



THE MAIN FEATURES AND DEVELOPMENT MODELS OF INNOVATIVE THINKING IN THE THINKING OF MODERN YOUTH

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ABSTRACT

This article examines the fundamental features and development models of innovative thinking among modern youth. In the context of rapid technological advancement, digital transformation, and globalization, the intellectual potential of young people is becoming the central driver of socio-economic progress. The research highlights the cognitive, psychological, and social determinants of innovative thinking and analyzes pedagogical, environmental, and technological models that contribute to its formation and enhancement. The article concludes with recommendations for fostering a sustainable innovative mindset among youth.

Introduction. In the modern world, globalization, digital transformation, and rapid technological progress have a profound impact on the thinking patterns of young people. Innovative thinking—thinking in new ways and finding creative solutions to unconventional problems—has become a key indicator of the intellectual potential and socio-economic activity of today's youth. Innovative thinking can be defined as the ability to generate new ideas based on existing knowledge and experience, and to apply advanced, non-traditional approaches in order to achieve effective practical results. Young people are active participants in this process and serve as one of the main drivers of innovative initiatives across various spheres of society.

Innovation in youth thinking manifests through several factors:

- Creative thinking – the ability to generate original ideas and make unconventional decisions.
- Critical thinking – the capacity to analyze problems deeply and propose alternative solutions.
- Technological literacy – competency in using digital tools and mastering modern IT solutions.
- Entrepreneurial skills – promoting new business ideas and implementing innovations through startups.

In the intellectual activity of contemporary youth, innovation takes several forms. Academic innovations emerge through new approaches in research and education. Technological innovations are expressed through startups, mobile applications, and AI-driven solutions. Social innovations address societal challenges such as environmental issues and volunteer initiatives. Cultural and artistic innovations include the creation of new styles in art, design, fashion, and digital content.

The development of innovative thinking can be guided by several models. The Design Thinking model focuses on creating products or services based on user needs. TRIZ (Theory of Inventive Problem Solving) provides systematic methods for generating creative solutions. The Creative Synergy Model emphasizes interdisciplinary collaboration to produce new ideas. The Lean Startup model promotes rapid testing and flexible development in entrepreneurial environments.

The increasing importance of information in all spheres of modern life highlights the urgency of studying innovation and innovative activity. These concepts are often treated as identical, though this approach is incorrect. Despite frequent discussions of innovation in the literature, it is commonly examined only as an economic category, while the nature of innovative thinking—its core philosophical essence—has been largely ignored. In an age of fast technological advancement, it is essential to study innovative thinking more comprehensively by employing philosophical analysis, methodological grounding, and comparative approaches between innovation and non-innovation.

Innovation must become a fundamental criterion for evaluating human activity and should encompass both material and spiritual dimensions. As an objective process, innovation is rooted in the intellectual labor of individuals and is continuously refined through their contributions. Innovators, early adopters, and creative individuals constitute the core of innovative thinking. As innovation develops, it gives rise to an innovative environment, consciousness, culture, values, and goals, as well as supportive innovation ecosystems. As P. Kozlovsky notes, *“Culture is today recommended as the key to innovation and social development—it facilitates the introduction of new technologies, their acceptance by society, and supports the exchange of international experience and mutual understanding.”* In this sense, culture plays a central role in sustaining an effective innovation system.

The young generation is the driving force of modern society, making the education of innovative individuals a matter of urgent importance. The concept of the “innovative individual,” introduced by American philosopher Everett Hagen, underscores the need to nurture people capable of adapting to change and generating original ideas. In the current stage of societal development, fostering an innovative worldview among youth has become a priority. Modernizing education is essential in this process. As the President of the Republic of Uzbekistan Shavkat Mirziyoyev states: *“In developed countries, great attention is paid to investing in the full educational cycle—from age 3 to 22—because such investment brings 15–17 times more benefit to society. In our country, this indicator is only 4 times. Therefore, we must increase attention to human capital and mobilize all available opportunities.”* Innovative approaches represent the socio-cultural development of society, requiring clear goal-setting for young people and the practical implementation of these goals.

