

The Need To Use Interdiscipline Approaches in the Activities of A Military Researcher

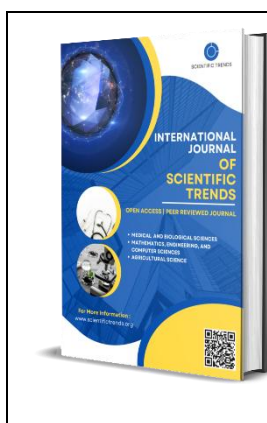
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Abstract

This article analyzes the need to use interdisciplinary approaches to the formation of new knowledge in the activities of researchers conducting military research. Modern research in the military field requires the integration of disciplines, including the development of interdisciplinary and transdisciplinary paradigms.

Keywords: military field, military researcher, interdisciplinary approach, interdisciplinary integration, paradigm, military strategy, artificial intelligence, cybersecurity.

Introduction

The Armed Forces of the Republic of Uzbekistan are currently undergoing a comprehensive reform, one of the priorities of which is undoubtedly the development of military science and education and the improvement of the personnel training system. In this regard, our President Sh.M. Mirziyoyev expresses the following thoughts: "...We need to take the work we have begun to modernize our Armed Forces to a new level, in particular, the widespread introduction of modern knowledge, advanced foreign experience, and information and communication technologies into the sphere of military education" [1;373]. Indeed, research conducted within the framework of military science today requires a broad worldview, deep thinking, and powerful intellectual potential from military researchers, and solving problems within the framework of military science requires a process of interdisciplinary integration.

The process of generating new scientific knowledge in the activities of a military researcher is closely linked to the complexity of modern social thinking, the deepening of views on complex systems, and a new epistemological environment

based on the diversification and integration of knowledge. In this process, interdisciplinary approaches appear not only as an additional methodological opportunity, but also as an ideological, philosophical and methodological necessity for the creation of new knowledge. In particular, a military researcher is required to make decisions not only by relying on traditional military strategies and tactics, but also by integrating knowledge from fields such as information technology, cognitive science, sociology, psychology, artificial intelligence, ecology, and even cultural studies. From a philosophical perspective, the interdisciplinary approach is an expression of epistemological complexity. The modern structure of knowledge abandons the principles of absolute separation established by classical philosophy and is transforming into a field of knowledge that exists in a networked, interconnected manner. This situation demonstrates the need for military researchers to understand the world not only through empirical experience or technical parameters, but also through substantive concepts, contexts of human activity, and normative criteria. This philosophical position leads to an interdisciplinary approach: the boundaries between the process of cognition, its subject, and object are erased, and their dialectical interaction serves to generate new knowledge. Considering that the work of a modern military researcher is not limited to narrow military-technical knowledge, but is based on a wide range of interdisciplinary approaches, interdisciplinary integration for military scientific research is not only an advantage, but also a necessity.

Analysis of Literature on the Topic

In reviewing the literature that examines the need to use interdisciplinary approaches in generating new knowledge in military research, we considered the views of a number of scholars. Liu Xiaoqing, a scholar at the Chinese Military Academy, said: "When developing modern military strategies, an integrated approach using social sciences, economics, psychology, and even ecology helps make more informed predictions and more informed decisions. A military strategist cannot think within the framework of a single discipline in a changing environment" [2; 67]. American military epistemologist J.E. Murch: "The creation of new theoretical constructs in the field of military knowledge is accomplished not only through an internal analysis of existing military experience, but also through the assimilation of conceptual and methodological achievements in other disciplines. New knowledge arises as a result of the convergence of knowledge that is not subordinate to one another, but complements one another" [3;81]. German military strategic analyst H. Meyer: "In

