

Integration of Military Education with Civil Society and Mechanisms for Promoting Military Careers: The Case of Azerbaijan

Інтеграція військової освіти з громадянським суспільством та механізми стимулювання військової кар'єри: приклад Азербайджану

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Purpose. To examine the integration of military education with civil society in Azerbaijan, assess the dual-use potential of military qualifications, and analyze mechanisms that may enhance the attractiveness of military careers.

Method. A qualitative study was conducted using systematic, comparative, and content analysis of normative legal acts, official institutional documents, international materials, and scholarly publications covering 1991–2025.

Findings. The study identifies institutional consolidation, modular and competency-based education, technological training, international cooperation, military–scientific integration, and financial, social, academic, and career incentives as key dimensions of military education transformation in Azerbaijan.

Theoretical implications. The findings integrate civil–military relations, professional military education, military human capital, and dual-use competencies within a common analytical framework.

Practical implications. The results may support curriculum modernization, stronger military–civilian educational cooperation, and improved mechanisms for professional reintegration and career incentives.

Originality/value. The study provides an integrated interpretation of Azerbaijan's military education transformation rather than examining its institutional, educational, and incentive dimensions separately.

Limitations/future research. The study is predominantly qualitative and lacks longitudinal data on admissions, employment, retention, and career outcomes. Future research should incorporate statistical and survey evidence.

Paper type: Research article.

Мета. Дослідити інтеграцію військової освіти з громадянським суспільством в Азербайджані, оцінити потенціал подвійного використання військових кваліфікацій та проаналізувати механізми, що можуть підвищувати привабливість військової кар'єри.

Метод. Проведено якісне дослідження із застосуванням системного, порівняльного та контент-аналізу нормативно-правових актів, офіційних інституційних документів, міжнародних матеріалів і наукових публікацій за 1991–2025 роки.

Результати. Визначено інституційну консолідацію, модульну та компетентісно орієнтовану освіту, технологічну підготовку, міжнародне співробітництво, військово-наукову інтеграцію, а також фінансові, соціальні, академічні й кар'єрні стимули як ключові напрями трансформації військової освіти в Азербайджані.

Теоретична цінність дослідження. Результати інтегрують цивільно-військові відносини, професійну військову освіту, військовий людський капітал і компетентності подвійного використання в єдину аналітичну рамку.

Практична цінність дослідження. Результати можуть бути використані для модернізації освітніх програм, посилення взаємодії військової та цивільної освіти, удосконалення професійної реінтеграції та кар'єрних стимулів.

Оригінальність/цінність. Запропоновано інтегроване трактування трансформації військової освіти Азербайджану замість ізольованого розгляду її інституційних, освітніх і мотиваційних складових.

Обмеження/майбутні дослідження. Дослідження має переважно якісний характер і не містить довготривалих даних щодо вступу, працевлаштування, утримання персоналу та кар'єрних результатів. Подальші дослідження мають включати статистичні дані й опитування.

Тип статті: науково-дослідна стаття.

Key words: Military Education; Civil Society Integration; Incentive Mechanisms; National Defense University; Dual-Use Specializations; Military Human Resource Capacity.

Ключові слова: військова освіта; інтеграція з громадянським суспільством; механізми стимулювання; Національний університет оборони; спеціальності подвійного використання; кадровий потенціал військової сфери.

Introduction

Nowadays, the architecture of national security is determined not only by a state's military power but also by the quality of the human capital that supports both offensive and defensive capabilities. The fundamental transformation of modern warfare, characterized by the widespread use of

unmanned aerial vehicles (UAVs), cyber operations, and artificial intelligence-based command and control systems, has created entirely new requirements for military education systems. Under these conditions, military education can no longer function as an isolated and closed institutional structure detached from civil society.

The integration of military education with society is a bidirectional process encompassing two complementary dimensions: the transfer of civilian scientific, academic, and technological resources into military education, and the application of the professional knowledge, competencies, and skills acquired through military education within the civilian sector.

Following the Second Karabakh War in 2020, the Republic of Azerbaijan initiated a comprehensive reform of its Armed Forces based on the Turkish military model. Within this framework, the consolidation of military educational institutions under the umbrella of the National Defence University has significantly accelerated institutional integration and modernization processes. Nevertheless, several strategic challenges remain unresolved, including increasing public interest in military education, attracting highly qualified and intellectually capable young people to military careers, and ensuring the effective social and professional reintegration of military personnel upon the completion of their service.

