment still does not fully harness all motivational energies, especially for high-thinking individuals and support for their creativity (Kraft, 2006). The development of this creativity is often related to the roles of teachers, which include maintaining an open attitude toward creative ideas or behaviors, thus fostering student creativity (Dikici & Soh, 2015).

In fact, Cachia et al. (2010) supported the idea of supporting creative learning, suggesting its development within current and future educational curricula that align with future skills strategies. This involves strong connections between a student-centered learning environment that allows learners to go beyond the provided knowledge. Additionally, David (2012) believes that there are teaching principles that encourage creative learning. Whether these actions are partial or comprehensive, creative teaching consists of creating an educational environment that encourages students to see the essence and details of a subject, formulate problems, and solve them. Engaging learners in activities that embrace the application of thinking skills helps teachers identify the types of learners in the classroom.

In summary, the actual impact of the school environment on creativity levels will only be achieved by developing a culture that promotes creative learning and utilizes capabilities. This requires high standards that push everyone towards achievement, with competent teachers contributing to the development of activities and programs for these students. The ability to think outside the box is formed in elementary school.

9. Measuring the dimensions of creativity

The primary aim of this study is to highlight the roles of the environment in developing creative performance, making it the focus for achieving the required development of learners' cognitive skills. This self-management allows learners to effectively face future challenges by applying appropriate strategies that qualify them to be active and future contributors.

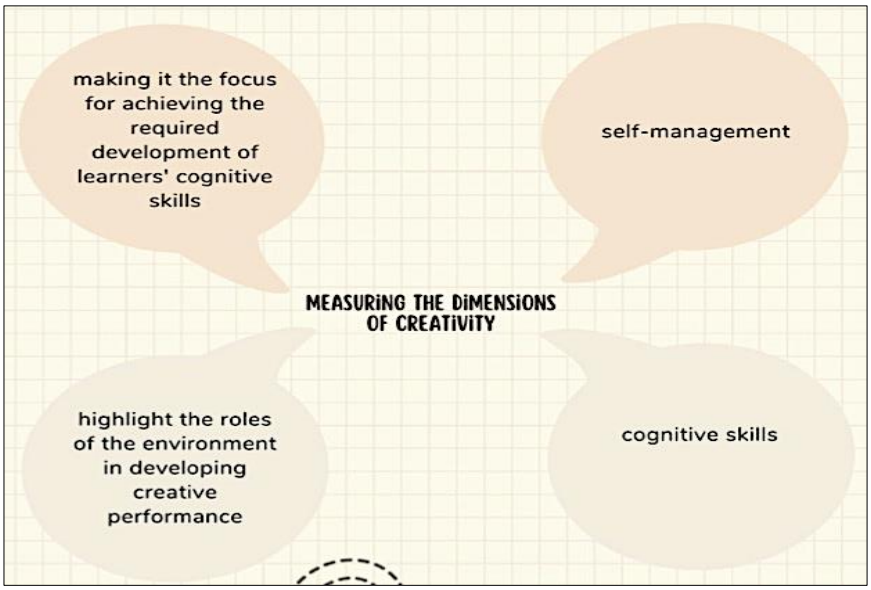

Figure 1: Measuring the Dimensions of Creativity

Numerous studies have attempted to explore the nature of the relationship between the environment and learning methods that stimulate learner development. The current study focuses on the relationship between the educational environment and the indicator of creative learning. This exploration began with Rhodes (1961), who identified four aspects influencing individual creativity, known as the four elements: the individual, the product, the process, and the environment. He emphasized the correlation between these four elements - the individual representing the different characteristics and creative potential, the creative environment and problem-solving solutions - with our study primarily focusing on the creative environment as a core factor. The educational environment is essential for supporting creativity, often referred to as the conditions that support educational, psychological, and physical factors. Through this research, which calls for the improvement of learning environments for creativity, we question: What effects will the implementation of thinking education in the UAE have on students' performance and the development of their potential?

The study conducted by Chan.s & Yuen.M. (2014) examined the relationship between students' creativity, learning strategies, creative environment curricula, learning activities, and external learning. The study concluded that the learning environment is necessary to support creative potential in an atmosphere where ideas are evaluated, and errors are considered an essential part of the learning process.

Our review of research in the context of school environments has led to calls for improving classrooms and the learning environment in general. The assumption has been interpreted as the inability of systems to perceive the mental processes individuals will employ for creativity (Kettler et al. 2018).

