

The Educational Environment and its Effects on Creative Thinking: The Case of Larbi Ben M'hidi University- Oum Elbouaghi

KHAMMAR ZEDIRA, Doctor, senior lecturer A, Department of social sciences, University of Om El Bouaghi

Email: khammar_zedira@yahoo.fr

المحور: الطالب الجامعي وصفات التفكير الإبداعي

Abstract:

The development of the Internet and communication technology revolutionized the contents and methods of education. Where have so many governments and visionaries moved education to the top to determine the future of the nation's citizens. This forced the university professor to develop more innovative teaching methods to teach the new generation of students, for example the students of Oum El Bouaghi University. Previous research has shown that developing students' creative thinking can greatly affect students' creativity and educational achievement as well. The web age approach has revolutionized methods of teaching creative thinking. Students' perception of the educational environment is an important resource for improving and applying changes to the educational environment. In this study, we re-evaluate undergraduate students' perception of the educational environment at Oum El Bouaghi University.

Keywords: Educational Environment, Creative Thinking, Larbi Ben M'hidi University.

الملخص:

أحدث تطور الإنترنت وتكنولوجيا الاتصالات ثورة في محتويات وطرق التعليم. أين قامت العديد من الحكومات وأصحاب الرؤية بترقية التعليم إلى القمة لتحديد مستقبل مواطني الأمة. مما أوجب على الأستاذ الجامعي أن يطور أساليب تدريس أكثر إبداعًا لتعليم الجيل الجديد من الطلاب، على سبيل المثال طلاب جامعة أم البواقي. فقد أظهرت الأبحاث السابقة أن تنمية التفكير الإبداعي لدى الطلاب يمكن أن تؤثر بشكل كبير على إبداع الطلاب وتحصيلهم التعليمي، وأيضًا أحدث نهج عصر الويب ثورة في أساليب تدريس التفكير الإبداعي. فيعتبر تصور الطلاب للبيئة التعليمية مصدرًا مهمًا لتحسين وتطبيق التغييرات على البيئة التعليمية. في هذه الدراسة، حيث قمنا بإعادة تقييم تصور الطلاب الجامعيين للبيئة التعليمية في جامعة أم البواقي.

الكلمات المفتاحية: البيئة التربوية، التفكير الإبداعي، جامعة العربي بن المهدي.

1. Introduction

Training students on creative thinking has become a priority in the 21st century which is characterized by an explosion of knowledge and technology in all fields. In this environment, we face challenges that require new and unique solutions. Educational institutions are therefore required to prepare students to meet challenges in creative ways, which positively affects the individual and society. Creative thinking is associated with producing change. Thus, students must be sensitized to the fact that continuous change is essential in society and they must be taught to deal with change using different thought patterns. Creative thinking is known to produce ideas, solutions, concepts and theories that are characterized by their uniqueness and originality (Reber, 1985; Fatt, 2000). Creative thinking results from the synthesis, resynthesis, generation and formu-

lation of ideas. It produces new and surprising ideas that have not occurred to the individual before (Azayaat, 2001). Bayer (1998) emphasizes the importance of teaching students how to think properly and taking thinking to higher and deeper levels. Without it, students cannot generate new ideas or process them. Relevant literature reveals that creative thinking is something that can be taught and therefore individuals can learn to practice it spontaneously and consciously (Qatami, 2003).

A safe learning environment is critical to learning. It affects the safety of people, motivates trainees and supervisors, creates learning opportunities and improves performance. A safe learning environment can be maintained when learners and staff reinforce the good aspects of work-based teaching and learning practice and identify, acknowledge and report areas that can be improved. The Education Quality Management System (SEQM) used at Oum El Bouaghi University will be described. Scholars and educators have recognized the importance of the learning environment, and especially the creative learning environment, on students' creativity. However, current understanding is far from complete to paint a clear picture of how a creative learning environment can stimulate creative outcomes for students in the classroom. That is why creative thinking is the ability to think about something in a new way. Employers in all industries want employees who can think creatively and bring new perspectives to the workplace Creative thinking can include:

- A new approach to a problem
- Resolving conflict between employees
- New result from data set
- A never before tried approach to earning revenue
- New Product — or Product Feature

Learn more about the different types of creative thinking, and why having this ability is so useful in the workplace.