The rapid evolution of modern warfare concepts and emerging technologies has made it increasingly impractical for military education systems to operate in isolation from civilian society. However, significant institutional gaps remain in facilitating the reintegration of military-trained personnel into the civilian labour market and in aligning military qualifications with civilian academic standards. At the same time, the incentive mechanisms designed to attract highly talented and intellectually capable young people to military professions are not sufficiently adaptable to contemporary socio-economic realities.

In this context, the integration of military education into society, the development of dual-use qualifications, and the optimization of incentive mechanisms represent pressing scientific and practical challenges that require comprehensive institutional and policy-oriented solutions.

Literature Review

The theoretical foundations of the study are primarily based on the concepts of civil–military relations developed by Samuel P. Huntington and Morris Janowitz. Huntington associates military professionalism with specialized expertise, professional responsibility, and institutional autonomy, emphasizing the importance of maintaining an appropriate relationship between the military profession and civilian society (Huntington, 1957). Janowitz, in turn, considers the development of the modern military profession in the context of increasing interaction between military institutions and society and emphasizes the growing importance of managerial, technological, and socially oriented competencies of military professionals (Janowitz, 1960). These approaches provide a conceptual basis for examining the interaction between military education and civil society.

Contemporary research on civil–military relations further demonstrates that military institutions should combine professional autonomy with effective integration into the broader institutional and democratic environment. In this context, Cottey, Edmunds, and Forster emphasize the transformation of civil–military relations and the need to reconsider traditional models of interaction between military institutions and society (Cottey et al., 2002). These theoretical perspectives make it possible to regard military education not only as a mechanism for preparing professional military personnel but also as an institutional component of broader civil–military relations.

An important component of the contemporary understanding of military education is the development of military human capital. The professional requirements placed on military personnel increasingly extend beyond traditional tactical and physical preparedness and include leadership, analytical thinking, technological competencies, information management, and the ability to

operate in complex security environments. This orientation is consistent with contemporary approaches to professional military education and human capital development reflected in strategic documents concerning defence personnel development (U.S. Department of Defense, 2022).

The modernization of military education also involves changes in educational content and teaching approaches. NATO's Defence Education Enhancement Programme (DEEP) focuses on curriculum development, improvement of teaching methodologies, and strengthening the institutional capacity of military educational establishments in partner countries (North Atlantic Treaty Organization, n.d.-a). In the Azerbaijani context, studies of military education indicate the development of modern approaches to the organization and management of the educational process and the gradual transition toward modular, competency-based, and more interactive forms of military education (Məmmədzaadə, 2025a, 2025b).

Another important research area concerns the growing role of technological competencies in military education. The transformation of contemporary warfare has increased the significance of telecommunications, cybersecurity, unmanned systems, information technologies, and other technologically intensive fields. Research conducted in Azerbaijan has addressed the development and effectiveness of military telecommunications systems, reflecting the growing importance of technological knowledge within the military sphere (İbrahimov & Həsənov, 2015). This trend reinforces the need to strengthen the relationship between military education, scientific research, and technological development.

The interaction between military and civilian education constitutes a further dimension of the literature relevant to this study. The legislation of the Republic of Azerbaijan establishes the general principles of continuity of education, development of modern knowledge and skills, and alignment of education with labour-market requirements (Azərbaycan Respublikası, 2009). These principles provide an institutional basis for considering military education as part of the broader national education and human capital development system. At the same time, the institutional development of the National Defence University and military research structures creates opportunities for closer interaction between military education, research, and the wider academic environment (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; Ministry of Defense of the Republic of Azerbaijan, n.d.).

The literature and institutional documents also indicate the importance of the international dimension of military education. Azerbaijan's cooperation with NATO, including within the framework of DEEP, provides mechanisms for curriculum modernization, faculty development, and the exchange of educational experience (North Atlantic Treaty Organization, n.d.-a, n.d.-b). Such cooperation contributes to the adaptation of military education to contemporary professional and institutional requirements and strengthens its links with international military education practices.

