

THE IMPACT OF VUCA ON MILITARY LEADERS. THE PARTICULAR CASE OF RUSSIAN-UKRAINIAN CONFLICT

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Abstract: *This study analyzes the VUCA variables' influence on the military environment and their impact on military leaders in the framework of the Russian-Ukrainian conflict. Firstly, the article focuses on the approach of the VUCA concept in modern military strategies, emphasizing how it influences the operational environment. Secondly, analyzing the Russian-Ukrainian conflict, the article provides a background for understanding the challenges of military leadership in the context of the contemporary operational environment. As far as the research methodology is concerned, the main focus is on how Russian and Ukrainian military leaders have addressed VUCA challenges, comparing their strategies and methods of adapting and managing critical situations. Finally, key competencies required by leaders to cope with a complex and constantly changing military environment are identified, providing insights into their development in contemporary conflicts.*

Keywords: operational environment, VUCA, military leaders, Russian-Ukrainian conflict

1. Introduction

The war between Russian Federation and Ukraine began in February 2022 and it is being considered one of the most representative military conflicts of the 21st century, with major global implications. Russian Federation has begun by launching a massive attack on Ukraine, targeting several major cities, including the capital Kiev. Ukrainian military forces put up a strong resistance, managing to prevent the rapid advance of Russian military forces and maintain control over significant parts of the country. International support in terms of arms and technology, as well as humanitarian aid, has been essential as the conflict has created a serious humanitarian crisis and millions of Ukrainians have migrated to stable countries. The conflict has disrupted energy and grain supplies,

impacting global prices and causing food crises in some regions dependent on Ukrainian exports. The conflict has erupted amid historical and geopolitical tensions between the two nations, heightened by the regional and international interests of major powers. From a military perspective, the war brought to the forefront the use of advanced technology, asymmetric tactics and the mobilization of substantial human and material resources.

The study of this conflict is essential to understand the dynamics of modern warfare and how political, economic and social factors influence current military operations. The war between Russian Federation and Ukraine is a complex and far-reaching conflict that has captured global attention for its impact, within which the concept of VUCA (Volatility,

Uncertainty, Complexity, and Ambiguity) provides a vital analytical framework for understanding the unpredictable and dynamic nature of warfare.

Consequently, this article aims to analyze the VUCA concept in the framework of the Russian-Ukrainian war, analyzing how decisions and tactics on the battlefield are influenced. It will be analyzed in detail the responses and strategies adopted by military leaders of both Russian and Ukrainian military forces, highlighting their ability to adapt to the challenges brought by such an unstable and complex environment. Furthermore, the identification of the military leader's core competencies and attributes to cope with VUCA environments, emphasizing the importance of flexibility, decisional agility and adaptation to diverse operational challenges, constitutes an additional purpose of this study. These competencies and attributes are essential not only for survival and success on the battlefield, but

also for effectively managing emerging challenges on the international stage.

2. Research Design and Methodology

Focusing on the analysis of the operational environment from VUCA perspective, and using the particular case of the Russian-Ukrainian conflict, this article tries to answer to the following main research question (RQ): What are the core military leader's competences and attributes necessary to effectively manage the operational challenges in any VUCA operational environments as those from Ukraine? This question is the central pillar of the research, providing direction at all stages of the research. In order to fulfill the two proposed research objectives (RObj), two secondary research questions have been formulated, one for each RObj. Table 1 correlates the RObj, RQs and research methods (RMs) that will be used in this scientific paper.

Table 1: Research Design & Methodology

Main research question: What are the military leader's core competencies and attributes necessary to effectively manage the operational challenges in any VUCA operational environments as those from Ukraine?		
RObj	RQs	RMs
RObj1 – analyzing the VUCA characteristics and their impact on the operational environment, having the Russian-Ukrainian conflict as the research framework	RQ11: How do VUCA characteristics influence the conduct of military operations in the framework of Russian-Ukrainian conflict?	- literature review; - systemic analysis of information.
RObj2 – identifying and analyzing the issues that Russian and Ukrainian military leaders currently face with in this destructive and demanding conflict	RQ21: What are the main challenges faced by military leaders in approaching VUCA operational environment in the framework of Russian-Ukrainian conflict?	- SWOT analysis; - comparative analysis.