Related research discussing the application of creative thinking skills, various research methods, evaluation models, statistical analysis, and the interpretation of results regarding the relationship between these factors and the environment are diverse. Studies like Sternberg & Lubart (1999) discussed the impact of cognitive ability factors, knowledge, thinking methods, personal characteristics, and environmental elements as factors that may enhance or hinder creative processes, understanding the relationship between the environment's influence and its role in students' creative learning.

10. Statistical Processes

The researcher used a set of statistical processes, including:

- mean averages
- standard deviations
- Spearman's rank correlation coefficient.

Descriptive statistics were used to calculate the difference between the average scores of the study's two samples on the creativity scale.

11. Data Collection and Analysis

-Participants:
The current study included a random sample of 55 participants attending public primary schools in cities and villages in the United Arab Emirates. Regarding the correlational study sample, Fraenkel et al. (2011) mentioned that samples for correlational studies should consist of at least 50 participants.
The results of this study were obtained after documenting, processing, analyzing, and presenting the data according to the study's questions.
-Conducting an analysis of the relationship between thinking skills and the quality of the environment:
1- Frank Williams Creative Thinking Test
- The Divergent Thinking Scale measures fluency, flexibility, originality, elaboration, and title. Williams (2003) highlights that the test has several features and emphasizes its importance as a method for measuring a set of characteristics associated with the creative process, the creative individual, and the creative outcome. The four factors discovered initially through factor analysis led to the identification of creative thinking in Guilford's intelligence model.
The test exhibited a statistically significant correlation ($\alpha = 0.05$) between the total score of the Divergent Thinking Test (A) and the Torrance Creative Thinking Scale, with a correlation coefficient of (0.479), indicating the scale's reliability (Khair Allah, 2014).
The applied scale aimed to detect the creative potential and abilities of the study participants, containing 12 frames with shapes that required completing a creative drawing measuring fluency, flexibility, originality, details, and providing a title based on the image. The total application time for the scale test in this study was limited to 10 minutes for each activity.

The study also used the evaluation of characteristics associated with the creative process, creative individuals, and creative outcomes, focusing on fluency, flexibility, originality, details, and title, where fluency represents the quantitative ability of produced ideas, flexibility is the ability to adopt different approaches to problem-solving, and originality represents uniqueness, rarity, nonconformity, and viewing problems from different perspectives.

12. Methods

This study is based on a correlational research model, which is one of the quantitative methods. Correlational studies examine the level of relationship between at least two variables, and exploring the relationship in correlational studies does not establish a causal relationship.

The aim of this study is to identify the common change and/or the degree of change in variables by examining the relationship between the creative learning environments.

In studying and reviewing assessment tools, the Frank Williams scale was used. From its previous applications, it is believed to measure students' abilities to explore and present ideas (Williams, 1993) and to plan tasks in light of the field of multiple skills such as communication, productive thinking, prediction, planning, decision-making, which the experimental sample students were exposed to through the program.

13. Presentation, interpretation, and discussion of results

The results of this study were reached after documenting, processing, analyzing, and presenting the data according to the study questions.
We review the results obtained in accordance with the sequence of research questions, then draw conclusions and recommendations. As follows:
- The study used exercises to assess characteristics associated with the creative process, the creative individual, and the creative outcome, with four factors (fluency, flexibility, originality, details, and titling):

- **Fluency** represents the quantitative ability of produced ideas; an individual with intellectual fluency is characterized by productivity.
- **Flexibility** is defined as the ability to approach a problem in various ways.
- **Originality** represents uniqueness, rarity, non-conformity, and viewing problems from different angles.
- **Details** involve the number of additions in elements inside or outside the shapes.
- **Titling** relates to the length of complexity in the vocabulary used for each drawing.

14. Results of the first question: Is there a significant relationship/difference between the response of sample individuals, students in (urban/rural) areas, to the creative thinking test?

Calculating the differences in the response of the sample individuals to the creative thinking test between urban and rural groups:
- A Spearman correlation analysis was conducted for the relationship between thinking skills and the learning environment. A correlation coefficient was calculated between the creative thinking skills of students and the learning environment, urban and rural. All correlations reached a statistically significant level, and a positive correlation was observed ranging from 0.56 to 59.0, indicating a moderate inverse correlation.
- Calculating the differences in the total score of the creative thinking test to identify the results by calculating the means and standard deviations for the study sample's response to the total score of the creative thinking test based on the environment variable.
-Reviewing the results of calculating the means, standard deviations, and probability values for the grades of urban/rural students on the Frank Williams Creative Thinking Scale before and after the proposed program application showed in table (1):

Test Type	Group	Number	Mean	Standard Deviation	T Test	P Value
Before					1.02	0.367
	Urban Students	33	59.73	14.75		
	Rural Students	22	62.48	12.09		
After					16.22	0
	Urban Students	33	79.18	8.94		
	Rural Students	22	73.82	8.64		

From the above table, it is evident that the average scores and standard deviations for the group of rural students in the pre-test were (62.48) and (12.09), respectively, and the average scores for the group of rural students in the post-test were (73.82) with a standard deviation of (8.64). This indicates a statistically significant difference between their scores in the pre-test and post-test, suggesting a positive effect of the Thinking Skills Program on creative learning among students.

