

## Professional Preparation Of Future Tactical Aviation Pilots As A Psychological And Pedagogical Issue

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### ABSTRACT:

Modern educational programs, facilities and resources have been developed for training of top level pilots which is currently believed to be a priority task for military education in Ukraine. However, the theoretical principles of education for future tactical aviation pilots should be adjusted due to the following factors: informatization, computerization and automation in the military sphere; changed views on the education methodology with theoretical knowledge as a basis for further practical training. Thus, as evidenced in practice, the low quality of theoretical education leads to flight cadets' failure to achieve high results in other aspects of professional readiness. During the research, at different stages the following theoretical methods were used: theoretical analysis of psychological and pedagogical literature, dissertations, authors' abstracts, monographs to determine the theoretical and methodological principles of preparation of military pilots; analysis, synthesis, generalization, systematization to clarify the essence, state of theory and practice of preparation of future tactical aviation pilots; methods of modeling, conceptual-comparative and structural-system analysis to determine the optimal content of preparation of future military pilots. The author has offered the following definition for the interpretation of the issue under consideration. High-quality professional preparation of future tactical aviation pilots for combat flights is believed to be a complex of specific, tactical academic disciplines and courses, as well as specialized simulating, physical and physiological training, which ensure the appropriate level of training and readiness of HMEI flight cadets for effective performance of combat missions in accordance with the real requirements to modern warfare and the society's needs. Ground combat flight training is believed to be a significant component of this studying. Despite its essential importance in the professional preparation, currently it is still uncovered in both military and professional pedagogy, and does not have its own integral scientific theory.

### Keywords:

theoretical education, quality, level, pilot, tactical aviation, competence, model, elements.

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## INTRODUCTION

At the beginning of the 21<sup>st</sup> century, Ukraine seeks to maintain friendly relations with all states of the world basing on international treaties concluded under the principles of equality, non-interference in internal affairs, mutual respect for independence, sovereignty and territorial integrity. The main goal of Ukraine's military policy is to create conditions for the restoration of the state's territorial integrity, full sovereignty and its inviolability within the state border, and its main tasks are to ensure the defense capability of Ukraine at the level sufficient to prevent any armed conflict, and if any to localize and neutralize it; participation of Ukraine in the implementation of the common security and defense policy of the European Union; improvement of the military security system to guarantee reliable protection of the state from external and internal threats, worthwhile perception of Ukraine on global stage and to meet the criteria for Ukraine's membership in the EU and NATO. In this regard, the improvement of the

military education system should be considered as one of the priority areas of reformation of the modern Armed Forces of Ukraine. And this seems quite natural, since the combat readiness and effectiveness of the Air Force of the Armed Forces of Ukraine mostly depends on the military personnel's professionalism and readiness to fulfill their military duty (Decree of the President of Ukraine, 2015).

### LITERATURE REVIEW

The analysis of academic publications regarding issues of the quality of theoretical education of future tactical aviation pilots shows the demand for further research in this area of military pedagogy.

In recent decades, fundamental works have been developed in military pedagogy allowing to reexamine all flight training. In our opinion, they include the concept of the flight image formation, the pedagogical principles of psychophysiological training, the theory of the gradual formation of mental actions and the principles of pedagogical technologies.

Studying the results of the scientists' findings regarding the modern philosophy and methodology of vocational education (Yagupov, 2012, and others), the practical experience of specialists from higher educational aviation institutions (Onipchenko, 2014; Pukhalskaya, 2011) helped reveal some contradictions in the existing professional education of future pilots which cannot be solved without further modification.

The analysis of scientific sources showed certain studies on training specialists for professional activities, including pilots, the scientists studied the theoretical principles of training programs for military pilots (Mak-Hau et al., 2021).

The issues of psychological readiness of military pilots were considered as well (Socha et al., 2020).

