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MOBILE LESSONS LEARNED TEAMS IN THE ARMED FORCES OF UKRAINE: ADAPTATIONS AND INNOVATIONS IN THE WAR (2014–2024)

Yuriy Pashchuk,

*Candidate of Technical Sciences, Associate Professor, Assistant Professor
at the Department of Foreign Languages and Military Translation,
Hetman Petro Sahaidachnyi National Army Academy (Lviv, Ukraine)*

ORCID ID: 0000-0002-0631-6183

ypashchuk@gmail.com

Abstract. The paper examines the employment of mobile lessons learned teams within the Armed Forces of Ukraine during the Russo-Ukrainian War (2014–2024). These squads served as integral components of two successive learning systems and evolved through two phases: Formation (2014–2018) and Modernization (2019–present). The article explores the establishment of these groups and the development of their operational methodologies. It analyzes the specific roles these teams have played in learning processes, emphasizing their pioneering contributions to enhancing the lessons learned capability. Notably, these squads have been instrumental in ensuring the timely and high-quality analysis of critical combat experiences.

Historical research of various categories of mobile lessons learned teams in the UAF and leading global militaries has been conducted, highlighting innovative approaches of the Ukrainian squads. The study proposes a classification of these groups based on their functional purposes, identifying three types: Collect and analyse observations; Supervise and assist in lessons implementation; and Monitor and evaluate the learning process. The findings include recommendations for improving the operational efficiency of these teams.

Key words: organizational learning, lesson identified, lesson learned, best practice, lesson analysis, experience implementation, NATO.

Introduction. Throughout history, military learning has proven to be a vital foundation for developing and adapting the armed forces (AF), enabling them to meet the ever-changing demands and complexities of warfare. As William Murray observes, «The problem of adaptation in war represents one of the most persistent, yet rarely examined, problems that military institutions confront» (Murray, 2011: 10). This enduring issue highlights the necessity of embedding robust lessons learned (LL) systems within military organizations to foster continuous innovations, flexibility, and operational readiness. The ability to adapt effectively not only strengthens combat effectiveness but also reduces the risks posed by outdated strategies and tactics. In the face of modern high-dynamic conflicts, the ability to implement a learning process with superior efficiency and speed compared to an adversary becomes a decisive factor in achieving success and securing victory (Murray, 2011: 12).

The concept of «organizational learning» (OL) was first introduced by American scholars Richard Cyert and James March in 1963 (Cyert, March, 1963). It was later advanced by Chris Argyris, who published the first dedicated scientific study on the subject in 1977 (Argyris, 1977). Since then, the theory and practice of OL have advanced significantly, particularly in the military sphere, where the unique significance of learning is underscored by the severe consequences of repeating mistakes and neglecting critical lessons. However, a key issue observed in many military organizations is the disconnect between the theoretical recognition of learning importance and its practical implementation. As Nick Milton noted, «The phrase «lessons learned» has become ubiquitous, yet organizations struggle with developing effective lessons learned processes» (Milton, 2010: 7). Moreover, learning

in AF faces additional challenges due to its inherently hierarchical and bureaucratic structures, which often resist necessary changes and innovations.

There is a wide variety of definitions for OL. However, in the military context, this term can be defined as the establishment and systematic application of appropriate LL structures, processes, tools, and training to enhance collective learning capability through capturing and analyzing experiences, producing and disseminating lessons, and transforming knowledge into remedial actions (Dyson, 2019; Dyson, 2020; Pashchuk, 2024; NATO 2022). Military learning is primarily designed to improve organizational activities, refine doctrines, and update policies, strategies and tactics, ultimately increasing the adaptability and operational readiness of troops. Its overarching goal is to minimize the risks of repeating mistakes and increase the chances of achieving success and victories in the future.

From 1991 to the present day, the Ukrainian Armed Forces (UAF) have been realizing OL in the form of two consecutive LL systems (Dyson, Pashchuk, 2022):

1) System of Lessons Analysis and Dissemination (SLAD: December 1991–December 2018). This system was inherited from the Soviet Union and went through three stages of development: Stagnation (December 1991–May 2013); Reformation (May 2013–April 2014); Adaptation (April 2014–December 2018).

