# Implications of Curriculum in Promoting Critical Thinking, Creativity and Innovation Among Learners

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# Abstract

Transforming the education system to enhance creativity and innovation is essential for equipping students to succeed in an increasingly complex and dynamic world. Contrarily, traditional education models often focus on rote memorization and standardized testing, which can hinder creativity and limit critical thinking. This paper examines the impact of the basic-level curriculum on fostering critical thinking, creativity, and innovation among students in Nepal. It also considers the influence of the traditional top-down educational model and the efforts to promote learner-centered, creativity-oriented, and contemporary educational practices. To achieve these ends, a qualitative case study approach, specifically the narrative inquiry design, was utilized to investigate how curriculum design and instructional practices affect the development of 21st-century competencies in secondary schools. The data were collected through inobservations, depth interviews, and with students, communications teachers. and administrators from three community basic-level schools in Chandragiri Municipality. The results reflect ongoing educational activities that remain traditional, teacher-centered, and rote-learning-oriented, relying on paper-and-pencil methods. The strategies employed to enhance critical thinking, creative work, and innovative performance, and to provide students with hands-on experiences, are weak and insufficiently emphasized. The study recommends that traditional curricula must be updated to equip students with 21st-century skills.

**Keywords:** Creativity, critical thinking, curriculum, global trends, innovative teaching

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#### Introduction

This paper explores the influence of curriculum design, content, and implementation on the development of critical thinking, creativity, and innovation in learners. It examines how curriculum frameworks, instructional strategies, learning activities, and assessment approaches affect the development of higher-order thinking skills and competencies.

Students' participation and performance are influenced by their school environment and the cultural factors around them, including the music of their community. A well-designed curriculum must integrate purposeful strategies, content, and teaching methods that promote inquiry, critical analysis, and reflective thinking, enhancing students' critical thinking abilities. Creativity, which involves generating original and valuable ideas, encompasses mental processes that explore possible solutions. Predetermined answers can hinder creativity, which thrives on cognitive and non-cognitive skills such as curiosity, intuition, and perseverance.

According to Padget (2013), three critical factors—learning environment, curriculum, and content—significantly influence creativity and critical thinking in education. Creative solutions may emerge spontaneously or develop over time. Historically, creativity has been associated with transformative figures such as Thomas Edison, Marie Curie, and Steve Jobs. However, creativity does not occur in isolation; it depends on general knowledge and expertise within a specific field.

The curriculum encompasses a collection of knowledge, skills, ideas, and concepts to be taught over a specific period, shaping the cognitive tasks of the learning journey (Padget, 2013). Innovative schools are adopting creative learning approaches to engage with the national curriculum in new and exciting ways. Despite its content-driven nature, these schools enhance learners' cognitive, social, and dispositional growth. For education quality to improve, the curriculum must promote creativity and critical thinking. Additionally, teacher educators can encourage creativity by involving students in exploratory and flexible learning experiences, providing opportunities for them to take ownership of their learning. Creative thinking involves a deliberate process of generating new ideas and experimenting with different concepts and behaviors. This process is crucial for students, teachers, and nearly everyone as it strengthens the ability to think creatively and solve problems.

The curriculum emphasizes inquiry-based learning to foster critical thinking. It utilizes open-ended questions, group-based projects centered on real-world issues, and debates on current, controversial issues or topics.

Socrates and Freire advocate for the dialectical method, which employs questioning to encourage students to think deeply and critically about a topic or issue (Fedoryshyn & Shtanko, 2022). However, educational practices in Nepal remain predominantly theory-based, paper-pencil-centered, and focused on rote learning, limiting opportunities for students to engage in critical and creative processes. This study examines the role of the curriculum in shaping pedagogical practices to foster creative and innovative learning.

# **Methodological Approach**

This paper is grounded in the interpretivist paradigm, which seeks to understand the subjective experiences and meanings that individuals create within the given setting. This study utilizes a qualitative research design, specifically a case study approach. We conducted a thorough, indepth examination of the practical implications of the curriculum in real-world educational contexts. The paper concentrates on selected schools or institutions to investigate participants' perspectives, practices, and challenges in curriculum implementation and learner development. It includes samples from teachers, basic-level students, and curriculum experts or policymakers involved in curriculum execution, with an emphasis on subjects that require critical and creative engagement. The research employs purposive sampling to select four basic-level schools from a suburban area of Kathmandu, including twelve teachers teaching Social Studies, English, or Nepali, twenty students in grades five, six, seven, or eight, and one curriculum expert, aiming to gain comprehensive insights into the research problem.