The dual-use potential of military qualifications represents another relevant dimension of the problem. Knowledge and competencies acquired through military education may retain professional and economic value beyond active military service. Accordingly, the recognition and transferability of military competencies into the civilian labour market are important for the professional reintegration of former military personnel. International approaches to military-to-civilian transition emphasize the importance of recognizing leadership, organizational, technical, and professional skills acquired during military service (Organisation for Economic Co-operation and Development, 2026). This creates a theoretical basis for linking military education with civilian qualification systems and labour-market requirements.

The literature also demonstrates that the attractiveness of military education and military careers depends on a combination of professional, financial, social, educational, and career-related factors. Azerbaijani legislation establishes a range of social guarantees and forms of state support for military personnel (Azərbaycan Respublikası, 1991), while national studies emphasize organizational and institutional aspects of the development of military education (Məmmədzaadə,

2025a, 2025b). However, the available literature does not provide sufficient systematic empirical evidence to determine the relative influence of individual incentive mechanisms on young people's decisions to pursue military education.

Thus, the reviewed literature provides substantial theoretical and institutional foundations for examining professional military education, civil–military relations, military human capital, technological development, international educational cooperation, and the professional reintegration of military personnel. At the same time, these areas are predominantly considered separately. This creates a need for an integrated analysis of how military education in Azerbaijan interacts with civil society, how military competencies can acquire dual-use value, and how financial, social, academic, and career mechanisms may contribute to the attractiveness of military careers.

Materials and Methods

The study is based on the application of systematic analysis, comparative analysis, and content analysis of normative legal documents, official materials of governmental and international institutions, as well as scholarly literature addressing the development of military education, civil–military relations, professional military education, military human capital, and mechanisms for promoting military careers (Cotter et al., 2002; Huntington, 1957; Janowitz, 1960; North Atlantic Treaty Organization, n.d.-a; U.S. Department of Defense, 2022).

The study's source base comprised materials covering the period from 1991 to 2025, selected based on relevance to the research topic, topicality, and academic reliability. The analysed materials included legislative acts of the Republic of Azerbaijan, official documents and institutional materials, publications concerning the development of military education in Azerbaijan, and documents of international organizations addressing professional military education and defence human capital development (Azərbaycan Respublikası, 1991, 2009; Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; Ministry of Defense of the Republic of Azerbaijan, n.d.; Məmmədzaadə, 2025a, 2025b; North Atlantic Treaty Organization, n.d.-a, n.d.-b; Organisation for Economic Co-operation and Development, 2026; U.S. Department of Defense, 2022).

The normative and legal framework of the study included the Law of the Republic of Azerbaijan “On the Status of Military Personnel” and the Law of the Republic of Azerbaijan “On Education” (Azərbaycan Respublikası, 1991, 2009). Official materials on military educational and research institutions were used to examine the institutional transformation of the military education system and the relationships among military education, scientific research, and professional personnel development (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; Ministry of Defense of the Republic of Azerbaijan, n.d.).

The theoretical framework of the study was based primarily on approaches to civil–military relations and military professionalism developed by S. P. Huntington and M. Janowitz (Huntington, 1957; Janowitz, 1960). These approaches were supplemented by research addressing the transformation of civil–military relations and the interaction between military institutions and the broader social and institutional environment (Cotter et al., 2002). They were used to interpret the relationship between professional military education, society, institutional autonomy, and the development of military human capital.

The study also used NATO materials concerning the Defence Education Enhancement Programme (DEEP) and NATO's cooperation with Azerbaijan (North Atlantic Treaty Organization, n.d.-a, n.d.-b). These sources provided the basis for examining curriculum modernization, institutional development, international educational cooperation, and the adaptation of military education to contemporary requirements. The U.S. Department of Defense strategic document was used as an additional source for considering contemporary approaches to defence human capital development (U.S. Department of Defense, 2022).

Systematic analysis was applied to examine military education as an interconnected institutional system encompassing professional military education, human capital development, interaction between military and civilian educational environments, military research activities, professional reintegration of military personnel, and financial, social, academic, and career incentives. This analytical perspective was based on the interrelationship between civil–military relations, professional military education, institutional development, and defence human capital reflected in the analysed theoretical and institutional sources (Cottey et al., 2002; Huntington, 1957; Janowitz, 1960; North Atlantic Treaty Organization, n.d.-a; U.S. Department of Defense, 2022).