When was the last time you came up with something truly new and original? Exercising your **creative thinking skills** is a critical part of life, no matter the field you work on. For those that consider creativity and innovation to be gifts of nature, it is important to understand it is a skill that can be improved with the right training. Not only that but you can also **make use of certain techniques to create innovative solutions** steadily. It is also important to break the myth that creativity is fully dependent on a mystical source of inspiration. Instead, it is the byproduct of consuming all kinds of content, being able to relate to different pieces of media, and deconstruct issues to come to the appropriate answers. The proper creative thinking makes this easier.

In this post, you will find out more about :

- What is creative thinking ?
- What is creative thinking techniques ?
- What are the main benefits of creative thinking?
- How to develop creative thinking skills?

2. **What is educational environment :**

The main definitions of the educational environment are :

- The physical locations and cultures, in which students learn. School policies and its governance are also considered as characteristics of the **educational environment**.

- A part of sociocultural space, a zone of interaction of **educational** systems, their elements, **educational** material and subjects of **educational** processes.

- The setting or conditions in which a particular **educational** activity is car-

ried on.

- It is the **environment** in which physical and psychological equipment is realized in order to gain desired and desired behaviours. (<https://www.igi-global.com/dictionary/education-environment/83212>)

The screenshot shows a web browser window with several tabs open. The active tab is titled "What Is Creative Thinking?". The address bar shows the URL: <https://www.thebalancecareers.com/creative-thinking-definition-with-examples-2063744>. The page content includes a navigation menu with "FINDING A JOB", "HUMAN RESOURCES", and "SUCCEEDING AT WORK". The article is by ALISON DOYLE, updated on April 14, 2022. The main heading is "Top Creative Thinking Skills". The article lists five skills: ANALYTICAL (Ability to analyze things first), OPEN-MINDED (Thinking of things no one else has considered before), PROBLEM SOLVING (Ability to solve an important issue), ORGANIZATION (Being able to structure a plan of action with clear goals and deadlines), and COMMUNICATION (Strong written and oral skills, ability to listen and ask the right questions). A central illustration shows a woman in a blue suit standing in front of a large lightbulb, surrounded by these skills. A "Table of Contents" is on the left, and an advertisement for Chegg is on the right. The browser's taskbar at the bottom shows various application icons and the system tray with the date 30/04/2022.

(<https://www.thebalancecareers.com/creative-thinking-definition-with-examples-2063744#citation-4>)

3. What is creative thinking ?

The most important definitions are concentrated in the following :

- Creative thinking means thinking outside the box. Often, creativity involves lateral thinking, which is the ability to perceive patterns that are not obvious (Lewis, 2020, p.35).

- Creative thinking might mean devising new ways to carry out tasks, solve problems, and meet challenges. It means bringing a fresh, and sometimes unorthodox, perspective to your work. This way of thinking can help departments and organizations be more productive.

- Creative thinking isn't limited to artistic types. Creative thinking is a skill that anyone can nurture and develop.

- Creative thinking refers to using abilities and soft skills to come up with new solutions to problems. Creative thinking skills are techniques used to look at the issue from different and creative angles, using the right tools to assess it and develop a plan.

4. The importance of a creative thinking :

The focus on creativity and innovation is important because most problems might require **approaches that have never been created or tried before**. It is a highly valued skill to have individually and one that businesses should always aspire to have among their ranks. After all, the word creativity means a phenomenon where something new is created (<https://rockcontent.com/blog/creative-thinking-skills/>).

Creative thinking is a skill and, like any other, it needs constant exercise to

stay sharp. You need to regularly expose yourself to situations in which a new idea is needed and surround yourself with like-minded people to achieve this goal.