many cases, military scientific research seeks to place itself above other fields of knowledge, and as a result, it turns a narrow circle of truths into absolute truth. This gives rise to an ineffective approach to modern hybrid threats" [4;54]. British strategic forecaster A. Stirling: "When developing any strategic plan, not only specialized knowledge is important, but also the ability to understand uncertainty, assess probability, and decode sociocultural signals. Such integrative capacity can only be achieved through interdisciplinary approaches" [5;77]. French sociologist Edgar Morin: "Knowledge of complex systems can only be developed in an interdisciplinary context, since no single science is capable of fully understanding complexity. This situation is particularly acute in the context of military security" [6;218]. British security researcher Mary Kaldor: "Military strategies are now implemented not only on the training grounds, but also in the minds of societies, in information flows, and in institutional normative systems. Strategic thinking must therefore become a complex activity based on sociological, psychological, and informational aspects" [7;95]. American political scientist David Snow: "Strategic concepts, threats, and security models are not empirical realities, but the result of sociocultural interpretations. And the military researcher must have the ability to epistemically distinguish between these interpretations" [8;402]. A. Juncker, a scholar at the German Academy of Security Sciences, noted: "Modern military-strategic research remains technocentric. This creates the risk of social ambiguity, semantic instability, and a complete disregard for political dynamics. The solution lies in the introduction of conceptual interdisciplinary paradigms" [9;109]. American military strategic epistemologist T. Farrell: "Unless military researchers adopt an interdisciplinary approach to understanding the structure of complex threats, their strategic analysis will not correspond to the real operational situation. Military science today is becoming an interdisciplinary construct" [10;73]. Spanish military strategist Josep Baques: "Cyber strategies, information dominance, social manipulation, the climate crisis—all of this requires the integration of military theory with information theory, ecology, political science, and psychology. Strategic decisions are no longer the product of pure military intelligence, but of hybrid intelligence"[11;118]. Japanese military cognitive scientist Hideo Nakamoto: "The military researcher must now become an intellect that produces universal knowledge. And this is achieved not only through the acquisition of technological, but also axiological, ethnopsychological, and semiotic skills. Military knowledge is a discursive complex" [13;91]. Norwegian military-philosophical analyst Thomas Halvorsen: "Modern security threats arise not only through weapons, but also

through networks of consciousness, semantics, and knowledge. And a military researcher can only understand these networks based on interdisciplinary methodologies" [14;59]. British strategist M. Dillon: "Modern military research is forced to engage in conceptual collaboration with other disciplines not only within the framework of methodological interaction, but also in the creation of a new ontology of knowledge. Any strategic model represents an episteme, that is, a socio-ideological reflex of knowledge" [15;146]. Dutch military studies methodologist Jan van der Meulen: "Military sciences can interact with other sciences, but these connections often remain superficial and fragmented. Methodological reflection is lacking for the formation of a fully integrated system of knowledge" [16;57]. Koichiro Tanaka, a researcher at the National Defense University of Japan, says: "Strategic thinking alone is insufficient for analyzing contemporary military problems. Military researchers must be in constant epistemic contact with cognitive science, sociology, political science, and communication theories. An interdisciplinary approach is not a methodological resource for strategic thinking, but a conceptual necessity" [17;64]. Dutch military sociologist Wilfried van de Donk: "Many military researchers accept interdisciplinary approaches only at a metaphorical level. They mechanically link concepts, but they lack interdisciplinary reflection, epistemic coherence, and methodological consistency. This replaces scientific depth with superficiality" [18;102]. Spanish military methodologist Carlos Blanco: "The modern role of the military researcher is to develop strategic thinking by integrating the complex interactions of information, ideology, technology, and culture. This requires not only a method, but also a level of intellectual culture in the analysis of a complex of social and humanitarian knowledge" [19;134].

Research Methodology

Contemporary military research emphasizes the need for interdisciplinary approaches as an effective means of gaining new scientific knowledge in the face of complex, multi-layered strategic, technological, and social challenges. The classical paradigm of military knowledge, that is, analysis within the framework of only technical, tactical or operational approaches, is no longer sufficient in the context of modern hybrid wars, information manipulation, decision-making based on artificial intelligence and cognitive interventions. This requires a rethinking of the military researcher as an intellectual subject, not simply studying technology but also understanding the complex interrelations between human consciousness, social systems, political dynamics, and ethical implications. The work of the modern

military researcher is not limited to the simple collection of empirical data and its functional analysis; it aims to develop new scientific approaches based on deep theoretical reflection, conceptual synthesis, and the convergence of interdisciplinary knowledge. In particular, such current areas as strategic forecasting, comprehensive military security assessment, hybrid warfare, and threat analysis in the artificial intelligence environment cannot be effectively addressed without an interdisciplinary approach. After all, modern threats represent an interconnected system of technical, psychological, political, informational, and social aspects. Therefore, military researchers must create new scientific knowledge not only within a single discipline, but also through interdisciplinary integration. The scientific work of modern military researchers, especially in the context of hybrid threats, the militarization of artificial intelligence, cognitive operations, climate security, and information warfare, requires comprehensive cognitive approaches developed not within traditional knowledge paradigms, but based on interdisciplinary synthesis. Military problems are no longer solved within technical or tactical frameworks, but within cultural, social, political, and informational contexts. For this reason, military research is closely linked not only to the study of technological innovations, but also to the formation of new scientific knowledge through the deep integration of social and humanitarian knowledge.