The definitions and interpretations of *innovative thinking* in the academic literature are diverse, reflecting the wide range of approaches and perspectives used to study this

phenomenon. According to A. Begmatov, innovative activity—considered a practical outcome of innovative thinking—refers to *“the performance of services for the creation of a new or improved product in production or the development of a new or improved technological process.”* He further identifies several specific features of innovative activity, including the creation of new products, the commercialization of original ideas, and the development of novel concepts. These views underscore the idea that innovative thinking functions as the intellectual foundation for systems of research and youth leadership.

Scholars emphasize that young people equipped with modern innovative mindsets will be responsible for building smart economies, smart cities, and smart societies in the future. Therefore, it is essential to support and guide young individuals from an early age—beginning in kindergarten, continuing through school and university, and extending into postgraduate education. The formation of an innovative society requires professionals with well-developed innovative thinking skills. As noted by several researchers, the development of high technologies, nanotechnology, information systems, and fundamental science must be accompanied by early cultivation of cognitive readiness in children to use advanced technological tools.

Different types of thinking—empirical, theoretical, visual, logical, and spatial—play important roles in shaping innovative thinking. Theoretical thinking, for instance, is associated with the ability to handle high-level abstractions and conceptual reasoning. Empirical thinking, on the other hand, is rooted in sensory perception and visual imagery, contributing to the formation of innovative ideas through concrete experiences.

Importantly, innovative thinking serves as an independent and integral component of innovative activity. This is because innovative activity is defined and shaped by the distinctive cognitive features that innovative thinking introduces into the process. From a conceptual perspective, innovative thinking embodies a combination of creative, scientific-theoretical, social, constructive, pragmatic, and transformative characteristics.

Creative thinking allows individuals to transcend established algorithms, patterns, or models, enabling them to produce fundamentally new results in a subjective and original manner. However, innovative thinking should not be equated with the creative thinking found in artistic expression. Artistic creativity is often driven by emotional experience and is evaluated based on its originality and aesthetic value. In contrast, innovative thinking in scientific and technological fields is oriented toward generating practical solutions and achieving significant results with minimal resources. Thus, the essence of innovative thinking lies in its ability to produce breakthroughs that cannot be achieved within the confines of existing models or conventional approaches.

Research Methodology. Innovative thinking is manifested in human activity in a special way, both scientifically and theoretically. Because, as V.P. Delia rightly noted, scientific thinking “has its own characteristic in relation to theoretical thinking, which allows us to distinguish the theoretical thinking of this era from its predecessors”. Concepts based on theoretical thinking also have the level of abstraction that exists at the level of modern science. Because without this, it is impossible to create an innovative product that is required in the modern development of science and technology without creating and generalizing repeatedly tested theoretical models for the phenomena and processes being studied. For example, the creation of a new energy source can only be carried out on the basis of modern knowledge and technologies.

Innovative thinking is constructive. Constructivity is the ability to correctly formulate the desired goal and select the methods and means that correspond to it in the process of activity, determine the sequence of the process, determine the achievement of the goal and dialectically update it, make timely changes to the goal, and understand the circumstances of the implementation of innovations in practice. The concept of constructivism can have a good result in the form of its perfect embodiment. Performing music on an assembly line is an ideal combination of creative and technological aspects in innovative thinking. This is exactly what the famous American inventor Edison did, who managed to translate his technical ideas into practice and profit from them.

Pragmatism of innovative thinking accompanies this phenomenon. It is natural that in each profession there are innovative changes of its own. Because innovative knowledge in medicine is different from that of an architect, and knowledge in these areas serves to direct their innovative thinking towards specific goals. Because, as Sh.T. Kubaeva said, "...innovations are implemented by individuals with innovative thinking. The objectification of innovative thinking occurs through the creation of innovative education. Innovative education, in turn, helps future specialists develop an understanding of the meaning of life and its processing, thereby forming an innovative thinking that encourages individuals to implement innovations."

An innovative thinker must be aware of existing conditions and use them effectively. In particular, as Nick Bostrom, the director of Oxford University, rightly noted: "It is likely that humanity is now rapidly approaching a turning point in its development due to the acceleration of technological progress. The threat of nuclear weapons familiar to society is being joined by the unprecedented opportunities and dangers of rapidly developing technologies in areas such as nanotechnology and machine intelligence. Our future, if it is to exist, depends on our attitude towards these processes. Since we depend on rapidly developing technologies, we need to understand the dynamics of the transition of humanity from a "post-human" (non-human) society. In particular, where are the pitfalls "We must notice the path that can lead to inevitable death."