Such a process is made easier with the use of certain techniques. They help get you on the right mindset and **provide the basic structure to reach new ideas** on demand

(<https://rockcontent.com/blog/creative-thinking-skills/>).

5. How Creative Thinking Works ?

Opportunities for creative thought in the workplace vary from obvious artistic positions to highly technical ones. Generally, anything that involves an “aha” moment is considered creative. Here are some examples of how to display creative thinking in different jobs.

5.1. Artistic Creativity

You don't have to be an artist for your work to have an artistic element. Perhaps you arrange retail displays for maximum impact or shape the path of an enticing hiking trail. Other artistically creative tasks might include designing logos, writing advertising copy, creating the packaging for a product, or drafting a phone script for a fundraising drive.

5.2. Creative Problem-Solving

Creative problem-solving stands out as innovative. A creative problem-solver will find new solutions rather than simply identifying and implementing the norm. You might brainstorm new ways to reduce energy use, find new ways to cut costs during a budget crisis, or develop a unique litigation strategy to defend a client.

5.3. Creativity in STEM

Some people think of science and engineering as the opposite of art and creativity. That's not true. The fields of science, technology, engineering, and math (STEM) are highly creative. Designing a more efficient assembly line robot, writing an innovative new computer program, or developing a testable hypothesis are all highly creative acts.

The history of science and technology is filled with projects that didn't work, not because of errors in technique or methodology, but because people remained stuck in their assumptions and old habits. STEM fields need creativity to flourish and grow.

6. Types of Creative Thinking

Creative thinking is expressed in several ways. Here are some types of creative thinking you might see in the workplace.

6.1. Analysis

Before thinking creatively about something, you first have to be able to understand it. This requires the ability to examine things carefully to know what they mean. Whether you are looking at a text, a data set, a lesson plan, or an equation, you need to be able to analyze it first.

6.2. Open-Mindedness

To think creatively, set aside any assumptions or biases you may have, and look at things in a completely new way. By coming to a problem with an open mind, you allow yourself the chance to think creatively.

6.3. Problem-Solving

Employers want creative employees who will help them to solve work-related issues. When faced with a problem, consider ways that you can solve it before asking for help. If you need the input of a manager, suggest solutions rather than just presenting problems.

6.4. Organization

This might seem counterintuitive: Aren't creative people known for being somewhat disorganized? Actually, organization is an essential part of creativity. While you might need to get a bit messy when trying out a new idea, you need to organize your ideas so others will understand and follow through with your vision.

6.5. Communication

People will only appreciate your creative idea or solution if you communicate it effectively. You need to have strong written and oral communication skills.

7. Benefits of Creative Thinking

Employers want creative thinkers because it benefits their bottom line. Companies that foster creativity may see more revenue growth.³ Positioning yourself as a creative thinker can make you a more appealing job candidate or leader within your current organization.

8. How to Showcase Your Creative Thinking Skills

When you're applying for a job, think about how your creative nature has helped you in the past and how it might be an asset in the job you're seeking.

Here's how to showcase your creative thinking throughout the application process.

- **Add Keywords:** In your resume and cover letter, consider including keywords that demonstrate your creativity. For instance, you might try "problem-solving."

- **Give examples:** In your cover letter, include one or two specific examples of times your creative thinking added value to your employer. Perhaps you came up with a creative way to save your department money, or maybe you developed a new filing system that increased efficiency.

- **Tell stories:** Come to your interview prepared with examples of how you've demonstrated your creativity. This is especially important if the job description lists creativity or creative thinking as a requirement.

If you're looking for creative opportunities as a means of personal fulfillment, you can find satisfaction in surprising places. Any job that allows you to put your own spin on your work will end up being and feeling creative.

9. Creative thinking techniques

As you have just learned, creative thinking can be triggered by some widely used techniques. These are effective methods to **help you come up with new ideas**, test them under new environments, and count on other people's input to make them even more innovative.