This study utilized a narrative inquiry approach, a qualitative research method that - in this study - emphasizes capturing and analyzing lived experiences to explore how curriculum and educational practices contribute to fostering critical thinking, creativity, and innovative performance. The participants included a diverse group of students, teachers, and administrators from three community basic-level schools in Chandragiri Municipality, Kathmandu. Their varied perspectives offered a holistic understanding of the topic. Data collection involved conducting in-depth interviews to examine individual viewpoints, classroom observations to analyze real-time teaching and learning interactions, and online communication to promote ongoing engagement. This method collectively provided comprehensive and nuanced insights into the design, implementation, and impact of the curriculum on the learners' development.

#### **Results and Discussion**

This section examines how the curriculum affects the development of critical thinking, creativity, and innovative performance among students. Also, it examines the relationship between curriculum design, teaching practices, and their impact on learners' cognitive and creative development.

#### **Necessity of Creativity in Educational Activities**

Education aims to empower students with academic and transversal competencies that promote critical, creative, and innovative thinking. Schools face several challenges in nurturing creativity in young minds, influenced by factors such as personality, environment, circumstances, motivation, and cognitive development (Adam, 1999; Wong & Pang, 2003). These challenges include limited time, insufficient funding, poor communication, an unwelcoming environment, a lack of technical critique, low risk-taking, and a scarcity of ingenuity. Additionally, emotional and perceptual barriers may likewise hinder creativity. To cultivate creativity in students, it is essential to identify and eliminate these barriers, which can be classified into perceptual, cultural, emotional, and other categories (Hilal et al., 2013). Addressing these issues can foster an environment that nurtures creativity and enables students to reach their full potential. Creativity holds significant value at both individual and societal levels, proving essential in overcoming various challenges in academic and social contexts. According to Sternberg and Lubart (1999), creativity spans numerous work categories and plays a crucial role in scientific discoveries, artistic movements, innovations, and programs (as cited in Hilal et al., 2013). In Nepal, policy documents have highlighted the importance of enhancing children's capacities at the school level; however, innovation in education has not been effectively achieved (National Education Commission, 2018). Therefore, it is essential to prioritize creativity in education to equip students against future challenges and foster their success in higher-level studies.

According to the National Education System Plan (2028), Nepal's current education system does not meet the needs of its students as proper. It further argues that the system prioritizes theoretical tradition over practicality, resultant from a lack of funds and poor policy implementation. Clear policies are essential for effectively incorporating creativity into education. However, the Research Center for Educational Innovation and Development (CERID) (2005) found that teacher involvement in politics is a significant problem in many schools, resulting in irregular attendance and a focus on personal gain rather than teaching. Furthermore, the policy provision is weak in encouraging students to be creative and critical, teachers to be more student-centered and

responsible, and the administration and management to be accountable for making educational activities learner-friendly and goal-oriented.

As a result, Nepal's education system faces numerous challenges. To foster creative learning, teachers must employ problem-solving techniques, engage in art activities, role-play, and other activities that require careful attention (CERID, 2005). However, the current curriculum and teaching methods are not conducive to creative thinking. Government initiatives are crucial for developing a problem-solving-oriented curriculum and training teachers in creative thinking. Additionally, schools should offer training and seminars to encourage creative thinking.

Learning is an artistic process closely tied to creativity, especially in a rapidly changing world (CERID, 2005). By shifting the focus of education from memorization to exploration and creation, students can develop the skills they need to succeed in the future. This approach to learning prepares students for future careers by teaching them to tackle obstacles methodically and creatively, adapt to change constructively, and solve problems collaboratively.