Analysis and Results

Interdisciplinary integration is a creative process that forms the philosophical foundation of military scientific thinking, revealing the complex interrelations between the object and subject of knowledge. Therefore, a military researcher must be not only competent within a specific discipline but also a reflective subject, capable of operating in an interdisciplinary environment, expanding the boundaries of knowledge. Only then will it be possible to achieve practical results in the military sphere for the security and stability of humanity.

An interdisciplinary (multidisciplinary) approach is a method of studying an object or solving a problem using methods, tools, and knowledge systems from various scientific disciplines. Instead of approaching a problem from the perspective of a single, narrow specialization, an interdisciplinary approach allows for the integration of diverse perspectives, leading to a more comprehensive and profound understanding of the problem and, consequently, more effective solutions.

A transdisciplinary approach is a methodology that integrates knowledge and methods from various fields to solve complex problems arising from research within

individual disciplines. It involves not only interaction between disciplines (as in an interdisciplinary approach), but also the creation of a new, holistic system of knowledge and approaches.

Strategic thinking is an interdisciplinary process, and military studies are the empirical field of this reflection. Critically, many military studies remain within the technical-instrumental paradigm. This leads to a simplification of the existing threat system and the neglect of complex informational, social, and cognitive factors in real-world operational environments. A sociological study examining the need for interdisciplinary approaches in military studies revealed the following findings.

Military Strategy (9 points): The central focus of military research, all other disciplines serve to solve problems in this area.

Artificial Intelligence (9 points) and Information Technology (8 points): These areas are essential for the development of modern military technologies and play a key role in information warfare, automated systems, and digital security.

Cognitive sciences (8 points) and psychology (7 points): necessary for predicting military behavior and studying their psychological readiness and stress resilience.

Philosophy (7 points): important for understanding the unity of knowledge and defining the axiological and ethical foundations of military decision-making.

Sociology (6 points): serves to analyze the relationship between society and the army and the social status of military personnel.

Ecology (5 points): Contributes to the development of strategies for preventing and combating environmental risks arising from military operations.

This analysis demonstrates that military researchers must actively utilize knowledge not only in their own narrow field but also from other disciplines. An interdisciplinary approach is not only complementary but also a fundamental philosophical and methodological prerequisite for the development of military scientific knowledge.

Conclusions and Proposals

Interdisciplinary approaches are crucial not only as a means of theoretical reflection in military studies, but also in practical decision-making.

The epistemic potential of the modern military researcher develops not within the framework of knowledge based on a single discipline, but rather through scientific awareness and theoretical reflection, which are formed through interdisciplinary, integrative approaches.

Cybersecurity, information manipulation, cognitive operations, environmental threats, artificial intelligence, and neuropsychological interventions emerging in the military-political reality of the 21st century require military science to move beyond narrow technological determinism and transform itself into a complex system of knowledge inextricably linked to social, cultural, and philosophical contexts. Therefore, the military researcher's work in generating new scientific knowledge requires conscious design, based not on methodological adaptation, but on interdisciplinary harmony at the epistemic level.

Modern military research develops not only through military-technical thinking but also through the comprehensive integration of social, informational, cultural, and philosophical fields of knowledge in the formation of new scientific knowledge. Hybrid warfare, cybersecurity, artificial intelligence-based operations, neuropsychological interventions, and environmental risks define the multilayered and systemic nature of modern threats.

This situation requires military researchers to strengthen their academic positions not only in highly specialized fields, but also through theoretical reflection based on interdisciplinary methodological synthesis. In this epistemic imperative, an interdisciplinary approach becomes the conceptual, rather than empirical, foundation of military scientific knowledge.

At the current stage of military research, the formation of new scientific knowledge depends not only on the complexity of the topic, but also on the scale of the methodological approaches to its analysis. While the military sphere has traditionally been based on technical and tactical aspects, 21st century security challenges are multidimensional, socio-cognitive, informational and cultural, requiring a rethinking of military science based on interdisciplinary approaches. New scientific knowledge is now fueled not by the internal dynamics of independent networks, but by hybrid thinking that emerges at the intersection of different intellectual fields.

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