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RELATIONSHIP OF KNOWLEDGE AND ITS THINKING STRATEGIES WITH RESPECT TO IMPACT ON CREATIVE THINKING

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ABSTRACT

Creative thinking is not a modern skill; it began with early humans who used imagination to hunt, build shelters, communicate, and navigate unfamiliar environments to problem-solving in our careers, finding new solutions for everyday challenges and fostering societal survival. Creative thinking has been widely recognised as an essential skill, yet its relationship with knowledge remains unclear. While some theories suggest that greater knowledge enhances creativity by providing more mental resources, others argue that excessive knowledge can limit originality through cognitive rigidity. Knowledge grows with age but creativity does not always increase in the same way. In fact, many highly knowledgeable individuals experience reduced creative flexibility due to rigid thinking patterns. This study explores the relationship between students' knowledge levels and creative thinking. Individuals with different levels of knowledge will be compared to evaluate how prior information, academic understanding, and general awareness influence divergent thinking. By comparing participants with varying levels of knowledge, the research aims to determine whether knowledge enhances or constrains creative thinking.

Keywords: Creative Block, Cognitive Flexibility, Divergent Thinking, Knowledge Levels, Cognitive Development, Thinking Patterns, Problem-Solving, Cognitive Rigidity, Idea Genera

1. INTRODUCTION

Creative thinking has always been an integral part of human development, shaping the way people understand, interpret, and express themselves. From early cave paintings and stone tools to modern scientific achievements and contemporary art forms, creativity has played a continuous role in human progress. Whether consciously or unconsciously, individuals have relied on creative thinking to solve problems, adapt to changing environments, and explore new possibilities. Interestingly, even people who may not be directly involved in creative fields are now becoming increasingly curious about how creativity works and why it matters.

When we observe the evolution of creative thinking from the Stone Age to the modern digital era, it becomes evident that creativity itself has not disappeared or weakened; instead, the knowledge applied alongside creativity has expanded

dramatically. This raises an important question about the relationship between knowledge and creativity. Has the growth of human knowledge led to advances in creative thinking, or has creativity been the driving force behind expanding knowledge? Or perhaps both creativity and knowledge work together in ways that are still not fully understood.

This paper will explore these questions by examining the dynamic relationship between knowledge and creative thinking, aiming to understand whether one drives the other, whether both evolve together throughout human history, or whether a third factor, which is either influencing this relationship or being shaped by it, plays a crucial yet often overlooked role.

By studying individuals with different knowledge levels, we can identify patterns that show how learning, experience, and imagination influence each other. This research may reveal whether creativity grows with knowledge, declines with it, or depends on another hidden factor such as environment or mindset. Knowing how these elements interact can help us design better educational methods, enhance innovative thinking, and speed up problem-solving. Ultimately, this research aims to provide insights that could make creativity more accessible and innovation more efficient in academic, professional, and real-world contexts.

But before moving toward the concept of knowledge and creative thinking, it is important to first understand what these two terms truly mean.

2. KNOWLEDGE

Knowledge is one of the most fundamental aspects of human understanding. In philosophy, the study of knowledge is known as epistemology. The philosopher Plato famously defined knowledge as “justified true belief,” suggesting that for something to be considered knowledge, it must be both true and supported by reasoning. However, later philosophers have questioned this view through what is known as the Gettier problem, which shows that even a justified true belief may not always count as genuine knowledge. Despite these debates, knowledge remains central to how humans interpret, reason, and engage with the world around them.

In everyday language, the word knowledge is often used to describe our opinions, beliefs, or whatever information we are familiar with. However, philosophy distinguishes between thinking that we know and actually knowing.

In education, explicit knowledge is formal, easily articulated knowledge like textbook facts, while tacit knowledge is personal, experience-based, and hard to verbalize, such as a teacher's intuition or a student's fluency in a second language. Implicit knowledge is often described as a bridge between the two, representing knowledge that is not explicit but can potentially be articulated, sometimes involving the application of explicit knowledge to specific situations.

Indian philosophical traditions also explore this distinction through the concepts of Dnyana and Prama. Dnyana refers to general understanding or cognition, while Prama represents true, verified knowledge — understanding that has been tested and proven accurate. The person who attains Prama is called Pramata, the means of gaining knowledge is Pramana, and the object of knowledge is Prameya.

3. CREATIVE THINKING

Thinking, in general, is a mental activity that involves the use of various cognitive processes such as reasoning, problem-solving, memory, and decision-making. It is an internal and private process through which individuals manipulate information, analyze situations, and imagine possible outcomes. While thinking, we often construct an internal world, symbolically running through ideas and scenarios before acting on them in reality.

Among the various forms of thinking, problem-solving and creative thinking are particularly significant. Problem-solving refers to the mental process of identifying challenges and finding effective solutions to overcome them. Creative thinking, on the other hand, extends beyond ordinary problem-solving; it involves perceiving the world in new ways, recognising hidden patterns, and making connections between seemingly unrelated ideas or experiences. It is the foundation of innovation across disciplines, whether in science, art, literature, design, or technology.