Also, issues like the professional selection of pilots and other specialists (Dzhamgarov & Marishchuk, 1964; Platonov, 1960; Teplov, 1985; Lugoviy, 1994; Kremeshniy, 2007), the vocational fitness formation (Deminsky & Makarov, 2001; Marishchuk, 1991), professional training of specialists (Dyachenko, 1985; Romanovsky, 2000), pedagogical principles of professional training of flight personnel (Kernitsky, 2015; Kartamyshev & Tarasov, 1974; Makarov, 1990, 2000; Rozenberg, 2019), mental characteristics of flight activity (Marishchuk, 1991; Pokrovsky, 1984; Ponomarenko & Lapa, 1985) have been studied.

Even though the researches on the issues of training military pilots are doubtlessly significant theoretically and practically, the scientifically grounded pedagogical system for ground training of future military pilots for combat flights should be improved due to certain shortcomings. Namely, no integrity of the training for combat flights in the traditional training of future tactical aviation pilots; poor (or even unavailable) interdisciplinary connections between its main components (disciplines, types of training), the system does not include its leading component - ground training of combat flights; no psychological and pedagogical principles for ground training of combat flights required for the effective functioning of the flight training system.

To solve these problematic issues, the study of theoretical disciplines should be conceptually changed. Consequently, the system of theoretical training of future military pilots should be improved to ensure their further training for combat flights.

Thus, the theoretical analysis and practice of professional training of future military pilots prove the high importance of their theoretical training at military university.

## METHODOLOGICAL FRAMEWORK

### 3.1. Purpose And Objectives Of The Study

The purpose and objectives of the study is in description of the theoretical principles of professional training of future tactical aviation pilots as a psychological and pedagogical issue.

### 3.2. Research Methodology

The science of victory and the implementation of its results are believed to be the present in the military field in Ukraine. In the joint forces operation in eastern Ukraine, with a high technical development of the enemy's weapons, military equipment and numerical superiority, in real air combats with high probability to be hit by an enemy's aircraft, a pilot can effectively perform a combat mission only due to own acquired qualities: proficiency, courage, fighting spirit, and theoretical training is always in the first place in this complex.

Scientists consider the training theory content for military flight crews in the definition of "the necessary education... for mastering the specialty of a military pilot" (Breslavet, Dzhus & Klushnikov, 2014). It should be also noted that the well-known methodologist of the professional pilot training theory D.V. Gander (2007) introduced the term "professional psychopedagogy" into the definition of the scientific theory that studies the influence of theoretical and experimental psychology on the practical professional training in aviation: "how psychological theories and concepts are interpreted in the methods of teaching, education and psychological training of flight staff, how scientific psychological ideas justify the flight training methods, how psychologists not only develop these ideas, but also introduce them into practice as ready methods and techniques for training and educating pilots" (Gander, 2007).

The activities of cadets and teaching staff (first of all, flight instructors) aimed at achieving maximum effect when using all didactic tools, as well as their individual psychological characteristics and learning conditions on the ground and in the air are considered as an object of professional psychopedagogy. As a subject of professional psychopedagogy, D.V. Gander (2007) understands the psychological substantiation of ground and air training methods, methods of the pilots' personality development, the psychological study of flight performance and failures in professional training of pilots (Gander, 2007).

Basing on a wide practical experience, the scientist highlights the methodological imbalance between scientific theory and flight training – a deep gap between theoretical research of the pilot training, including military ones, and the existing practice of their training and education. In his opinion, many serious and useful special studies just do not reach their main potential consumers – teachers and flight instructors. Therefore, the training system for future pilots (cadets of multidisciplinary aviation HMEIs) is conserved becoming inflexible and hardly accepts changes, and, subsequently, not ready for new challenges and tasks (Gander, 2007).