2) Lessons Learned System (LLS: January 2019–present). Due to the poor performance of SLAD, it was replaced by the perspective LLS that started its functioning in January 2019 based on NATO’s achievements in organizational learning. The implementation of the NATO LL process in July 2020 became a foundational pillar of the LLS (Dyson, Pashchuk, 2022; Doctrine 2020; SOP 2022).

As stated by NATO LL Handbook (NATO 2022: 17), «a LL process is part of a formal approach to OL that deliberately processes observed issues arising from an activity until either a LL is reached, or the lesson is rejected/noted for various reasons». The NATO LL process consists of two phases (NATO 2022: 17-22):

- 1) Analysis: Marked by the lessons identified or potential best practices (LI/PBP) as the outcome.
- 2) Implementation: Culminating in lessons learned or best practices (LL/BP) as a result.

The phases are divided into six stages: 1.1) Plan; 1.2) Observe; 1.3) Analyse; 2.1) Decide; 2.2) Implement and validate; 2.3) Share (Fig. 1).

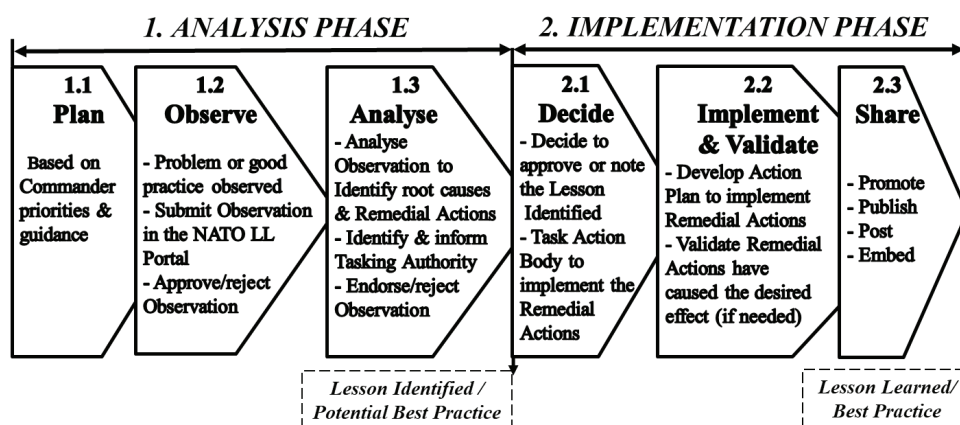


Fig. 1. The NATO LL process (NATO 2022: 18)

In line with modern neorealism theory, «the competitive international security environment, and especially the threat of defeat on the battlefield, should be a powerful incentive for the development of OL» (Dyson, 2019: 60-62). However, other factors, such as internal bureaucratic politics and imperfect military culture, can hinder the LL processes and negatively affect the ability of AF to facilitate effective changes, especially at the tactical and operational levels (Dyson, 2019).

In this context, the war initiated by Russia against Ukraine in 2014 significantly accelerated the reform of OL within the UAF and compelled their leadership to adapt the SLAD (Dyson, Pashchuk, 2022; Pashchuk, 2024):

1) Established the LL section, the first UAF's LL body, within the Anti-Terrorist Operation (ATO) Zone on 3 August 2014 (MSR 2018: 40).

2) Approved the Temporary LL Standard Operating Procedures (SOP) on 9 August 2014 (SOP 2014), which defined LL procedures within the ATO and outlined the responsibilities of the UAF's command and control bodies.

3) Introduced a list of urgent LL reports on 30 October 2014 (MSR 2018: 40-42).

As a result, the SLAD's primary focus was on analyzing and disseminating combat experiences from the ATO. This operation was succeeded by the Joint Forces Operation (JFO) in April 2018, a broader military campaign tailored to the evolving nature of the conflict (MSR 2020: 32). Throughout this transition, the SLAD maintained its critical role, systematically capturing lessons from the battlefield, analyzing operational successes and failures, and disseminating actionable recommendations.