Some of the best examples of creative thinking skills may include: lateral-thinking, visual reading, out-of-the-box thinking, copywriting, artistic creativity, problem-solving, analytical mind, and divergent thinking.

Here are the best creative thinking techniques you can use.

9.1. Brainstorming

This technique can be very useful in small or large-scale problems that require a creative solution. The main goal is to form a group of people and throw around ideas without interference.

The general idea of brainstorming is that, by having an **excess of creative potential solutions**, it gets easier to reach one with the highest level of quality.

Brainstorming has several advantages that can help you exercise your creative thinking skills. For starters, it does not require a rigid structure to function, being very informal. However, **it can be facilitated by professional guidance**. Also, the people involved do not even need to be together at the same time, as you can use a virtual setting or put ideas into a shared document.

For it to work well, all participants must be aware of the problem that requires a creative solution and are familiar with how brainstorming works. In the end, do not forget to register all the ideas through proper documentation.

(<https://rockcontent.com/blog/creative-thinking-skills/>).

9.2. Lateral thinking

Sometimes, the answer to a problem is not in front of it, but besides it. That is the general idea of lateral thinking, which is a great way to exercise your creative soft skills and come up with innovative plans.

Lateral thinking involves looking in **less obvious areas and lines of reasoning**. It can work well if you and your partners try to put yourselves under different perspectives or reverse the problem to look at it differently.

For instance, the direct solution to a loss of sales online would be to put up

more ads and promotions. However, lateral thinking might reach alternative paths, like using e-mail marketing to reach customers that have not bought from you in a while.

This can be extrapolated further, even using absurd lines of thinking to get your creative juices flowing. The most important aspect of this process is to **go where you would not usually choose to go.**

9.3. Mind mapping

The process of mind mapping helps you connect ideas you never imagined could be combined. Because of that, it might help you reach appropriate solutions while using creative thinking skills.

A mind map is a chart where you input ideas and connect them. It can have possible solutions to a problem, its immediate consequences, and be the best course of action to deal with them. Alternatively, your mind map can serve as **a way to see a bigger picture regarding what you are trying to do.**

Mind mapping can even be done individually. Sometimes, you may already have all the ideas you need but it is required to put them to paper. Creating a mind map helps to organize them and naturally reach conclusions.

Also, since a mind map is essentially an **infographic**, those who were not part of the process can easily understand it. Therefore, it serves as a valid piece of documentation. (<https://rockcontent.com/blog/creative-thinking-skills/>).

10. Examples of creativity skills

Besides these creative thinking techniques we presented in this chapter, there are several skills you'll need to develop to enjoy the advantages of the techniques. Some of the creativity skills may include :

- experimentation
- opposing views
- asking questions
- communication
- organization

11. What are the main benefits of creative thinking ?

Developing your creative thinking skills is highly beneficial for any field of work. After all, every area needs people that can come up with the best solutions to the everyday problems that arise and **creativity is critical** to do that.

You can experience advantages such as these by developing creative thinking skills :

- ability to **create the best solutions** to daily demands, which provides value to clients and your own business;
- improvement on **problem-solving** for not only work-related matters but also those in your personal life;
- higher **workplace involvement** in daily activities and engagement, which is beneficial to a healthier environment;
- a better **understanding of data** — also known as data literacy — and how to present it through data storytelling;
- focus on **self-improvement** as you and your teammates will develop more soft skills.
- more effective **teamwork and bonding**, since people grow used to

bouncing off original ideas and learn each other's creative traits.

12. Things to Avoid which will impact your Creative Thinking

Creative thinking pushes passion allowing you to love and live beyond your limits. However, sometimes situations happen in life that restricts your freedom. It's up to you to break down these walls and live up to your full potential. The following are 8 things you are advised to avoid in order to be able to unleash your creativity : (<https://www.potential.com/articles/creative-thinking/#5>)

12.1. Complain about a problem:

Don't just nag about a problem instead try to discover opportunities that might be hidden deep within.