By adopting this framework, teachers can create powerful learning experiences that enable students to explore their capabilities as creative and collaborative problem solvers. This can help reduce inhibitions and enhance creativity and adaptability, which are highly valued qualities in today's and tomorrow's business and life (CERID, 2005). Mcloughlin and Hodson (2013) argue that creativity and critical thinking should be continuous and integral to every learner's educational journey. Effective teaching practices suggest that the early development of these skills is crucial and must be consistently nurtured to create confident, creative, and critical thinkers. Education should prioritize teaching process skills, enabling students to generate inventive solutions to new problems rather than merely focusing on memorization and repetition. Creative thinking leads to new ideas, methods, and perspectives, resulting in innovations in music, poetry, dance, literature, and technology, as well as less obvious advancements, such as novel ways of questioning and understanding relationships. In a dynamic and evolving world, traditional educational principles are insufficient for the new generation, which thrives in an era of innovation. One strategy, perhaps the most crucial one, of achieving these ends can be incorporating these provisions in the curriculum.

# Role of Curriculum for Creative and Innovative Teaching-Learning

Education is vital for societal advancement, as it equips individuals to make practical contributions to national development. A well-educated populace is indispensable for providing competent labor across various

sectors, driving social, political, and economic progress, thus underscoring the need for educational innovation. The curriculum encompasses the essential knowledge, skills, and concepts that form the basis for cognitive development and behavioral change (Padget, 2013). Despite its traditionally content-focused nature, forward-thinking schools are adopting creative learning strategies to enhance students' cognitive, social, and dispositional growth. The curriculum must include activities that foster creativity and critical thinking in students, similar to those found in progressive schools. Padget (2013) also argues that educators can nurture creativity by engaging in exploratory and flexible learning activities, allowing students to take ownership of their education and express themselves. Creative thinking is a purposeful process that encourages the generation of new ideas and innovative solutions. It involves experimenting with different concepts and behaviors and utilizing various problem-solving techniques to foster students' creativity. Morley (2010) emphasizes the importance of creativity, noting that it reveals non-literary aspects of knowledge and is essential for both artistic and scientific endeavors. The curriculum must promote creative thinking for writing, music, dance, art, scientific innovation, and critical reflection. By integrating creative learning methods, the curriculum can help learners realize their full creative potential. However, due to being time-consuming, expensive, and requiring more effort, creative educational activities are often replaced with theory-based, exam-oriented approaches.

Critical thinking, which involves analysis and judgment, is essential for creativity, which entails making and producing. The curriculum can empower students with innovative and creative skills through various teaching and learning strategies. One practical approach includes classroom activities that encourage students to tackle complex problems with no clear solutions. This requires them to apply critical thinking and collaborate on engaging with real-life situations and cross-disciplinary projects, and reflect on the problem-solving process. Although such activities are part of the curriculum, they are often less emphasized in educational settings because they are viewed as less beneficial for achieving higher grades.

The next step is to implement critical media literacy. This includes teaching students to critically analyze media messages and distinguish between credible and misleading information. In this approach, the teacher guides students in examining media coverage of specific events for bias and accuracy, conducts projects that compare different media sources on a particular issue, and develops student-produced media content that encourages critical perspectives.

The third strategy for making educational activities creative and innovative is to encourage students to think creatively and consider multiple perspectives on problems. In this context, brainstorming sessions, creative writing, art projects, and role-playing play significant roles. Brainstorming sessions involve the teacher motivating students to share their ideas and participate in creative writing or art projects that interpret complex issues in their own unique ways, as well as engaging in role-playing or simulations where students adopt different viewpoints.

Assessment similarly plays a significant role in fostering critical and innovative teaching and learning. Both formative and summative assessment methods contribute to evaluating students' creative and innovative efforts and performances. The former includes reflection journals where students document their thought processes, peer evaluations in group projects to encourage collaborative critical thinking, and oral presentations where students argue or defend a position. Conversely, summative assessment comprises essay writing that requires critical analysis of texts or real-world problems, research papers where students construct evidence-based arguments, and portfolios that showcase the development of critical thinking skills over time.

All activities, including classroom tasks, student participation and performance, and assessment, depend on the teacher's role. The teacher must guide and support students in their learning journey as a facilitator, not as a banker depositing knowledge or imposing their ideas and principles. They can create a creativity-oriented classroom environment by encouraging questions, where no ideas are dismissed without exploration; in other words, all ideas receive some examination. Similarly, using unfolding techniques helps students progressively develop their thinking skills.