The transformation of the SLAD (2014–2018) resulted in only a partial improvement in acquiring knowledge and experiences while maintaining a low level of potential absorptive capacity (Dyson, Pashchuk, 2022: 160). Despite the localization of the LL process within the ATO/JFO areas, a significant weakness in SLAD's functioning during this period was the inadequate collection of potential observations and the low quality of lessons analysis. The principal factor was the low learning awareness among UAF personnel, which hindered their engagement with the LL process. The absence of proper training for LL staff, many of whom lacked familiarity with and did not employ academic analysis techniques. Notably, national LL training courses within the UAF were introduced in June 2021 (Dyson, Pashchuk, 2022).

Additional challenges included the low assurance level of observations; insufficient time allocated to LL staff for conducting in-depth LL analyses; and chronic vacancies in LL positions. Moreover, the activity of LL officers was not prioritized. Their positions were usually viewed as transitional («passing through») and LL personnel were often diverted from their primary responsibilities to address other tasks (Dyson, Pashchuk, 2022; Pashchuk, 2024).

To enhance the LL capability in collecting and analyzing observations, the Army Scientific Centre (ASC) of the National Army Academy (NAA) initiated the creation of mobile lessons learned teams (MLLT) in May 2014 (MSR 2018; OT 1580/NOV 2014). In July 2014 the ASC developed an initial methodology for employing MLLTs, inspired by similar American teams of subject matter experts (SME) and cross-functional teams (CFT) used in the United Kingdom and Germany (AR 2006; Pashchuk, et al., 2015; Dyson, 2020). Over the subsequent decade, the UAF MLLTs underwent significant changes in both their activities and the approaches to their operation.

While advanced theoretical studies on OL have been conducted in leading countries, research on the UAF's LL practices remains limited. Ukrainian scholars have only partially explored this topic. For instance, researchers B. Semon, O. Skriabin, V. Hrytsiuk, and I. Yevsieiev analyzed learning in the Red Army during World War II, offering recommendations to enhance the UAF's LL capability (Pashchuk, 2024: 53). However, studies focusing specifically on the development of learning within the UAF are still scarce.

The importance of analyzing the role of MLLTs lies in their significant contribution to the LL process and the urgent need to improve the effectiveness of the LLS amidst the ongoing large-scale Russian aggression. This article examines three key aspects to better understand the potential of MLLTs in enhancing the UAF's learning capability:

1) The foundations for the establishment of MLLTs and the development of their methodologies.

2) The role and involvement of MLLTs in the LL process and their impact on organizational learning.

3) The analysis of MLLTs' adaptations and innovations during the Russo-Ukrainian War (2014–2024).

Methodology and data used. To execute the research tasks, an interdisciplinary scientific approach was employed. In particular, the historical-comparative method was used to study the similarities and differences in operation of MLLTs in the USSR (1942–1945), USA (1984–2024), Great Britain (2000–2024), Germany (2000–2024) and Ukraine (2014–2024). The historical-systematic method was applied to investigate the activities of different types of MLLTs, and changes in their structures and functions within two consecutive LL systems (SLAD and LLS). Special attention was focused on processing relevant source materials, including guiding documents, scientific reports, and memorandums.

Results and discussion. Starting from World War I, when semiformal LL procedures were first implemented, AF of various countries began widely utilizing MLLTs, primarily for the prompt and accurate analysis of acquired experiences (Dyson, 2020). From December 1991 to April 2014, OL within the UAF relied on the inherited Soviet LL system (Pashchuk, 2024: 53). This underlines the importance of examining the establishment and activities of MLLTs within the Red Army during World War II.

One of the primary challenges in Soviet learning, particularly during the early stages of the German invasion in 1941, was the inadequate LL analysis (Pashchuk, 2024: 54). To address this issue, MLLTs were introduced in the spring of 1942. These groups operated across all operational and operational-strategic formations and usually included representatives from the General Staff: at least two officers at the army corps level and three officers at the army or front level (Pashchuk, 2024: 54). The primary role of these squads was to verify the accuracy of initial operational reports and perform qualitative analyses of observations. The Soviet MLLTs operated within a semiformal LL process and the main limitation of these groups was their lack of dedicated LL training (Pashchuk, 2024).

The US AF were among the first to utilize MLLTs within a formal LL process. It is widely acknowledged that the initial team of this kind was the Army Studies Group, led by Colonel Wesley Clark in 1984. This team employed formal learning procedures to analyze the lessons of Operation Urgent Fury. Subsequently, with the establishment of the US Joint LLS in the late 1980s (Dixon, 2011: 227) MLLTs became known as SME teams (AR 2006: 13).