12.2. Worry about what others think:

Don't waste your time worrying about other peoples' judgments. Be happy with who you are and don't be afraid to show it.

12.3. Stay in your 'comfort zone':

Living up to your potential is not easy but make sure you give it a go! Don't take the easy way out because you will never know what great things you might be missing!

12.4. School limiting your creativity:

Society wants robots. It does not prefer you to think for yourself. Schools are programmed to help society limit youth potential. Don't fall for the trap. Allow your mind to explore new, fresh places that it has never been given a chance to explore before

12.5. Hold back when you have a good idea:

Instead of just accepting what you know innovate something not created before. Unleash your creativity to flourish throughout your life and career.

12.6. Ego:

Focus on what's right rather than who's right. Eliminating your ego allows you to change the way you think becoming more flexible and open-minded.

12.7. Stop learning:

Being smart is not being able to generate an idea but it is being able to recognize the value of the idea and make it happen. Keep looking for answers putting what you know into reality!

12.8. Assume certain perceptions:

Naturally, in your everyday life there will be certain boundaries already set previously. Don't assume they will always be there instead work your way to break them down and free yourself to make a change for a better world!

We suggest you try to avoid the 8 points mentioned above in order to free your mind to think creatively.

It is a step forward to raise hidden talents that will push our world to lasting global success

13. The effect of the educational environment on creative thinking:

We have chosen the most important basic effects of the educational environment on creative thinking in the following points:

13.1. Web-based instruction

Belanger et al. (2011) indicated that the progress of information technology and the boom of the Internet have web-based instruction become the latest distance learning method. The so-called conventional education refers to teaching activities proceeded on campus or in classrooms, where instructors and learners are usually in the same space and learners in a classroom have to obey certain behavioral rules and communication styles due to the environment (Lara et al., 2014). Compared to conventional education, web-based instruction used to be defined as a distance learning system set up with computers and was divided into synchronous and asynchronous systems. Asynchronous web-based instruction referred to teaching and learning processes not being preceded at the same time, teaching situations being continuously enhanced the quality through instructional design, teaching activities being controllable, and learners being able to access to the systems for learning at any time (Jones & Sallis, 2013). In this case, web-based instruction could be briefly described as the learning method applying the Internet to deliver and acquire learning information and contents, including information technology, delivery of various material contents, accumulation and management of learning experiences, learning communities, and material designers, providers, and fieldxperts (Cheung et al., 2011). Harasim (2012) quoted the definition of e-learning from ASTD (American Society for Training & Development), which specifically studies learning and training, as anything delivered, facilitated, or mediated through electronic technology in order to achieve definite learning objectives. Accordingly, web-based instruction is a kind of virtual classroom distance learning, in which the Internet platform is used for teaching knowledge and skills and delivering materials to learners through systematic material design. On the other hand, learners could precede two-way

communication and interaction with other learners through the communication channels on the Internet. Huang et al. (2012) proposed that the real benefit of web-based instruction was to get rid of classrooms and try to teach with timeless transmissibility and interactivity. In short, e-learning is to utilize personal electronic devices and the Internet for delivering and transmitting training material contents as well as managing learning processes at any time or places.

13.2. Web-based creative thinking teaching :

Irwin et al. (2012) regarded creative teaching as encouraging a teacher changing the teaching methods whenever necessary. Liu et al. (2011) defined web-based creative teaching as utilizing web-based development and applying novel, original, or inventive teaching methods. Crooks et al. (2012) mentioned that web-based creative teaching was a teacher designing teaching activities through web-based curriculum contents to induce students' creation behaviors, i.e. allowing students applying the imagination to cultivate the sensitive, fluent, flexible, unique, and elaborative thinking abilities. Padilla-Meléndez et al. (2013) referred web-based creative teaching as changing web-based instruction to cultivate students' creative thinking and problem solving abilities. Accordingly, web-based creative thinking teaching utilizes creative thinking strategies matching with curricula for students applying the imagination so as to cultivate students' fluent, flexible, unique, and elaborative thinking abilities. A teacher, on the other hand, could perceive happy fulfilment and achievement in the lively web-based instruction (Jong et al., 2013). Bill & Francesco (2011) proposed three web-based thinking teaching principles of teaching for thinking, teaching of thinking, and teaching about thinking. Teaching for thinking intended to create school and classroom environments to facilitate thinking development; teaching of thinking