D.V. Gander (2007) substantiates the dialectical connection between the flight activity patterns and

flight training methods, as well as the personal growth of future pilots. Fully supporting and basing on a personality-oriented approach in the training of future pilots, he highlights the key, in his opinion, theoretical provisions (concepts and theories) that should form the methodological core of the modern system of their professional training: the concept of "flight image", "joint activity", "active operator", personal and human factors, educational environment of flight training, theory of flight simulating, flight skills.

The scientist considered the professional training of pilots as a "theoretical generalization → practice" link. The special theory is practically implemented as a teaching method that actualizes a theoretical component as an initial condition for effective training of future tactical aviation pilots (Gander, 2007).

## RESULTS AND DISCUSSION

Like any pedagogical and psychological phenomenon, the training of future tactical aviation pilots for combat flights is known to be a complex and multidimensional education. Therefore, it is important to investigate the scientific approaches and views revealing its essence. Thus, an analysis of the main scientific sources indicates that currently the theory of training future tactical aviation pilots for combat flights has not yet been formed, although some aspects have been studied. The issue of training of future tactical aviation pilots for combat flights in the general agenda of their professional training has historically developed mainly in the psychological science.

At the beginning of the 20<sup>th</sup> century, when aviation was gaining positions worldwide, and military aviation showed significant potential, the social demand for psychological research in this area was actualized, primarily related to the task of training professional personnel. As A.N. Lysakova (2008, 2012), researcher of the history of aviation psychology, noted, "we believe that military aviation psychology is a specificity of aviation psychology and its genetic basis. The first discoveries and scientifically substantiated findings of the psychological support for aviation by military specialists: pilots, doctors, psychologists, psychophysicists." The substantiation of the provisions of the psychological support for the combat aviation became a specific feature of military aviation psychology. Thus, a flight image as a system of psychological regulation of the flight personnel's activity during preparation and flying, theoretically and methodologically based on the theory of the psychological image and mentality of the developing concept of a dangerous profession and the theory of flight abilities, allows, according to specialists, "to reasonably form a holistic image of flight to withstand adverse conditions of activity in case of a high probability of the flight image reduction" (Zavalova, Lomov & Ponomarenko 1986). Actually, the flight image is the pilot's holistic view of the aircraft's spatial

position and flight mode, based on his own experience of direct piloting, training theory, analysis of instrument readings and non-instrumental signals (Vorona, 2018). N.D. Zavalov, B.F. Lomov and V.A. Ponomarenko (1986) in their research reveal the structure of the flight image consisting of three bases – the spatial position image, the 'folk image' (discrepancy between actual and reference indicators, instrument analogue), and the feeling of the aircraft. This approach, in general, represents imaginative mechanisms of regulation in the professional training of military pilots, allowing the important practical task of flight designing to be implemented, helping the further improvement of the content and methods of flight personnel training.

In professional psychopedagogy, D.V. Gander (2007) considers the theory of aviation psychology unconditionally as the initial, dominant position, indicating the pedagogical component as the "follower". It is identified only as teaching methods directly resulted from the special psychological theory, primarily in the aviation psychology (for example, the method of a personality-oriented analysis of an aviation accident in the form of a role-playing game is based on the psychological theory of interpersonal conflicts). In our opinion, reducing the role of the pedagogical component in the theory of professional pilot training to a technical (technical and methodological) element seems to be unreasonable. Professional training of future tactical aviation pilots for combat flights is part of a broader educational process in specific educational environment under certain psychological and pedagogical conditions and patterns and has pedagogical features and properties. The theoretical and pedagogical principles are no less important here than the theoretical and psychological ones. As R.N. Makarov (2006) stipulates, "numerous psychology areas can be combined only basing on the systematic approach as well as a common language between pedagogy and related disciplines can be found". Within this context, it should be noted that the ratio of academic papers on aviation pedagogy (monographs, dissertations, articles, textbooks and manuals) published over the last three decades in the post-Soviet countries is several times less than on aviation psychology. No specific theoretical and pedagogical works devoted to the training of future tactical aviation pilots for combat flights exist (except for individual articles on certain narrow aspects), which also makes this study urgent. Thus, N.N. Breslavets, R.M. Dzhus and I.M. Klushnikov (2014) consider the training of future military pilots from the classical pedagogical views – as a combination of theory and practice, "giving knowledge, skills and abilities to perform functional duties in specific circumstances for a certain period of time (for military pilot training, the appropriate flying abilities, physical and psychophysiological qualities). Thus, the scientists see the specific content of the theory