Since 2000, SME teams have been regularly deployed (for up to 30 days) to support troops engaged in the expeditionary operations of the US AF (Dixon, 2011). Their primary objective was to collect observations «on the heels» of operations and perform detailed, high-quality analyses as part of the initial phase of the standardized LL process, known as the Analysis Phase (Fig. 1). These teams operated within a formal framework for collecting operational experiences (AR 2006). Their activities were guided by approved plans for observations collection and analysis, with well-defined priorities. Typically, they employed semi-structured or structured survey methods to gather data (NATO 2011: 55-62).

In contrast to the SME teams, in the British and German AF in the 2000s, CFTs began to be widely applied during stage 2.2 (Implement and Validate) (Dyson, 2020: 7). The concept of using these teams was developed in the late 1980s and derived from innovative practices of civilian companies (Dyson, 2020: 7). Their key mission was to monitor the execution of remedial actions and assist in the implementation of LLs/BPs. The CFTs were distinguished from other MLLTs by their greater creativity and enhanced capacity to organize LL procedures (Holland, et al., 2000: 232). Their principal advantages lay in the fact that their representatives were directly responsible for the results, and, secondly, they were highly qualified specialists (Dyson, 2020). In addition, the employment of CFTs made it possible to overcome vertical lines of command and improve the speed and quality of decision-making in implementing remedial actions by avoiding information overload at higher levels (Dyson, 2020: 7-8; Henke, et al., 1993: 217).

The pioneer in the UAF to use MLLTs and develop their methodological support was the ASC (OT 1580/NOV 2014; Pashchuk, et al., 2015). To execute the order of the UAF General Staff 322/541 on 24 March 2014, the ASC staff prepared a report with proposals to improve OL in the UAF on 30 May 2014 (OT 1580/NOV 2014). Among important statements, the memorandum contained recommendations on the establishment and use of MLLTs, including their tasks, responsibilities, and employment methods. This was preceded by the analysis of practices of similar MLLTs in the Soviet Union, United States, United Kingdom, Germany, and other countries. The historical review of various «inspection-investigation» groups and different verification squads in the Soviet and Ukrainian AF was also used to evolve the methodology of MLLTs' operation (MSR 2018).

The first MLLT in the UAF was established on 17 November 2014 based on the ASC personnel and deployed in the 80th separate airmobile brigade (A0284) from 25 November 2014 to 12 December 2014 (OT 12/NOV 2015). The team consisted of 11 ASC staff members (5 officers and 6 civilians), including 5 doctors of philosophy (OT 12/NOV 2015). The primary selection criteria for members of this group were their gradual assignments in troops and headquarters, proper training, and multifunctional experiences. The central duty of this team was to collect, analyze, and summarise observations and other important information about combat experience that was not submitted or implemented for various reasons.

Unlike the permanent LL bodies in the ATO, the first MLLT was authorized to perform certain LL tasks with a temporary assignment to the A0284 unit under the order of the Commander-in-Chief of the Ukrainian Army (OT 12/NOV 2015). At that time, most of the brigade personnel had been withdrawn from the ATO on rotation and were in the place of permanent deployment.

Following a preliminary agreement with the brigade commander, a list of respondents to the planned survey was completed and coordinated a few days before the MLLT's deployment. All brigade personnel were invited to participate in the survey voluntarily and use the right of anonymity. The semi-structured interview tool was developed by the ASC and 49 servicemen were interviewed (OT 12/NOV 2015). The members of the MLLT also used other methods of data gathering: study of various operational documents; «round table» method; technique of individual interview; structured questionnaire, etc.

As a result of the first MLLT operation, a report was developed, which included an analysis of outcomes of the conducted survey, a list of potential LI/BP, and proposals for improving the training and employment of Ukrainian troops. Additionally, the document contained recommendations for improving the MLLT methodology including samples: plan for MLLT employment; plan for studying LL information; survey questionnaires; questions for gathering LL data; and final report.