aimed to teach students thinking skills and strategies; and, teaching about thinking would help students perceive individual and others' thinking processes and apply such cognition processes to daily life and problem-solving situations. Referring to Hasan &Abuelrub (2011), web-based creative thinking teaching is divided into three dimensions, and student behaviors from the interaction between teaching contents and teaching strategies are the expected creative teaching goal.

1. Cognition: It is to understand students' thinking fluency, flexibility, uniqueness, and elaboration.

2. Affection: It concerns students' curiosity, challenge, risk, and imagination.

3. Skill: It stresses on expertly applying creative thinking strategies to create novel and proper works.

13.3.Creativity :

Creativity is the interaction between personal mental operation and the factors of motivation, personality traits, knowledge, and social and cultural environments to form unique and useful concepts for solving problems (Chang, 2011). Creativity is a process of solving problems with creative thinking (Hilarie et al., 2012). For this reason, creativity is a problem-solving ability. Tsai et al. (2010) regarded creative thinking as a sequential process, including the awareness of problem deficits, knowledge gap, and element loss, to further discover difficulties, seek for answers, propose hypotheses, verify and re-verify hypotheses, and eventually generate results. Cheng et al. (2013) indicated that creation was to apply cognition, imagination, and assessment to find out facts, problems, ideas, and acceptable solutions. Udo et al. (2011) referred creativity to students applying flexibility, uniqueness, and sensitivity to change common thinking methods into

unusual and output thinking ones. Young (2011) considered that creative thinking started from the awareness of problems, followed by mental exploration and project proposal, to finally solve and verify problems. In the thinking process, a person should remain the spirit to look for changes, risk, and explore as well as present sensitive, fluent, flexible, unique, and elaborative characters. Sae-Khow (2014) pointed out creativity as the ability of a creator integrating associable elements to new relationship for specific needs or useful purposes. Deng & Tavares (2013) argued that creativity was not simply the personality tendency or ordinary ability, but the combination of personality traits, cognitive ability, and social environment. In this case, work motivation, skills in special field, and creativity related skills should be integrated for effective problem solving. Referring to Sung & Hwang (2013), four indicators to evaluate learners' individual creativity are used in this study.

1. Fluency: The ability of a participant generating concepts and ideas. It is usually the presentation of sensitive responses and fluent thoughts (Wang, 2007).

2. Flexibility: A method of a participant changing the thinking and the degree to respond to changes.

3. Uniqueness: The ability of a participant coming out of different or rare ideas.

4. Elaboration: The ability of a participant adding details or refinement beyond basic responses. (Cheng & Rayan Ying, 2016, pp.1676-77).

Conclusion :

In the end, we concluded many ideas related to our intervention, which are

related to the ideas of many researchers, as follows :

Morrison (1966) reported significant relationship between teacher's classroom influence and academic achievement of students. He concluded that student spend a great deal of time with school teachers which plays an important role in their development.

Jarial (1981) found that non-verbal and verbal creativity were positively and significantly related to academic achievement in science.

Young et al. (1994) studied the impact of school on the achievement level of students and found that children learn through exploration of their environments, in particular the home and school, as important developmental factors.

Panda (1997) in his study, " Impact of creativity and adjustment on academic achievement", found positive and significant correlations between academic achievement and creativity.

Bajwa (1998) found positive significant correlation between creativity and academic achievement in physics

Goel (2004) instigated the effect of home environment on educational aspirations. The sample of the study comprised 100 students (50 boys and 50 girls) of intermediate classes in age groups of 16-20 years. The results revealed that girls had much higher educational aspiration than boys. Boys felt more rejected with the autocratic atmosphere at home in comparison to girls who experienced more nurturance than boys.