of training of military flight crews in the definition "the necessary education... for mastering the specialty of a military pilot", the development of appropriate methods at all stages of training, as well as of guidance and organizational and methodological documents, including, for various types of aircraft. The object of this theory is understood as a pilot/flight crew, and the subject as the training system functioning. According to them, the training practice, "flight training" should directly provide and form in cadets a system of professional knowledge, abilities and skills, as well as psychological readiness for combat mission performance.

The above researchers presented the structure of military flight crew training in several stages:

- selection of flight personnel (preliminary – upon admission to HMAEIs, current - in the conditions of flight training);
- initial training of flight personnel (primary (actually – propaedeutic) – training in piloting techniques and introduction into the profession) and basic training – a combination of the primary training experience with the mastering of a combat aircraft;
- basic training of flight personnel and improvement of combat skills (in combat aircrafts at military units);
- retraining of flight personnel for new aviation equipment (theory – at a specialized center for military pilot training and practice – in the same place or at military units).

It should be noted that the element of the structure of training of military flight crews proposed by N.N. Breslavet, R.M. Dzhus and I.M. Klyushnikov (2014) – the stage of basic training of flight personnel, is described quite typically and schematically. Actually, they are organizational and methodological attitudes and teaching methods well known to industry specialists, with insufficient fundamental theoretical and pedagogical principles, integrated system of pedagogical modeling, conditions, patterns and principles of training of future military pilots. Although a step in this direction has been definitely taken, such as a vision of the training theory and practice adjusted to military flight education. Besides, in our view, they express a convenient opinion about the prospective need to leave behind the Soviet model of training military pilots simultaneously with their higher education (in fact, by the model of ground military specialists) and the transition to sequential training according to the model "first higher education (at HMEIs), then flight training (at specialized institutions)" (Breslavet, Dzhus & Klushnikov, 2014), which will contribute to flight cadets' "immersion" into the flight environment and will give methodological coherence to all stages of training. The key definitions like "preparation", "professional training", "vocational training", "professional training quality", "combat flight", "high-

quality professional training for combat flights" seem to require for clarifying.

The concept of "preparation" has been fully covered in pedagogical science for a long time ago. In the Pedagogical Encyclopedia (Kairov & Petrov, 1968), it is interpreted as "a complex of special knowledge, abilities and skills, work experience and behavior norms ensuring successful work in a particular profession; a process of realizing the relevant knowledge and skills". The Pedagogical Dictionary (Yarmachenko, 2001) defines the concept of "preparation" as the process of formation and enrichment of attitudes, knowledge and skills required for a person to adequately fulfill specific tasks.

The Vocational Education Encyclopedia interprets this term more broadly specifying several meanings: 1) as preparedness, meaning that a person has the competence, knowledge and skills required for professional task performance; 2) as training in the sense of the formation of a person's readiness for future professional task performance; 3) as specialized training. The authors of the Encyclopedia stipulate that the term "preparation" is usually referred to applied educational tasks that involve a person's mastering of social experience aimed at its further use when performing specific tasks of a practical, cognitive or educational nature (Batyshev, 1999).

In 2014, the training was defined in a new academic way as "a kind of organized (formal and non-formal) education to achieve the goals of studying as determined in the research or educational programs, resulting in the qualification acquisition or improvement according to the current requirements of the International Standard Classification of Education (2011), International Standard Classification of Occupations (2008) and certain Ukrainian legislative and regulatory norms" (Chernyshova, 2014).