Subsequently, in just one year, the ASC participated in nine MLLTs in the following units (MSR 2018: 24-25):

- 1) 24th separate mechanised brigade: 24 December–30 December 2014; 26 January–31 January 2015.
- 2) 80th separate airmobile brigade: 5 February–27 February 2015.
- 3) 128th separate mountain infantry brigade: 17 February–27 February 2015.
- 4) 199th Training Centre of the Highly Mobile Airborne Troops: 25 May–30 May 2015; 8 June–12 June 2015.
- 5) 74th centre of information and psychological operations: 21 March–21 April 2015; 26 May–26 June 2015.
- 6) 95th separate airmobile brigade: 10 November–23 November 2015.

In doing so, the MLLTs performed the following primary tasks (OT 12/NOV 2015):

Collect, analyze, and summarise information about combat experiences.

Identify the main causes of problems in the Ukrainian Army employment, develop potential LIs/BPs, and relevant remedial actions.

Supervise dissemination of the ATO LLs/BPs and check LL informing of the personnel.

Assess the learning effectiveness in military units, in particular, the quality of collecting and analyzing LL data.

Create the LL database based on the obtained potential LIs/BPs for use within the National Army Academy.

In addition, the MLLTs were engaged in improving their methodology. One of the duties of each MLLT member was to evaluate the outcomes of the team's activity and provide propositions for improving the MLLT's methodology. First of all, it concerned testing and estimating of used methods for collecting and analyzing observations, particularly semi-structured surveys and LL analysis techniques.

Ground on the operation of each MLLT, reports were sent to the higher commander (headquarters), who ordered the assignment of the corresponding team (OT 297/NOV 2019). Such documents included the potential LIs/BPs, recognized problems in the training and employment of troops, causes of such issues, and recommended remedial actions. In particular, these reports contained proposals on:

Amending the UAF doctrinal and guiding documents.

Timely and high-quality preparation of military units for employment in the ATO zone.

Improvement of the organizational structures of military units.

Modernization of existing and development of new weapons and military equipment.

Ensuring proper training of cadets and officers, etc.

For instance, from 2014 to 2018 the MLLTs provided important recommendations, among which the following should be highlighted (MSR 2018: 53-56):

«Changes to the course of firing from small arms and combat vehicles that are used in the Ukrainian Army».

«Recommendations on procedures for activities of the military unit commander and headquarters staff during the preparation for operation (Part 2)».

«Recommendations for use of 9k115 Metis and 9k111 Fagot anti-tank missile systems».

«Proposals on tactics of using unmanned aerial systems».

«Guidelines for activities of military personnel in the training centers on the organization of training of mobilized servicemen on the example of the 184th Training Centre».

«The use of military units in maneuver defence».

«Recommendations for improving the effectiveness of counterintelligence tactics in the ATO zone».

From 2014 to 2018, the MLLTs operated within the SLAD that was based on semiformal LL procedures (Dyson, Pashchuk, 2022). This period can be defined as the first (Formation) stage of such groups' activities. During this time the MLLTs were created and their methodology was initiated and tested. These squads were usually used in the first (Analysis) phase of the semiformal LL process. Their leading role in OL within the UAF was the increased efficiency in collecting and analyzing observations. The LL information gained by the MLLTs was primarily transformed into potential LIs/BPs, and implemented in relevant reference materials, methodological guides, memos, and schemes. However, a significant limitation of MLLT functioning during this period was the absence of formal LL guiding documents.

Five years of enduring Russian aggression (2014–2018) has revealed an urgent need for enhancing the UAF LL capability. It became clear that the SLAD has been ineffective, and all its key components (LL structure, process, and tools) have required radical modernization. In August 2018, the UAF leadership initiated significantly improving OL by creating a fundamentally new Lessons Learned System. The LLS Roadmap was developed in November 2018 and is based on NATO LL practices. Building the LLS meant the final transition from the semiformal to the formal LL process. Hence, starting in January 2019, the second stage (Modernization) in the MLLTs' employment began.