3. Preliminary Findings

In today's world of increasing global interconnectedness and interdependencies, the VUCA concept has become an essential framework for analyzing and understanding complex and unstable operational

environments. Operationalizing this concept in the Russian-Ukrainian confrontation provides valuable insights for the strategic and operational challenges facing the actors involved in this conflict. Moreover, understanding the Russian-

Ukrainian war through the lens of VUCA allows for a more detailed analysis of the operational environment, as well as the development of more adaptive and flexible strategies. This approach emphasizes the importance of resilience and adaptability in the face of a dynamic and tumultuous reality characterized by rapid and unpredictable changes. The study of this conflict through the lens of VUCA makes significant contributions not only to the analysis of the current war, but also to the understanding of future conflicts in an

increasingly complex and unstable global landscape.

On the other hand, the first variable of the VUCA, volatility, refers to the rapid pace of change affecting all domains.

Coping with this environment requires improving the speed of reaction and maintaining a high level of focus from leaders to deal with the changes that are constantly occurring. Uncertainty describes the inability to accurately predict when and how future events will unfold.

Table 2: VUCA analysis

VOLATILITY
- technology is developing rapidly [2]; - unstable prices: energy and oil price changes [3]; - lack of political and military stability affects global financial markets [4].
UNCERTAINTY
- lack of information about how the war will progress or when it will end [5]; - the West's unknown intentions regarding Ukraine [6]; - the results of western sanctions on Russia are unknown [7]; - it is not known whether other European countries will be involved in the conflict [7].
COMPLEXITY
- cyber threats [8]; - the involvement of non-state actors [9]; - the involvement of digital technologies [10]; - actions of manipulation and disinformation [11].
AMBIGUITY
- hybrid warfare has created ambiguity in the decision-making process [12]; - Russia's nuclear threats create ambiguity for adversaries [13].

In this context, long-term strategies become obsolete and a short-term, flexible and adaptable approach is needed to manage change effectively. Complexity derives from a web of globally interdependent factors such as globalization and technological advancement. The world is becoming increasingly interconnected and multidimensional, and to cope with these realities, leaders need to improve their ability to manage these situations. Ambiguity reflects the lack of a clear cause-effect relationship and the difficulty of understanding situations in a logical and predictable way. The development of analytical skills and the ability to make

innovative decisions are essential in this environment [1].

Next, for a better understanding of how VUCA characteristics shape the operational environment in the context of Russian-Ukrainian conflict, it will be analyzed each characteristic individually, identifying through literature review and analysis which factors highlighted these characteristics (Table 2).

The analysis of VUCA characteristics in the framework of Russian-Ukrainian conflict highlights a geopolitical landscape marked by a multitude of challenges that are interconnected. In this regard, the rapidity of technological change, global political

and economic instability, cyber threats and the involvement of non-state actors highlight multiple and difficult-to-manage interdependencies. These elements require an adjustment of traditional approaches to international and security policy, emphasizing innovation, adaptability and collaborative solutions. Unpredictability and ambiguity require the need for international cooperation and proactive strategies, to stabilize the international environment and strengthen global resilience mechanisms. In a world in constant change, the development of a capacity for flexible reaction, but also for rapid assessment and strategic response to

unforeseen situations is essential.

4. Applicability within Russian-Ukrainian Conflict

To understand the applicability of the VUCA characteristics, the Russian-Ukrainian conflict had been analyzed using SWOT research instrument (Table 3). This analysis is useful to identify the weaknesses, strengths, opportunities and threats in a dynamic and complex conflict. Moreover, this analysis provides a clear understanding of the context, as well as the impact of the conflict on different parties involved, but also internationally.

Table 3: SWOT analysis – Russian-Ukrainian conflict

STRENGTHS	Ukraine	- strong feeling of national identity [14]; - creative thinking [15]; - flexibility and ability to react quickly [16]; - high troop morale [17]; - Western aid with weapons and equipment [18]; - high defense capabilities [19]; - effective use of anti-tank guided missiles [20]; - successful anti-aircraft artillery missions [21]; - financial support from the United States of America (USA) [21].
	Russia	- a greater number of forces [17]; - conventional high-precision weapons [19]; - expanded cyber warfare capabilities [22]; - support from China [23].
WEAKNESSES	Ukraine	- the need for help from the West [14].
	Russia	- difficulties with simultaneous coordination of various military services [16]; - poor planning and prepared for a short war [24]; - the command structure was rigid and inflexible [16]; - lack of communication technologies [16]; - the loss of a large number of key commanding officers [16]; - low troop morale [17]; - vulnerability of supply lines [17]; - using communications that have not been encrypted and could be intercepted quickly [20]; - air force failure [20]; - failed joint operations [25]; - lack of aerial and ground reconnaissance before hitting the streets [21]; - lack of water, food and medical support for soldiers [21].
OPP ORT.	Ukraine	- strengthening relations with Western countries [14]; - EU and NATO membership [21]; - implementation of new technologies and rebuilding a more modern