As we can see, the above definitions and interpretations made in different times are united by a common substantiation: in pedagogy, training is considered to be a component of the educational process in a broad sense, directly associated with vocational preparation and getting appropriate qualification, so actually, this is professional education (both higher, and vocational; both at educational, and at specialized institutions (training and retraining centers, etc.) and its derived forms). Thus, it should be noted that no common view regarding the content of the "training" concept is yet developed in pedagogical science. Particularly, some scientists consider training as the readiness for vocational activity, while others as the formation of this readiness as well.

Based on the aforesaid, regarding the military aviation education, we consider the training of future tactical aviation pilots as a specific organized process of their training and education at higher military educational institutions engaged into academic and pedagogical,



organizational, methodological and tactical technical specificity, resulting in their readiness for professional military activity thanks to the formation of a system of knowledge, skills and abilities to perform combat air missions (a pilot's survival instinct) as the art of preparing and performing combat flights.

L.V. Dolomanyuk (2010) considers professional training regarding flight cadets as professional competence, "an integral characteristic that determines cadet's ability as a military specialist to solve professional problems and typical tasks in real training and combat situations, using knowledge, professional and life experience, values and abilities." The scientist suggests professional experience, systemic perception of professional reality, easy navigation in the subject area, producibility, integration with other experience, creativity and reflexivity to be handled as components of the structure. Actually, he reduced professional training to individual training during educational and vocational activities.

A.N. Kernitsky (2015) considers the professional training of cadet pilots as a separate pedagogical category in three dimensions (aspects): 1) on the part of the management subjects, the process of creating conditions by state institutions and management subjects for the purposeful formation and development of certain opportunities for cadets' future professional activity; 2) on the part of the cadet pilots, the process of achieving the required preparedness for professional activities as intended (competencies) and 3) as a result of professional training. This position, in general, correlates with the vocational training interpretations in most pedagogy encyclopedic and dictionary publications and we believe it's worthy to use it as a base.

The analyzed sources on the vocational training interpretation objectively refer to two key points – formation of professionally significant knowledge, skills and abilities of future specialists at their educational activities (vocational education) and results of this activity, presented as formed professional competencies with the must psychological readiness for the future profession. In turn, this indicates that vocational training is considered as a form and tool for vocational training implementation: didactic goals are specified, pedagogical tasks are set, learning modeling and teaching methods are specified and correlated, and the pedagogical result is formed. Thus, vocational training can indicate the successful training and readiness for professional activity.

Based on the aforesaid, in our research, we render the professional training of future tactical aviation pilots as the didactic system of organizational, educational and specific methodological activities aimed at training and educating a military pilot's personality for all and any combat missions, with the specific result as his

professional and psychological readiness for successful professional activity.

Both analyzed concepts reflect the formation of the knowledge, skills and abilities required for future pilots, as well as the appropriate competencies for their application in their professional activity and define the professional level and qualifications of HMAEI graduates. This allows to consider them as separate essential components of military flight education in general and military aviation in particular. The above applies equally to both the training systems of all military pilots, and tactical aviation pilots. Thus, both components use the psychological and pedagogical scientific and theoretical apparatus (together with the developments of related scientific disciplines, for example, aviation medicine and physiology, aviation cybernetics, etc.) and didactic tools, reflecting the system approach that dominates in aviation psychology and pedagogy.

In the domestic academic literature, the concepts of "professional training" and "specialty training" are quite often equated or used as synonymous. In this regard, N.V. Guziy's (2015) opinion seems to be quite fair with mentioning on the one hand the Ukrainian language richness regarding two synonymous terms "profession" and "specialty", and on the other hand, their complicated semantic application, suggesting the logical chain "labor – profession – specialty – specialization", so the profession, being closer to the specialty, however in content is closer to the specialization. It can be assumed that the author considers it as a highly tailored profession or separate specializations within one profession. Also, we agree with the opinion of I.Ye. Semenenko (2015), who believes that "professional training provides for the acquisition by students of theoretical knowledge in the basics of science of the relevant specialty and specialization, the development of practical skills for their professional activity. So this is highly specialized training for a certain profession by different content".