Other creative and innovative teaching and learning strategies include incorporating real-world issues, collaboration, peer learning, reflection, and metacognition. Integrating global and local issues, rather than relying on outdated theories, is essential. Additionally, linking classroom discussions to the outside world while promoting civic engagement and responsibility is equally important for enhancing critical thinking skills. Group discussions and collaborative projects can help students hear diverse viewpoints and challenge their thinking. Using feedback fosters critical and constructive dialogue skills.

Our education system is poorly equipped to cultivate children with creative and critical thinking skills. It continuously emphasizes theoretical rote learning and inflexible teaching methods. This policy has not liberated or empowered students to thrive based on their interests and talents, as intended. Instead, it discourages students from engaging in discussions with teachers and peers, hindering the transformation of knowledge. Critical thinking and creativity can be enhanced by decreasing students' over-reliance on others.

This approach emphasizes the learning environment, shaped by physical, social, intellectual, and cultural factors that are influenced by learners' backgrounds, surroundings, and social interactions. Students often carry the burdens of others' creations. Thus, curricular modification is crucial for fostering critical thinking and creativity.

## Praxis of Curriculum in Teaching-Learning

The praxis-based curriculum in teaching and learning is a dynamic process that provides experiential learning grounded in the theoretical knowledge of the curriculum. It bridges the gap between the curriculum as a living document and its application in the classroom. A robust curriculum goes beyond fixed syllabi and adapts to learners' needs and interests, encouraging flexibility and relevance in content delivery. Teachers play a crucial role in implementing the curriculum and co-creating new learning experiences. However, the current teaching-learning process is shaped by the top-down model of the education system. In other words, it lacks the most prominent defining feature of critical pedagogy: "emphasis on the emancipatory potential of education." Teaching-learning activities often fail to adequately address learners' interests, experiences, and cultural backgrounds. This learner-centered approach has not effectively promoted students' active participation and critical thinking.

Additionally, the ongoing analysis of educational activities and the use of feedback to refine strategies and enhance outcomes at the management and policy levels are insufficient. Relevant authorities place less emphasis on gathering reflections from teaching and learning activities conducted in the classroom. The education system can be improved by encouraging students, teachers, and relevant authorities to regularly analyze and reflect on the activities in which they participate and perform.

Furthermore, the curriculum places relatively less emphasis on social and ethical dimensions. The concerned authority seems to have no plans or strategies to address the various forms of bullying and violence that frequently occur in educational institutions (Budnyk, 2023). An environment that promotes "respect for human diversity and group differences" (Adams et al., 2016, p. 26) is essential for fostering critical and creative thinking among students. Promoting the essence of 'Respect for Diversity' from policy to practice is crucial for empowering students to participate and fulfill their roles in the classroom actively. Without this emancipation and empowerment, critical thinking and

innovative learning tend to weaken and stagnate. The curriculum should serve as a tool for social justice and equity in education. This can be achieved by incorporating transversal competencies, such as empathy, collaboration, and ethical reasoning, into the curriculum. However, transversal competencies are currently included as part of educational activities in the calendar rather than being explicitly stated as curricular goals. Rigid standardized curricula, limited teacher training, inadequate reflective practices, insufficient resources for diverse educational contexts, and theory-based, rote-learning-oriented paper-pencil tests pose significant challenges to making educational activities emancipatory, relevant to real life, and goal-oriented.

# Critical Thinking and Creativity in Education Management

Institutions must cultivate critical thinking and creativity by providing teachers and students with an innovative, reflective, and analytical environment. Evidence-based decision-making, effective problem-solving strategies, the promotion of ethical judgment in educational settings, and strategic planning to support administration, students, and teachers all play significant roles in this process. Similarly, innovative leadership encourages management, teachers, and students to collaborate harmoniously, creates flexible policies that support adaptable and inclusive strategies to meet the diverse needs of students and staff, and fosters cultural and technological adaptation to integrate modern technologies and cultural diversity into the educational process.

Creativity, in particular, is essential because it involves generating new ideas, modifying existing ones, and exhibiting exploratory behavior when faced with novelty (Spearman, 1930). Highly creative individuals possess optimistic, tolerant, and driven personalities, characterized by responsibility, empathy, and an integrated consciousness.