The initial step in this direction was the development of the Concept of MLLTs' Operation by the ASC experts in December 2018 (MSR 2018: 64-72). The document outlined the purpose of these teams, staffing requirements, primary tasks, operational algorithms, and tested methods for collecting and analyzing observations. The Concept provisions served as the foundation for the relevant sections on MLLT activities in the UAF LL Doctrine and the Temporary UAF LL SOP, issued in July 2020. Accordingly, the MLLT was defined as "a temporarily created squad for the prompt study of lessons and monitoring of experiences implementation" (Doctrine 2020: 12; SOP 2020: 12). Additionally, it was stipulated that these teams "may be involved in the execution of LL Process procedures, if necessary" (Doctrine 2020: 18; SOP 2020: 15).

Significant advancements in refining MLLT operations were achieved within the Land Forces with the approval of the following documents by their Command:

- 1) The Temporary Army MLLT SOP in January 2023 (Army SOP MLLT 2023).
- 2) The Temporary Army LL SOP in September 2023 (Army SOP 2023).

During the second (Modernization) phase the MLLTs underwent radical changes. First of all, the number of the MLLTs and the duties they perform have increased. The spectrum of tasks performed by such squads also significantly expanded. In addition to the prompt collection of observations and their analysis, the MLLTs were involved in an in-depth analysis of past important events, in particular, the UAF operations at the beginning of the Russo-Ukrainian War (2014–2016). Also, these teams started to monitor the organization of the LL Process in military units and formations assessing its effectiveness.

Throughout the Modernization stage, significant progress was made in the LL training of UAF personnel. On May 18–20, 2021, the first LL course, attended by 43 LL officers, was conducted by the NATO Advisory and Training Team in Lviv. Subsequently, two national LL courses were held at the NAA: on June 14–18, 2021 (19 officers), and October 18–23, 2022 (20 officers). During the full-scale Russian aggression, from May 29 to July 4, 2023, a mobile LL training group trained 174 LL officers directly in UAF military units and formations. As a result, between 2021 and 2023, a total of 256 officers completed LL courses, many of whom later participated in MLLTs' operations. This had a serious impact on enhancing the quality of MLLTs, particularly in improving their effectiveness in collecting and analyzing observations.

Thus, the second phase of MLLTs' activities (Modernization) fundamentally differs from the first phase (Formation). A corresponding regulatory framework for the functioning of MLLTs has been developed, and significant adjustments to their operation have been implemented.

Based on the historical analysis of MLLTs' operation within the UAF during the Russo-Ukrainian War (2014–2024) it is proposed to divide these teams into three types in line with their functional purpose:

1. «Collect and Analyse observations» (1st phase of the LL process: stages 1.2. Observe and 1.3. Analyse).

It is worth distinguishing between the following two categories of this type:

- 1.1. «Rapid Reaction Lessons Learned Teams». This refers to MLLTs deployed to identify lessons «in hot pursuit», typically within a short timeframe, usually up to three months, following significant events or combat operations. The vast majority of MLLTs utilized by the UAF before February 24, 2022, fell into this category. These groups collected and analyzed observations during the duty trips to units, which were mainly based in places of permanent deployment after rotation (withdrawal from combat zone). Since the beginning of the full-scale war, such squads have been working primarily in units located in the forward combat area, as well as in places where troops were restored to combat readiness.

At the onset of the full-scale Russian invasion, most incoming LL data was of poor quality, necessitating further clarification and verification. After the initial processing of this information, it often

became necessary to deploy specialized MLLTs to the battlefield for more in-depth examination. For these missions, officers from the UAF General Staff, along with representatives from scientific and military educational institutions, were engaged. These teams primarily focused on conducting comprehensive verification of key findings derived from the preliminary analysis of combat experiences.

1.2. «Deliberate Lessons Learned Teams». Such groups are used for a thorough study of a particular operation or a series of operations that took place in the «recent past», for example, a year or several years later. These teams are used when, over time, there is an urgent need to study more thoroughly the previous lessons that have not been properly analyzed for various reasons. In this case, the special methods of collecting information are interviewing eyewitnesses of the above events and working with relevant archival documents, reports, and memorandums. For example, between April 2021 and June 2021, seven MLLTs worked under the command of the General Staff. These groups conducted a comprehensive study of the UAF's employment in the Russo-Ukrainian War in Donbas between April 2014 and December 2016, when the most intense operations were taking place.