Content analysis was used to systematize the provisions of normative legal documents, official materials, and scholarly publications according to the study's main thematic areas. These areas included professional military education; civil–military relations; military human capital development; modular and competency-based education; integration of military and civilian education; technological training; the relationship between military science and education; professional reintegration of military personnel; mechanisms for attracting young people to military education; and the recruitment and retention of specialists in technological fields (Azərbaycan Respublikası, 1991, 2009; Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; İbrahimov & Həsənov, 2015; Məmmədzaadə, 2025a, 2025b; North Atlantic Treaty Organization, n.d.-a, n.d.-b; Organisation for Economic Co-operation and Development, 2026; U.S. Department of Defense, 2022).

The analysis of the transformation of military education in Azerbaijan also drew on national scholarly publications addressing theoretical and methodological approaches to military education and the management of the educational process in Azerbaijani military educational institutions (Məmmədzaadə, 2025a, 2025b). Research concerning military telecommunications systems was used in examining the increasing importance of technological competencies within the military education and defence environment (İbrahimov & Həsənov, 2015).

Comparative analysis was applied to compare the development of military education in Azerbaijan with the theoretical approaches and international practices represented in the analysed literature and institutional documents (Cottey et al., 2002; Huntington, 1957; Janowitz, 1960; North Atlantic Treaty Organization, n.d.-a, n.d.-b; U.S. Department of Defense, 2022). The comparison covered professional military education, civil–military relations, military human capital, modular education, integration of military and civilian education, technological training, the relationship between science and education, professional reintegration, mechanisms for attracting young people, and the recruitment and retention of technological specialists.

The collected materials were systematized according to the main areas of integration between military education and society, as well as the mechanisms for promoting military careers. Subsequently, qualitative comparison and theoretical interpretation of the identified institutional and educational changes were conducted. Attention was paid to institutional restructuring, modular and competency-based approaches, technological areas of training, international educational cooperation, and the integration of military research with the educational process (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; İbrahimov & Həsənov, 2015; Məmmədzaadə, 2025a, 2025b; North Atlantic Treaty Organization, n.d.-a, n.d.-b).

Studying is predominantly qualitative in nature. The available source base does not contain sufficiently systematic statistical data to enable quantitative assessment of trends in admission to military educational institutions, competition indicators, the scale of international exchanges, graduate employment outcomes, or military personnel retention rates. Therefore, the identified developments were interpreted primarily as qualitative institutional and educational trends rather than as statistically measured effects. This methodological limitation was taken into account when interpreting the results and formulating the study's conclusions.

Results

Theoretical and Legal Foundations of the Integration of Military Education into Society

In contemporary military education theory, professional military education is viewed not merely as a means of ensuring the combat readiness of military personnel but also as a process aimed at developing highly qualified military human capital, advancing civil–military relations, and supporting the integration of military personnel into society. S. P. Huntington associates the principal characteristics of a professional military organization with the development of an officer corps possessing specialized expertise, professional ethics, and institutional responsibility (Huntington, 1957, pp. 80–92). M. Janowitz, in turn, emphasizes that contemporary military professionalism develops through interaction with society and social adaptation, arguing that military professionals should be trained not only as warfighters but also as professionals equipped with managerial and technological competencies (Janowitz, 1960, pp. 115–128). These approaches provide a theoretical explanation for the transition of military education from a relatively closed institutional model toward an educational system that interacts with the scientific, technological, and social resources of society.

An important theoretical dimension of the integration of military education into society is the concept of civil–military relations. According to this approach, a professional military should not be isolated from democratic society, while at the same time performing its professional functions within the framework of institutional autonomy (Cottey et al., 2002). In the Azerbaijani context, this principle is particularly relevant to the development of links between military educational institutions and the civilian higher education, scientific, and innovation environment. The Law of the Republic of Azerbaijan “On Education” identifies continuity of education, the development of modern knowledge and skills, and the alignment of the education system with labour-market requirements among its fundamental principles (Azərbaycan Respublikası, 2009). These provisions provide a general legal basis for considering military education within the broader national system of education and human capital development.

In this context, the concept of military human capital assumes particular importance. In modern armed forces, an officer’s professionalism is determined not only by tactical and physical preparedness but also by leadership, analytical thinking, information technology, cybersecurity, foreign-language proficiency, and managerial competencies. NATO’s educational approaches likewise associate military education with the preparation of personnel capable of critical thinking, analysing complex problems, and operating effectively in changing security environments. NATO’s Defence Education Enhancement Programme (DEEP) supports curriculum modernization, faculty development, and institutional capacity-building in military educational institutions of partner countries (North Atlantic Treaty Organization, n.d.-a).