The table also shows that the average scores for the urban group in the pre-test were (59.73) with a standard deviation of (14.75), and their average scores in the post-test were (79.18) with a standard deviation of (8.94). This indicates a preliminary indication of a higher level of creative learning for the urban group compared to the rural group.

15. Results of the Second Question: Do creative thinking skills differ among students, depending on the (urban/rural) environments?

Calculating the results of the pre-test and post-test between urban and rural groups:
Statistical differences will be calculated between the two groups (urban/rural), followed by assessing the impact of the proposed Thinking Skills program on creative learning for both research groups.
The data were statistically processed using the T-Test for two independent samples, and the calculated t-values and p-values are presented in Table (2), which shows the mean scores, standard deviations, and t-values for the study groups (urban/rural).

Group	Procedure	Sample Size	Mean	Standard Deviation	Degree of Freedom	T-Value	P-Value	Significance Level
Rural Students	Before	22	59.7	14.7	34	-5.29	0.000	Significant
	After	22	79.18	8.94				
Urban Students	Before	33	62.5	12.1	57	-4.38	0.000	Significant
	After	33	73.5	8.64				

From the above Table (2), we find that the average scores of rural students in the pre-test for creative thinking were (59.7) with a standard deviation of (14.1). The average scores for urban students were (62.5) with a standard deviation of (12.1). The calculated p-value was greater than the significance level of 0.05, indicating no statistically significant differences between the study groups before the implementation of the Frank Thinking Scale for creative thinking.

The average scores for rural students in the post-test were (79.18) with a standard deviation of (8.94), while the average scores for urban students was (73.5) with a standard deviation of (8.64). The p-values between the study groups were (0.00), confirming statistically significant differences between the study groups after the implementation of the proposed program. This suggests a substantial positive impact of the Thinking Skills program on enhancing creative learning among the study groups.

The overall results post-test indicates significant improvement, and the activities provided succeeded in developing learners' thinking. Students are likely to succeed academically and develop more positively in a healthy school environment, working with thinking and problem-solving frameworks. When students learn and thrive through evaluating and synthesizing new information, given the opportunity for exploration and discussion, they become better prepared to face the challenges of the 21st century, armed with deep knowledge (Knodt, 2009). They are ready to question assumptions and provide bold solutions, portraying the vision of developing capabilities and leaders of the next generation in our schools. This flows from the awareness of creating opportunities and creating an academically creative environment supported by environmental activities and community experiences to enhance the image of their local communities.

Student participation in learning, problem-solving, asking questions, and planning solutions; employing discussion with others using models and acquired knowledge has helped develop communication, planning, prediction, accepting opinions, understanding different perspectives, contributing to a deeper understanding of the subject. I believe that these discussions, writing their thoughts, notes, and sharing their feelings with their classmates will provide us with the evidence we need that they will be successful learners in the future. However, their development is currently lacking in our schools (Piske, F. H. R. et al., 2014).

The results indicate agreement with most previous studies, demonstrating a connection between a child's thinking and their representation of the environment, according to psychologists. The findings supported the roles of the classroom environment and teaching methods, emphasizing the crucial role of teachers in nurturing creative potential. The impact of implementing activities related to thinking skills and problem-solving was observed as an opportunity to facilitate changes, breaking the constraints of conventional thinking. True learning for students occurs in a flexible and highly effective environment for applying thinking skills and solving problems, allowing them to explore challenges through testing various strategies (Goldschmidt, Smolkov, 2006). There is a significant indication of children's performance being influenced by an environment that provides opportunities for choice and sufficient time for learning, especially in tasks with a significant impact on their performance, particularly in schools where teachers promote thinking and expand goals for students, fostering their creative potential (M. Besançon, T. Lubart, 2007). The skills required by students in the twenty-first century demand deep learning, problem-solving, questioning, and risk-taking in ideas. Some influential correlations that require further research emerge because differences sometimes stem from variations in the social and environmental context (Richa Sharma, 2011). Classroom dynamics and traditional teaching methods (Thomas and Berk, 1981) also play a role. Teachers need a solid foundation in research and theory related to creativity, as well as a diverse range of teaching and management strategies that connect research with practice. The great opportunities lie in adopting training

programs for teachers, aiming to develop essential skills, selecting appropriate strategies, and aligning them to transform our schools into institutions that shift from teaching basic skills to nurturing constructive skills, leading into the future.