Creative thinking is characterized by two essential components: originality and functionality. Originality refers to producing ideas that are new and unique, not merely extensions of existing concepts. Functionality ensures that these ideas hold practical value or usefulness in real-life contexts. According to psychologist Mihaly Csikszentmihalyi in his

book Creativity: Flow and the Psychology of Discovery and Invention, creativity manifests in different forms from individuals who generate unusual yet insightful thoughts, to those who make personal discoveries, to creators whose innovations influence the entire world, such as inventors like Thomas Edison or artists like Pablo Picasso.

4. METHODOLOGY

This research paper intends to examine the relationship between knowledge and creative thinking, and to understand how different forms of knowledge influence creative thought processes. To achieve this, the study will adopt a mixed-method research design, combining both quantitative and qualitative approaches. Quantitative data will be collected through online surveys and structured forms, while qualitative insights will be gathered through small individual creative tasks, interviews, and simple experiments designed to observe differences in thinking patterns.

Participants will be divided into two distinct groups based on the type of knowledge they primarily engage with.

- The first group will represent tacit knowledge, consisting of individuals from creative and artistic fields who rely heavily on experiential, intuitive, and practice-based learning.
- The second group will represent explicit knowledge, including participants from technical, scientific, commerce, and related disciplines that depend on formal, structured, and documented knowledge.

This division will help compare how different knowledge types shape distinct forms of creative thinking, allowing the study to identify patterns, variations, or relationships between the two rather than simply measuring creativity as higher or lower in either group

Creative thinking is a type of cognitive process that involves generating new, original, and useful ideas. The MSBSHSE 12th Psychology book 2022 describes creativity as perceiving the world in new ways, recognizing hidden patterns, making connections between unrelated ideas, and constructing novel solutions. Creative thinking relies on cognitive processes such as imagination, divergent thinking, insight, and problem-solving.

Creativity is often studied through the four-stage model:

- **Preparation:** collecting knowledge and defining a problem
- **Incubation:** unconscious processing when the mind steps away
- **Illumination:** sudden insight or “aha” moment
- **Verification:** evaluating and refining the idea

5. LITERATURE REVIEW

Understanding the relationship between knowledge and creative thinking requires exploring both concepts individually as well as identifying how they interact. The materials from books on Knowledge Management, Psychology and Philosophy indicate that knowledge provides the cognitive foundation for thinking, while creative thinking represents the ability to transform, reorganize, or extend that knowledge in novel ways. This literature review examines definitions, processes, and theoretical frameworks related to knowledge and creative thinking, along with how these two constructs influence each other.

On the other hand, Betty Anderson in her work on knowledge management, understanding the different forms of knowledge is essential for analyzing how people think and create. Anderson explains that knowledge is commonly categorized into three main types: explicit, implicit, and tacit.

Explicit knowledge is formal, documented, and easy to communicate, making it useful for standardized learning and training.

Implicit knowledge develops through social interaction and experience, enabling individuals to understand how to apply what they know in real situations.

Tacit knowledge, the most personal and experiential form, is rooted in intuition, insight, and hands-on learning, and although difficult to express, it plays a critical role in quick decision-making and problem-solving.

Recognising these distinctions helps us understand how different forms of knowledge influence the ways individuals think, interpret information, and engage in creative thinking.

Knowledge processes- creation, sharing, storage, and application—shape how individuals and groups use knowledge to solve problems. These processes set the stage for creativity by determining how much information individuals have access to and how flexibly they can apply it.

From a cognitive perspective (as seen in psychology), knowledge forms the mental representations, concepts, and schemas that individuals use to interpret the world. The Psychology textbook emphasises that thinking is built upon internal representations learned through both direct and indirect experiences. These representations form the basis for reasoning, decision-making, and problem-solving, all of which depend heavily on the knowledge stored in memory.

Researchers (such as Mihaly Csikszentmihalyi) classify creativity in levels:

- Everyday creativity: unusual but insightful personal ideas
- Problem-solving creativity: innovations within specific fields
- Big-C creativity: large-scale achievements (Edison, Picasso, etc.)

Two essential components define creativity:

- **Originality:** the idea must be new or unique
- **Functionality:** the idea must be useful or meaningful

Thus, creativity is not simply imagination - it is the ability to transform knowledge into meaningful novelty.

6. KNOWLEDGE SUPPORTING CREATIVITY

Knowledge supplies the raw materials for creative thought. The Research Methodology and Psychology texts indicate that mental representations, concepts, and schemas guide how individuals interpret problems, which directly influences how creatively they approach them. A wider knowledge base increases the number of connections the mind can form, enhancing divergent thinking.

Tacit knowledge is especially important for creativity because it contains personal insights, intuitions, and experiences that allow individuals to see patterns others may miss. Explicit knowledge provides structure and foundational facts, ensuring that creative ideas remain meaningful and functional.