The integration of military and civilian education may also contribute to preserving the economic and professional value of competencies acquired during military service after the completion of active service. In this regard, the professional reintegration of veterans is an important dimension of civil–military integration. International approaches to military-to-civilian transition emphasize the recognition of leadership, organizational, technical, and professional competencies acquired during military service (Organisation for Economic Co-operation and Development, 2026). Accordingly, greater compatibility between military educational programmes, civilian qualifications, and occupational requirements may facilitate the transition of former military personnel to the civilian labour market.

Another relevant area concerns the recruitment and retention of specialists in technological fields. The growing importance of artificial intelligence, cybersecurity, robotics, unmanned systems, and data analytics increases the need to connect traditional military personnel development models with technological competencies. Human capital development is also identified as an important

component of contemporary U.S. defence policy (U.S. Department of Defense, 2022). From this perspective, the integration of military education with civilian, scientific, and technological environments can be interpreted as a potential mechanism for facilitating the circulation of knowledge and competencies between the civilian and defence sectors.

Taken together, professional military education, civil–military relations, military human capital, veteran reintegration, military–civilian educational interaction, NATO DEEP cooperation, and the development of technological competencies constitute complementary dimensions for analysing the transformation of military education in Azerbaijan.

Transformation Dynamics of the Military Education System in Azerbaijan

The transformation of Azerbaijan's military education system in recent years has been characterized by changes in its institutional structure, educational content, and approaches to military personnel development. One of the principal institutional developments has been the establishment of the National Defence University (NDU). The consolidation of military educational and research institutions within a unified university structure provides an institutional framework for coordinating educational, scientific, and personnel-development activities. The operation of the Heydar Aliyev Military Institute, the Institute of Military Management, and the Institute of Military Scientific Research within this institutional structure reflect the organizational scope of the transformation (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; Ministry of Defense of the Republic of Azerbaijan, n.d.).

Another important direction is the adaptation of the educational process to modular and competency-based approaches. The analysed materials indicate that, within the framework of NATO's DEEP programme, curriculum modernization has been associated with the introduction of more interactive forms of education and greater attention to critical thinking, operational analysis, and simulation-based decision-making (Məmmədzaadə, 2025a; North Atlantic Treaty Organization, n.d.-a). These developments indicate a qualitative movement toward educational approaches focused not only on the transmission of theoretical knowledge but also on the development of applied professional competencies.

With regard to the possible impact of institutional reforms on attracting young people to military education, the available evidence does not permit a quantitative assessment. Existing sources do not provide systematic year-by-year statistics on admission numbers, competition ratios, or changes in the number and characteristics of applicants to military educational institutions. Consequently, no direct causal relationship can be established between the establishment of the National Defence University and changes in the attractiveness of military education. Nevertheless, the analysed sources identify state-supported financial and social incentives, educational opportunities, and career-related mechanisms that may influence the attractiveness of military education and military service (Azərbaycan Respublikası, 1991; Məmmədzaadə, 2025b).

International cooperation represents another component of the transformation. Within the framework of Azerbaijan's cooperation with NATO's DEEP programme, activities have focused on curriculum modernization, faculty development, and the improvement of institutional capacities (North Atlantic Treaty Organization, n.d.-a, n.d.-b). The analysed materials also indicate educational cooperation with military institutions in Türkiye and other partner countries. However, the sources used in this study do not provide systematic comparative statistics on the number of participants or exchange programmes over time. Therefore, international educational cooperation can be identified as an expanding institutional direction, but the scale of this expansion cannot be quantified on the basis of the available evidence.

Changes in educational content constitute another observable dimension. The analysed sources indicate increased attention to technologically oriented areas relevant to contemporary military activities, including unmanned systems, cyber defence, electronic warfare, military telecommunications, and related technological competencies (İbrahimov & Həsənov, 2015). The

available evidence therefore supports the conclusion that technological subjects have become an important component of the modernization agenda. However, the absence of comparable curriculum data and credit distributions for different periods prevents measurement of the magnitude of these changes.