Pande & Nanda (2005) conducted a study to find the impact of different environment of nursery school on the school readiness of children. The sample

comprised of 60 children attending different level of quality of nursery school education in terms of school environment (good/average/poor). The children were taken randomly from 12 nursery schools of Ludhiana district in Punjab. Results revealed that good school environment improved the level of school readiness of children.

Narula (2007) in her study on a sample of 700 students of ninth class studying in senior secondary schools of Punjab concluded significant positive correlation between the variables of creativity and academic achievement. Significant difference was also obtained between the creativity of boys and girls at 0.01 level of significance.

Neelam (2008) in her study on 630 students of eleventh class studying in higher secondary schools of Jammu division concluded that positive significant correlations exist between home environment and emotional competency of students.

Jagpreet et al. (2009) in their study found that there exists a positive significant relationship of self-concept with protectiveness, conformity, reward and nurturance components of home environment (**R i c h a S h a r m a : EFFECT OF SCHOOL AND HOME ENVIRONMENTS ON CREATIVITY OF CHILDREN**

https://www.academia.edu/7354757/EFFECT_OF_SCHOOL_AND_HOME_ENVIRONMENTS_ON_CREATIVITY_OF_CHILDREN).

In our intervention, we also found that there are several obstacles facing Oum El Bouaghi University students, which in turn hinder the promotion of their creative thinking. Among these are personal obstacles such as poor self-confidence and a feeling of helplessness. There are also circumstantial obstacles that

relate to social or cultural aspects such as resisting change. Other obstacles exist in the educational process, e.g., placing emphasis on rote learning to the neglect of practicing creative thinking processes (Jarwan, 2008; Al-Atoom, Al-Jarah, & Beshara, 2011). Eberle (1996) suggests that a teacher should enhance creativity in students by encouraging them to think creatively whenever possible which in turn, increases student participation and promotes the learning and developing of positive concepts. Among the significant aims of creativity education are enhancing the Creative Self-Efficacy and Cognitive Motivation.

-References:

1. Cheng, S.L., & Ryan, Y.W.W. (2016). Effects of Web-Based Creative Thinking Teaching on Students' Creativity and Learning Outcome. *Eurasia Journal of Mathematics, Science & Technology Education*, 2016, 12(6), 1675-1684 doi: 10.12973/eurasia.2016.1558a, National Quemoy University, TAIWAN ROC, Received 12 June 2015, Revised 22 November 2015, Accepted 2 February 2016.
2. <https://rockcontent.com/blog/creative-thinking-skills/>.
3. <https://www.forbes.com/sites/phillewis1/2020/03/20/the-most-valuable-skill-in-difficult-times-is-lateral-thinking-heres-how-to-do-it/?sh=7b1478f357a9>.
4. <https://www.igi-global.com/dictionary/education-environment/83212>.
5. <https://www.potential.com/articles/creative-thinking/#5>.
6. <https://www.thebalancecareers.com/creative-thinking-defini->

tion-with-examples-2063744#citation-4.

7. Lewis, P. (2020). "The Most Valuable Skill In Difficult Times Is Lateral Thinking—Here's How To Do It.

8. Sharma, R. (n.d). EFFECT OF SCHOOL AND HOME ENVIRONMENTS ON CREATIVITY OF CHILDREN, https://www.academia.edu/7354757/EFFECT_OF_SCHOOL_AND_HOME_ENVIRONMENTS_ON_CREATIVITY_OF_CHILDREN

9. The Effect of Creative Thinking Education in Enhancing Creative Self-Efficacy and Cognitive Motivation. Available from: https://www.researchgate.net/publication/295672853_The_Effect_of_Creative_Thinking_Education_in_Enhancing_Creative_Self-Efficacy_and_Cognitive_Motivation [accessed January 12 2022].