THREATS		infrastructure [14].
	Russia	- control over Donbas and Ukraine's coal reserves [26]; - control over areas with agricultural land such as Zaporozhia and Kherson [26]; - strengthening relations with non-Western countries such as China, North Korea and Iran [26]; - owning part of Ukraine's metal resources [27].
	Ukraine	- limiting or stopping trade in Ukrainian ports [20]; - long-term financial instability [14]; - damaged infrastructure that will have long-term effects [14].
	Russia	- western sanctions [28]; - long-term economic damage [28]; - rapid and unexpected price increases [28]; - lack of Western supplies of goods and services for the civilian population [28].

Following the SWOT analysis, the issues challenging military leaders of both Ukrainian and Russian military forces have been identified. In case of Ukrainian military leaders, these consist of:

- dependence on Western aid: leaders have relied more on Western aid without developing their own resources and capabilities that could lead to vulnerabilities in the event of a change in the international political situation;
- damaged infrastructure: lack of previous investments made it more difficult to sustain defensive efforts;
- long-term financial instability: inadequate management of financial resources and failure to implement sound economic policies make it more difficult to sustain and conduct military operations;
- lack of attention to key points: ports and airports have not been sufficiently protected affecting the economy;
- overconfidence: risks created by underestimating threats and own capabilities.

Instead, for the Russian military leaders, these issues have been generated by:

- poor coordination: failure to coordinate effectively various military services which led to significant losses and operational failures;
- rigid command structure: inflexible command structure where decisions were

not taken quickly;

- supply vulnerabilities: ignoring supply issues created logistical deficiencies, affecting the ability to sustain military operations;
- communication vulnerabilities: the use of unsecured communication technologies for interception affected the conduct of military operations and led to information leaks;
- international isolation: addressing strategies that have led to Western sanctions that could significantly damage Russian Federation's economy and position on the international stage;
- underestimation of the adversary: underestimating Ukraine's defense capabilities and resilience led to strategic mistakes that resulted in battlefield failures;
- lack of technological advances: limited the effectiveness of military operations.

The SWOT analysis of the Russian-Ukrainian conflict gives us significant insights for identifying essential competencies and attributes for military leaders. Thus, by developing these competencies, military leaders can successfully meet the complex challenges they face with:

- strategic and innovative thinking: creativity and flexibility in the planning and execution of military operations, as well as adaptability in the face of rapid change on the battlefield;

- coordination skills: between different structures or even military services;
- effective management: optimizing the use of available resources and the ability to manage vulnerabilities;
- technological skills: preparing forces for emerging and disruptive technologies (EDTs);
- effective communication: for effective coordination of troops and sustaining high morale;
- resilience: the ability to make quick decisions under pressure;
- international collaboration skills: strengthening relationships with international allies.

5. Conclusions

As it has been seen, the complexity and dynamics of the contemporary conflicts requires a detailed analysis of the VUCA characteristics and their relevance in assessing and managing military operations. The analysis highlighted how VUCA characteristics influence military strategies and decisions, emphasizing the need for constant adaptation and flexibility.

Furthermore, by applying SWOT analysis, it was possible to trigger the challenges and opportunities facing leaders on both sides, Russians and Ukrainians. This analytical approach allowed for a deeper understanding of strategic deficiencies and leadership errors, providing valuable insights into how leadership can be adjusted to respond more effectively to the constraints and risks imposed by a VUCA environment. On the other hand, in a context marked by VUCA and continuous change, leaders must be able to cope with external pressures and make informed decisions, and to possess the ability to communicate effectively, to think strategically and agilely, as well as to maintain a clear and adaptable vision. All these are indispensable attributes for adaptive military leadership. Investing in the continuous development of these requirements will allow military leaders to cope more easily with the confusion and complexity of contemporary conflicts, ensuring a more strategic and coordinated approach in managing future challenges.

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