The development of innovative thinking also requires innovative behavior, the implementation of innovative ideas. That is, people need to be given the opportunity to implement their ideas and dreams in their lives. After all, the need for each innovative idea must be met by the consumer. For this reason, one of the components of innovative thinking is the commercialization of ideas. Innovative thinking means the end result - profit, it is a tool for the development of any business. "The systemic nature of innovation processes is also associated with their goal-oriented nature, therefore, all components of innovation processes determine the balance of interests and the overall dynamics of development."

Innovation is a concept that includes various aspects of synthetic, self-active thinking. At its core, it is necessary to understand the orientation of consciousness to new knowledge, the psychological need for it and the intellectual readiness to accept it. Power is not in knowledge alone. Only relevant and fundamental knowledge has power. Innovative thinking is a creative person who has many options - either to create innovations himself, or to respond to innovations in a timely manner, based on the necessity and purpose of introducing innovations into production. Thus, innovative thinking is a phenomenon inherent in creative consciousness.

Innovator – homo pragmaticus – a pragmatic person. He knows exactly how to put an idea into practice, turn it into an innovation. Conservative – homo tecnicus – a technological person

is considered the owner of technologies that allow us to eliminate previous negative situations, to accept innovations for society and man and to use them effectively. As we can see, all people involved in the innovation process are distinguished from each other by their abilities and experience. For us, it would not be wrong to say that how young people perceive themselves as individuals is determined by their place in the world and the process of innovation changes. Therefore, I.G. Abdullayeva explains the characteristics of an innovator as follows: "1. Intellectual property, which is a product of thought, is owned by innovators (individually or jointly with others). 2. Economic rights are used when implementing innovation. 3. Labor and the type of labor are freely chosen. 4. No one is illegally deprived of the right to innovative research, improve property relations and expand their property. 5. Innovators have the right to join professional associations and through them manage the country, their enterprise, and economic life. 6. The will of the people or the labor community, in particular, the activity and initiatives of innovators, are the basis for the activities of the authorities or property owners. is considered the basis. 7. Innovators have the right to social support (provision) to exercise their creative and economic rights and develop their skills. 8. An innovator has the right to receive remuneration and rewards commensurate with his work as a human being. 9. Innovators may form trade unions (unions) that protect their economic and cultural rights. 10. The fact that innovators have special privileges is not considered a violation of labor regulations and contracts.

The innovator, homo creator, is considered a generation that creates new ideas. The innovator is a person with his own ideal, a creative person. The worldview of such people is closely connected with civilization. The civilizational approach gives the innovator many opportunities to attract his ideas from different parts of the world. The discoverer usually pays attention to only a few elements of civilization. The innovator, homo pragmaticus, introduces new things received from the innovator, transforms them into innovations and gives them to the conservator for implementation.

Analysis and results. Independently mastering new knowledge, systematically organizing it, and reflecting the set of basic competencies that an "innovative person" should possess. Innovative thinking and innovative activity based on it, in turn, are one of the strategies for adapting to social changes. The transition to innovative development is an important task of modern society. "Innovative education" ensures the stability of the process of creating innovations as a unique intellectual tool or technology. "Today, no industry in the world can develop without innovative ideas and scientific achievements."

Innovation intelligence refers to an individual's assessment of the content and likely/observable consequences of an innovation and "the importance and priority of the search, expressed in acceptance/disapproval, support/resistance, and participation in it to the best of their ability." Trust refers to the forward-looking trust, anticipatory trust, shown by individuals in social systems.

Conclusion/Recommendations. In short, innovative thinking is always aimed at innovation. Innovative thinking is based on humanitarian ideas, and innovations increase labor productivity, alleviate working conditions, and serve to ensure the well-being of life. We call this feature of innovative thinking socially positive. Therefore, it is not appropriate to call it innovation, for example, gas chambers, which were invented and used to kill people. The idea of the Nazis who invented the gas chamber, although it corresponds to the features of

innovative thinking both practically and constructively, cannot be called an innovation and creative achievement.

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