By the way, in our opinion, vocational training is understood in this sense in the Law of Ukraine "On vocational pre-higher education" (2019).

Consequently, the concept of "vocational training" is obviously broader, generic in relation to the concept of "professional education", its specific kind.

We propose to consider the professional training of future tactical aviation pilots as a complex of specific, tactical academic disciplines and courses, as well as specialized simulating, physical and physiological training, which constitutes the basic component of the professional training of military pilots at HMEIs and is aimed at the formation of special military flight competencies and professional readiness for combat missions (flights).

Quality in education is believed to be a fundamental and international category, since it is the essence of its goal.

Historically, regarding higher education, the concept of "quality" appeared at the end of the 19<sup>th</sup> century, and as a special term - from the late 20<sup>th</sup> century. It is officially entrenched in international documents. Thus, according to Article 11 of the Universal Declaration on Higher Education for the Twenty-First Century: Vision and Action, adopted by UNESCO on 09 October 1998 in Paris, "quality in higher education is a multidimensional concept which should embrace all its functions, and activities..."

According to the European Association for Quality Assurance in Higher Education (ENQA), stipulated in the package of organizational and guiding documents "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (2005), education quality is "a set of properties and characteristics of the educational process or its result, giving the ability to meet the needs of all educational process actors (pupils, students, their parents, teachers, employers, managers, etc.)."

The National Doctrine of Education Development determines that "the education quality deems as a national priority and a prerequisite for the national security, compliance with international norms and the requirements of Ukrainian legislation regarding the implementation of the citizens' right to education... the education quality is determined on the basis of state education standards and public assessment of educational services."

According to the definition of the Ministry of Education and Science of Ukraine, the education quality is a complex of the educational process characteristics determining the consistent and effective formation of competence and professional consciousness; a certain level of knowledge and skills, mental, physical and moral development achieved by graduates in accordance with the planned goals of education and upbringing. Also, if we take as a guideline the definition of the higher education quality according to the relevant law, then in the opinion of its developers, it can be formulated as the compliance of the conditions of education and learning outcomes with the requirements of legislation and educational norms, professional and/or international standards, as well as stakeholders and society's needs, which is ensured through taking measures for internal and external quality assurance in education.

In scientific circles, the discourse about this issue seems to be relevant as well. It should be noted here that in a general sense the concept of "quality" is usually interpreted in pedagogy as a systemic methodological category demonstrating the degree of the result compliance with a formulated goal.

In Western European science, the most common today are model studies of higher education quality. One of the most popular variants of such model was proposed by L. Harvey and D. Green (1993). They highlighted 5

components of higher education quality: exclusivity, excellence, stability, suitability for specific goals, and price ratio.

Professional education quality is a complex and synthesized pedagogical category, related to highly specialized vocational training, focused upon the society's specific needs and requirements. In our work, we propose to consider the quality of professional training of future tactical aviation pilots as an integrated indicator of the compliance of their professional competencies, professionally significant skills and abilities, actual readiness for combat missions with the specific requirements of the Air Force of the Armed Forces of Ukraine, society's expectations to modern permanent officer pilots.

The combat flight (CF) category comes from military affairs and military sciences. Thus, some of the special information on this issue is classified and, for reasons of national security, cannot be presented in a public dissertation research. Therefore, our work is reasonably restricted to materials not deemed as a military secret and approved for public discourse. In the Flight Manual of the Air Force of the Soviet Army (1952), flights of the Soviet Air Force are classified to training, combat training, combat, and special assignments. A combat flight is characterized as a flight for performing a combat mission.