Readings suggest that a system of factors can influence the relationship between the school environment and the creative performance of learners. Most of these factors are determined by conditions and socio-cultural factors, including the quality of education, psychological factors, and the positive and active contribution that responds to the energy of learners and their engagement with learning (Al-Khaza'i, 2020). Social upbringing methods and available opportunities also play a role in developing or limiting the creative interests and inclinations of learners, hinting at statistically significant differences.

Based on the results that emerged, they indicate that the environment has a significant and effective impact on the development and shaping of creativity. It creates a space to stimulate personal, academic, and creative skills in learners. This awareness prompts us to plan for strategically selecting essential strategies in creativity, curiosity, problem-solving, and neutralizing factors and conditions that could undermine support for creative learning in classrooms. School administrators should actively work on this, being aware of issues related to future learning that activates its essence through creative thinking as a goal for effective learning design and successful development. Furthermore, there is an attempt to encourage primary school teachers to create attractive and inspiring spaces within school environments to stimulate ideas.

The study revealed differences in learners' performance, even though students were exposed to the same training program. We noticed variations in performance, such as oral and written communication skills, task planning, and fluency of ideas among students in different environments. This can be justified by cultural and human development differences, personal and social skills, negatively affecting learning and accessing the quality of outcomes.

Positive interaction can be discussed within a learning environment that encourages the development of students' abilities in planning, communication, exploration, experimentation, and active learning. Providing tasks for self-directed learning and continuous development adds value to their confidence, fosters active participation, and feeds creativity, ultimately improving our schools' outcomes. Nevertheless, this doesn't negate the presence of teachers who understand the creative process. They can use deliberate strategies in content selection, lesson planning, material organization, and even assessment creation in ways that help students stimulate cognitive processes and develop skills, building fundamental bridges for creativity.

It is worth mentioning that enriching their repertoire with effective strategies and skills was a fundamental approach in the skills training program (communication, prediction, productive thinking, planning, decision-making), employing them in fostering creative learning, providing tools for experimenting with new methods, and discovering their small potentials. Students expressed a motivational sense of learning, maintaining a competitive edge. The active engagement with the received skills by some indicates that the active interaction itself, based on their connection within a creative design environment for thinking skills tasks, designed to help them learn new things, generate original ideas, and provide reliable evidence that these strategies will be useful for them in future creative behavior, and these are skills that must be enhanced in individuals because they represent their uniqueness. The endeavor to develop teaching sciences that focus on inclinations and skills to enhance their skills for sustainable learning is essential, forming good mental habits, including communication, planning, prediction, decision-making for problem-solving. These skills will inspire them for future use, enabling them to understand societal challenges and take the initiative to solve them, rather than passively listening to ready-made lessons. In my opinion, they will have a profound impact on building confidence in their future performances. Therefore, the developmental generative organizational advancements in creative learning should not be neglected. Gradual creativity is closely linked to product innovation (Leoni, L., et al., 2022).

In conclusion, awareness of positive teaching and learning methods for students by family, school, and society will provide psychological and social support for learners, improving their mental, psychological, and social health, and thus academic performance.

16. Conclusions and Impacts

We are living in a world with diverse interests and changing demands, and this learning serves as an example of how we can bring these learners closer to developing future solutions and productivity that allow their environments to flourish.

- In this experimental research, we provided evidence of the interaction between student creativity and the design of thinking skills task environments. The researcher presented evidence of the contribution of active learning practices to the development of creativity in learners. More of this will provide various opportunities for educators over a longer period.
- This indicates the association of creative learning with a collaborative educational environment, showing that it can contribute to the development of learner readiness and increase opportunities for excellence. Implemented programs contribute to improving the quality of learning for students, enhancing learners' cognitive, planning, communication, prediction, decision-making skills, guiding them towards mastery and creativity, extending to reducing the negative impact of traditional environments.
- Overall, our study provides a framework that future studies will benefit from. It necessitates achieving the goals and objectives for thinking skills, teaching them through curricula. We suggest that future research delve into employing curricular components and diverse environments.

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