The relationship between military science and education is also an important element of institutional transformation. The operation of the Institute of Military Scientific Research within the university structure and cooperation involving military research organizations provides an institutional basis for linking education and scientific activity (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.). These institutional arrangements indicate the development of mechanisms for integrating research into military education, although the available sources do not provide quantitative indicators allowing the effectiveness of such integration to be measured.

Overall, the evidence concerning the transformation of Azerbaijan's military education system is predominantly qualitative. The establishment and development of the National Defence University, institutional consolidation, modular and competency-based approaches, interactive and simulation-oriented education, greater attention to technological competencies, international educational cooperation, and the institutional relationship between education and military research constitute the principal identified areas of transformation (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.; İbrahimov & Həsənov, 2015; Məmmədzaadə, 2025a, 2025b; North Atlantic Treaty Organization, n.d.-a, n.d.-b).

At the same time, the available evidence is insufficient to determine quantitatively how these institutional changes have affected educational quality, recruitment, graduate performance, career outcomes, or personnel retention. Such assessment would require longitudinal data on admissions, competition ratios, graduation and service outcomes, retention rates, international mobility, curriculum structure, and surveys of cadets, graduates, and instructors.

Analysis of Incentive Mechanisms: Financial and Social Dimensions

The attractiveness of military education and military careers is associated with a combination of financial, social, educational, and career-related factors. Accordingly, incentive mechanisms should be analysed as a multidimensional system rather than as a single motivational instrument.

One component of this system consists of financial and material support. In the Republic of Azerbaijan, cadets of military educational institutions are provided with forms of state support that include accommodation, meals, uniforms, medical support, and scholarships in accordance with the applicable regulatory framework (Azərbaycan Respublikası, 1991). These benefits reduce some of the direct costs associated with obtaining military education and therefore constitute an institutional component of the military education incentive system.

The available sources, however, do not provide sufficiently comparable data to establish the extent to which cadet scholarships are higher than financial support available to civilian students or to determine statistically how such differences influence enrolment decisions. Therefore, claims concerning the relative attractiveness of military education for particular socio-economic groups should be treated as hypotheses requiring empirical verification rather than as established findings.

Long-term social guarantees, including housing-related mechanisms, are another component of the support system for military personnel (Azərbaycan Respublikası, 1991). Such mechanisms can contribute to the social security associated with a military career. Nevertheless, the available evidence does not allow housing support to be identified as a “decisive” determinant of military career choice because the relative influence of housing, remuneration, professional prestige, career opportunities, and other factors has not been empirically measured in this study.

Academic and professional development opportunities constitute another possible incentive. International education, professional courses, and cooperation with foreign military education institutions can broaden the professional development opportunities available to military personnel (North Atlantic Treaty Organization, n.d.-a, n.d.-b). The documentary evidence confirms

the existence and institutional importance of international cooperation; however, it does not provide longitudinal statistical data sufficient to demonstrate that the number of international exchange programmes has “increased substantially”. Accordingly, the results support the more cautious conclusion that international educational cooperation has developed as one of the directions of military education modernization.

The growing importance of high-technology military fields also creates a potential challenge for recruitment and retention. Cybersecurity, unmanned systems, engineering, information technologies, and related fields involve competencies that are also demanded in civilian labour markets. This creates a rationale for considering differentiated incentive mechanisms for specialists in technologically intensive areas. However, the introduction of specific skill-based bonuses or salary supplements should be regarded as a policy recommendation arising from the analysis rather than as an empirically tested result of the present study.

Overall, the analysis indicates that the incentive environment associated with military education consists of several interrelated components: financial and material support, social guarantees, educational opportunities, professional development, and career prospects. The available documentary evidence establishes the existence of these mechanisms but does not permit measurement of their individual or combined effects on recruitment, motivation, or personnel retention. Consequently, their effectiveness requires further empirical assessment using applicant, cadet, graduate, and serving-personnel data.

Comparative Interpretation of the Findings

The findings indicate that the transformation of military education in Azerbaijan encompasses institutional restructuring, changes in educational approaches, development of technological competencies, military-scientific integration, international cooperation, and mechanisms connecting military education with the broader social and professional environment.

Comparison with the theoretical approaches of Huntington and Janowitz and with international military education practices demonstrates both areas of alignment and areas in which additional institutional development and empirical assessment are required.

The comparative results of the transformation of military education in Azerbaijan in relation to theoretical approaches and international experience are presented in Table 1.