7. CREATIVITY EXPANDING KNOWLEDGE

Creative thinking can also lead to the generation of new knowledge. When individuals discover new solutions, reinterpret problems, or craft novel explanations, they create additional knowledge that contributes to understanding. Creativity, therefore, functions as a mechanism of knowledge growth.

8. KNOWLEDGE CONSTRAINTS

Some researchers argue that too much rigid or specialized knowledge may sometimes limit creativity by encouraging fixed ways of thinking. However, the psychology texts suggest that flexibility, mindset, and cognitive openness can moderate this effect.

9. INTERDEPENDENCE

Overall, the literature suggests that knowledge and creative thinking operate together rather than independently. Knowledge provides the base; creativity transforms it. Creativity introduces new insights; knowledge organizes and validates them. Neither exists meaningfully without the other.

The review of literature from Knowledge Management and Psychology/Philosophy indicates that both knowledge and creative thinking are essential cognitive constructs that develop through experience and learning.

10. ACROSS THE REVIEWED SOURCES, THE FOLLOWING CONSISTENT INSIGHTS EMERGE:

1) Creativity is deeply dependent on prior knowledge—both factual and experiential.
2) Tacit and explicit knowledge shape different styles of creative thinking.

3) Knowledge supports idea generation, evaluation, and refinement.
4) Too much or too little knowledge can limit creativity.
5) Domain knowledge strengthens the effects of creativity training.
6) The most innovative outcomes arise from integrating tacit intuition with explicit understanding.
7) Knowledge influences not just the level but the type of creativity individuals express.

11. CONCLUSION

This research paper explored how different types of knowledge influence creative thinking and whether these forms of knowledge shape the way individuals approach problem-solving and innovation. To illustrate this relationship, I want to reflect on a personal experience.

Since my school days, I often sat behind my brother on his motorcycle as he explained how the clutch, engine, acceleration, and other parts worked. These casual conversations slowly gave me a strong, explicit understanding of the bike's mechanics long before I ever rode it myself.

Years later, when I finally learned to ride, this foundation made the process much easier. Instead of figuring out what the machine was doing, I could focus on how it feels to ride and quickly develop tacit knowledge through experience and intuition. My explicit knowledge allowed faster tacit learning, giving me a deeper and more natural understanding overall.

This example reflects the central idea of the research: the relationship between knowledge and creative thinking functions like a yin–yang balance. Tacit and explicit knowledge complement each other, and both are necessary for higher creativity, innovation, and efficiency. A sculptor who lacks technical knowledge of stone may struggle to refine his creative ideas, while a data analyst who lacks creative thinking may fail to see meaningful connections in the information. Neither form of knowledge is more important than the other. The real progress happens when both interact in the right proportion. It is this balance, not the dominance of one side, that unlocks innovation and meaningful creative thinking.

12. FUTURE IMPLICATIONS

The findings of this study, even in their conceptual stage, highlight important implications for future research, education, workplaces, and skill development. Understanding the relationship between different types of knowledge, like tacit, explicit, and implicit, and their impact on creative thinking opens several pathways for deeper exploration. One major implication is the need for educational systems to balance theoretical instruction with experiential learning. Students who rely only on explicit knowledge may develop strong analytical thinking but limited creative flexibility, while those who rely only on tacit knowledge may lack the structured understanding needed for complex problem-solving. Future research can contribute to designing learning environments that intentionally integrate both types, allowing learners to shift smoothly between structured reasoning and imaginative exploration.

In professional environments, these insights suggest that innovation flourishes most effectively when teams consist of individuals with diverse knowledge profiles. Creative professionals with strong tacit knowledge can generate unique, intuitive ideas, while technical experts with explicit knowledge can refine these ideas into practical solutions. Future studies may investigate how these complementary strengths can be optimized through team composition, collaborative tools, and organizational culture.

The relationship between knowledge and creative thinking also has meaningful implications for future leaders and managers. Managing teams today often means working with both highly creative individuals and technically skilled professionals, each relying on different types of knowledge. Leaders who understand how tacit and explicit knowledge influence thinking can better guide communication, collaboration, and decision-making within their teams. This awareness helps managers assign roles effectively, appreciate diverse strengths, and create an environment where both intuitive ideas and structured reasoning are valued. In the future, leadership development programs may increasingly focus on this balance, as the ability to manage mixed-knowledge teams will become essential for innovation and organizational success.

There is also significant scope for further research into how digital technology influences the acquisition of knowledge and creativity. With artificial intelligence, online learning, and rapid information access, explicit knowledge

is becoming more widely available. However, tacit knowledge, which relies on hands-on experience, observation, and intuition, remains difficult to transfer digitally. This gap presents a challenge and an opportunity for future innovation, particularly in virtual learning and skill-development technologies.

CONFLICT OF INTERESTS

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