2. «Supervise and assist in lessons implementation» (2nd phase of the LL Process: stage 2.2. Implement and Validate). An example of these squads are the CFTs used in the British and German AF. The UAF have not employed such teams and there is still a «gap» between two learning phases, which means that obtained LIs/PBPs are mostly informative, and not mandatory for implementation (Dyson, Pashchuk, 2022; NATO 2020).

3. «Monitor and evaluate the learning process». An example of such team is the experimental MLLT, comprising ten military experts, including staff officers and scientists, which was deployed to the JFO headquarters in January 2022. Their primary responsibility was to analyze learning effectiveness in the JFO zone and provide recommendations for its improvement. The team was supposed to work in two phases: from January 20, 2022, to April 20, 2022, and from April 21, 2022, to July 20, 2022.

In addition to the previously mentioned advancements, other significant innovations deserve attention, particularly the introduction of integrated MLLTs at the beginning of 2023. These teams were designed to combine the functions of the first and third types of MLLTs, increasing their versatility and operational effectiveness. Furthermore, in the summer of 2023, MLLTs began incorporating representatives from the General Staff and were initially tasked with collaborating directly with units. Over time, these teams expanded their scope to include activities within operational and operational-strategic formations. As of today, nearly all MLLTs are staffed by General Staff officers, primarily from the Main Doctrine and Training Department (J-7), ensuring enhanced expertise and alignment with learning priorities. By the end of 2024, additional permanent MLLTs had been established within operational commands, further institutionalizing their role in the UAF.

Although MLLTs have consistently demonstrated their value and importance, chronic deficiencies in OL within the UAF continue to hinder the effective and broader use of these squads. A primary issue lies in the persistent lack of attention from senior military leadership toward the operation and potential of MLLTs. Moreover, there remains a low level of awareness among UAF personnel about the learning principles, the significance of MLLTs, and the need to actively support their activities.

It is crucial for the UAF to adopt proven NATO best practices in employing MLLTs, especially CFTs, which have proven effective in improving OL and, most importantly, in addressing the existing «gap» between lessons identification and implementation.

Another critical shortcoming is the lack of a methodological framework for MLLT operations aligned with NATO standards. For instance, the UAF has yet to adopt the NATO LL Analysis SOP (NATO 2016), which is essential for ensuring a systematic approach to the LL process. To address these and other pressing issues, it is strongly recommended to update the UAF LL guiding documents. Specifically, this revision should include:

1) A more precise definition of MLLT (Doctrine 2020: 12; SOP 2020: 12): «A working (mobile) lessons learned team is an ad hoc unit operating within the framework of the standardized lessons learned process to collect and analyze observations, identify potential lessons and best practices, oversee the execution of remedial actions and their validation, monitor the lessons learned process, and evaluate its effectiveness».

2) Clearly articulated objectives (Army SOP MLLT 2023: 8): «The main purpose of mobile (working) lessons learned teams is to enhance the analytical capacity of organizational learning, as well as to improve coordination and integration across its key functional areas, thereby increasing the pace and effectiveness of the lessons learned process within the UAF».

3) Detailed methodologies and techniques for MLLTs employment.

Conclusions. In the UAF, mobile lessons learned teams were first introduced in November 2014, integrating best international practices with Ukrainian adaptations. Over the subsequent decade, significant developments in the operation and methodological support of these teams occurred, particularly following the full-scale Russian invasion in February 2022. The number of MLLTs, their scope of responsibilities, and the range of tasks they undertake have expanded substantially. Such squads have become a critical component of the formal LL process and a key tool for acquiring important lessons within the UAF. The most significant Ukrainian innovations include: the deployment of MLLTs for monitoring and evaluating the LL process; operation not only in units but also in operational and operational-strategic formations; utilization of MLLTs of various and integrated types; inclusion of General Staff officers in the MLLTs; establishment of permanent MLLTs within operational commands.

The scientific and practical value of this paper lies in its systematic analysis of MLLTs' employment within UAF, including a historical-comparative study of similar groups in other countries. The research identifies two distinct stages of MLLTs' development (Formation (2014–2018) and Modernization (2019–present)), refines their classification based on functional purposes, and highlights their leading role in the UAF's organizational learning. Additionally, the paper provides actionable recommendations for improving MLLTs operations and updating doctrinal documents to align with best practices and NATO standards.

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