In the Concise Dictionary (1958) of Tactical and Combined-Arms Words (Terms), the CF is interpreted as a flight over enemy territory associated with a combat mission, or a flight over own territory accompanied by an air battle with the enemy. It usually includes take-off and flight formation; flight to the target; reaching the target and combat mission completion; target escape and force rendezvous, return to the airfield; break up and the landing of aircraft.

The Soviet military encyclopedia (1976-1980) gives the following definition of the CF: "the flight conducted by the flight personnel (subunit, unit, formation) to perform a combat mission (strike at ground or sea targets, aerial combat, aerial reconnaissance, airborne landing, etc.)."

S.A. Gubarev, A.A. Kargapol'tsev, A.V. Pozdnyakov (2015) define it as a flight for combat mission performance with such stages as take-off and flight formation, flight to a combat mission site, actions in a combat mission site, flight from a combat mission site to an airfield (aerodromes), break up and landing.

The Russian-Ukrainian Aviation Military Dictionary defines the CF as a flight to perform a combat mission. This concept is entrenched in Ukraine by law. In accordance with the Rules of Civil Aircraft Flights in the Airspace of Ukraine, approved by order of the Ministry of Defense of Ukraine dated 09 December 2015 No. 700 (as amended by order of the Ministry of Defense of Ukraine dated 08 January 2020 No. 2), "combat flights (designated flights) are flights to

perform a combat mission (designated assignment)". In the classification of flights of the State Aviation of Ukraine, the CF is related to designated flights.

Combat flights are the basis of military pilots' professional activity, its main component, demonstrating their professional training, physical and psychological preparedness, perfectibility and moral endurance. Even if the CF is not a psychological and pedagogical category, it's still an additional object of the theory of aviation psychology and pedagogy on the issue of professional training of future tactical aviation pilots. Unfortunately, currently in domestic science no specific studies are devoted to the issue, making the issues raised in our work significant.

Regarding the professional training of future tactical aviation pilots, we propose to consider a combat flight as the main type of military pilots 'professional activity aimed at performing a combat mission, and their readiness for it (physical, psychological, technical) as a key competence indicator of the pedagogical system for quality assurance of training of future tactical aviation pilots to perform combat missions.

The training of future tactical aviation pilots for combat flights is believed to be the most important part of their vocational education, since their main professional activity for the designation is combat (special combat) flights (combat standby duty, patrolling, following up, air battles, etc.). The rapid technical development of modern aviation systems, new types of weapons, navigation equipment, guidance and firing systems, new combat missions and methods of air battles significantly actualize this issue. Expanding aircraft capabilities to independent searching and destroying of air, ground, sea targets, as well as the need to detect the enemy at long distances and the possibility to use aircraft weapons from any position, using on-board equipment, stipulate revising and improving the training of future tactical aviation pilots at the level of the theoretical and methodological foundations of the preparation and execution of various combat flights.

## CONCLUSIONS

The author has proposed the following definition for the interpretation of the issue discussed. High-quality professional training of future tactical aviation pilots for combat flights is believed to be a complex of specific, tactical academic disciplines and courses, as well as specialized simulating, physical and physiological training, which ensure the appropriate level of training and readiness of HMEI flight cadets for effective performance of combat missions in accordance with the real requirements to modern warfare and the society's needs. Ground combat flight training is believed to be a significant component of this studying. Despite its essential importance in the professional training, currently it is still uncovered in both military and professional pedagogy, and does not have its own integral scientific theory.

To wind the article up, it should be noted once again that being trained, future tactical aviation pilots acquire their theoretical competencies at an educational institution and fit into the unified ideology of combat training of flight personnel of the Armed Forces. Thus, the complexity and multifunctionality of modern aviation technology make tactical theoretical knowledge no less important than skills. Certainly, we refer to knowledge at the level of productive, heuristic activity, which, combining with other qualities and personality traits of a cadet, build the basis for the formation of a tactical aviation pilot as a professional capable of effectively solving complex tasks in real combat flights.

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