Different approaches to fostering creativity include viewing it as a talent that can be developed in all fields (Heilmann & Korte, 2010) or associating it with specific subjects, such as art, music, and technology. Creative thinking can be encouraged in the classroom through various strategies and tactics, such as structuring creative approaches to problem-solving (Sadi, 2006). Creativity is a universal skill that can be nurtured and refined over time, influenced by personality traits, modes of thinking, and social and environmental factors (Hilal et al., 2013). By recognizing the importance of creativity and implementing effective strategies to promote it, individuals and societies can unlock their full potential and achieve greater success.

Several obstacles hinder creativity, making it challenging to nurture innovation in young minds (Hilal et al., 2013). These obstacles can be perceived as

barriers that obstruct the development of creative skills, influenced by various factors, including personality, environment, circumstances, motivation, and cognitive development (Adam, 1999; Wong & Pang, 2003). These barriers may vary in context and content, encompassing business, academia, the economy, art, and science.

These obstacles include limited time and funding, insufficient communication, a challenging physical environment, a lack of technical critique, low risk-taking, and a deficiency in inventiveness (Hilal et al., 2013). Additionally, emotional and perceptual challenges can also hinder creativity. To promote creativity in our students, it is essential to identify and eliminate these restrictions, which can be classified into perceptual, cultural, emotional, and other barriers (Hilal et al., 2013). This approach can create an environment that fosters creativity and enables our students to reach their full potential.

Lohani, Adhikari, Subedi, and Gupto (2000) emphasize the distinction between critical and creative thinking. Critical thinking involves observing, analyzing, reasoning, and evaluating based on established standards. In contrast, creative thinking generates and expresses new ideas, forms, and solutions, often more spontaneously and lightheartedly, such as during daydreaming or casual contemplation. Additionally, creative thinking prioritizes aesthetics, seeking solutions that are not only effective but also pleasing. Unfortunately, traditional education systems offer limited opportunities for students to develop creativity and innovative thinking beyond standardized boundaries. Education must adopt a forward-thinking approach that inspires and nurtures creativity to prepare the next generation for both known and unknown future challenges. Individual differences in learning are significant and influenced by inheritance, environment, and culture, as noted by Smalzer (2014). Culture dictates behavioral norms, which can vary or be similar across different societies. The current emphasis on standardized testing often leads to teaching to the test, which stifles critical learning components such as risk-taking and viewing failure as a natural part of the learning process. To foster 21st-century skills like cooperation, creativity, and critical thinking, education should provide individually relevant and engaging learning experiences through a hands-on approach. This method includes motivation, practical experience, reflection, enjoyment, and collaborative learning. Fisher and Scriven (1997) defined critical thinking as the skilled and active interpretation and evaluation of observations, communications, information, and arguments. Prakash (2009) emphasizes the significance of creativity in an open market, where uniqueness in ideas, processes, or products distinguishes one person or entity from another, thereby adding value and capturing attention.

#### Conclusion

Among others, the curriculum is required to promote critical thinking, creativity, and innovative teaching and learning. However, providing and explaining teaching-learning content alone does not enhance students' critical thinking, creativity, and innovative skills. The review process and promotion strategies play a crucial role in developing these skills. Despite the curriculum including content aimed at fostering creativity and innovation, its application in most schools is often weak and insufficient to empower students and teachers as intended. The findings suggest that the traditional curriculum needs reform to prioritize creativity and critical thinking, and that teachers should be trained to foster multiple intelligences in students. The study also highlights the need for the government to implement result-oriented educational programs that encourage creativity and critical thinking.

The changing global landscape demands creativity and critical thinking from students. Despite the influence of a traditional curriculum that emphasizes teacher-centered, rote-learning-oriented, and paper-and-pencil-test-focused methods, at present the curriculum is required to promote essential critical thinking and creativity skills among students. However, in the context of Nepal, it has not still been fully successful in prioritizing these crucial skills during the implementation phase due to the current education system's overemphasis on rote learning and exam-oriented preparation, which obstructs the development of critical and creative thinking in students. To foster these abilities, educational activities should engage students and teachers from the outset, making them responsible and accountable. These activities are even more effective when participants operate autonomously in their work and performance.

The study concludes that sufficient access to resources, teacher training to create and implement learner-friendly, justifiable, and innovation-oriented educational activities, as well as the role of relevant authorities in promoting a creative and innovative teaching-learning environment, influence the enhancement of critical thinking, creative work, and innovative performance.

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