Table 1: Comparative interpretation of the transformation of military education in Azerbaijan in relation to theoretical approaches and international experience

Criterion of comparison	Theoretical approach / international experience	Azerbaijani context	Comparative finding
Professional military education	Huntington associates military professionalism with specialized knowledge, professional responsibility, and institutional autonomy (Huntington, 1957).	Military educational institutions operate within a consolidated university structure.	Alignment at the institutional level; effectiveness requires empirical assessment.
Civil–military relations	Huntington emphasizes institutional autonomy and civilian control, while Janowitz highlights interaction between military institutions and society (Huntington, 1957; Janowitz, 1960).	Institutional opportunities exist for interaction between military education and the civilian academic and scientific environment.	Partial alignment; the actual intensity and outcomes of integration require further evidence.
Military human capital	Contemporary approaches emphasize leadership, analytical, technological, and managerial competencies	Educational modernization places greater attention on analytical and technological competencies.	General alignment with competency-oriented personnel development.

Criterion of comparison	Theoretical approach / international experience	Azerbaijani context	Comparative finding
	(U.S. Department of Defense, 2022).		
Modular and competency-based education	NATO DEEP supports curriculum modernization and contemporary educational methodologies (North Atlantic Treaty Organization, n.d.-a).	Modular, competency-based, interactive, and simulation-oriented approaches are identified in the analysed sources (Məmmədzaadə, 2025a; North Atlantic Treaty Organization, n.d.-a).	Alignment with the direction of international educational modernization.
Integration of military and civilian education	International approaches support compatibility between military education, higher education, and professional qualification systems.	Greater interaction with civilian academic and scientific institutions is identified as a development direction.	Emerging area; institutional and outcome indicators remain limited.
Technological training	Modern military education increasingly incorporates cyber, information, unmanned, and related technological competencies.	Technological fields, including telecommunications and other emerging military technologies, receive increasing attention (İbrahimov & Həsənov, 2015).	Qualitative alignment; quantitative curriculum evidence is unavailable.
Military science and education	Modern military universities combine education, research, and innovation.	The Institute of Military Scientific Research provides an institutional basis for connecting research and education (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.).	Institutional alignment; effectiveness has not been quantitatively evaluated.
Professional reintegration	Military-to-civilian transition emphasizes transferability and recognition of competencies (Organisation for Economic Co-operation and Development, 2026).	Dual-use qualifications create potential for transferring military competencies to civilian employment.	Potential alignment; employment and transition data are required.
Attraction to military education	Financial, social, academic, and career factors can contribute to career choice.	State support and professional-development opportunities form part of the military education environment (Azərbaycan Respublikası, 1991; Məmmədzaadə, 2025b).	Relevant institutional mechanisms exist, but their relative motivational impact has not been measured.
Recruitment and retention of technological specialists	Modern defence organizations increasingly compete for technological human capital (U.S. Department of Defense, 2022).	Technological specialization is becoming more prominent in military education.	Development direction identified; retention outcomes require empirical data.

Source: developed by the author based on the results of the study.

The comparative analysis therefore indicates that Azerbaijan's military education system demonstrates several institutional and educational developments that are broadly consistent with contemporary approaches to professional military education. However, similarity in institutional direction should not be interpreted automatically as evidence of equivalent performance or

effectiveness. The available sources allow institutional and qualitative comparison but do not support quantitative benchmarking of outcomes.

The scientific contribution of the study therefore lies not in proposing a new universal theory of military education, but in systematically applying and integrating the concepts of professional military education, civil–military relations, military human capital, dual-use competencies, military-scientific integration, and career incentives to the institutional context of Azerbaijan.

Alternative explanations must also be considered when interpreting the identified developments. For example, changes in the attractiveness of military education cannot be attributed solely to the establishment of the National Defence University or to educational modernization. Social prestige, remuneration, social guarantees, housing opportunities, professional development, and career prospects may also influence individual decisions. Because the present study does not empirically isolate the effects of these variables, causal conclusions concerning their relative influence should be avoided.

Recommendations and Development Perspectives

Based on the findings, further development of the Azerbaijani military education system may include continued improvement of modular and competency-based education and greater integration of technologically advanced and practice-oriented content. Cooperation between military and civilian educational institutions and the development of qualifications applicable in both military and civilian professional environments may contribute to greater transferability of competencies.

Particular attention may be given to cybersecurity, artificial intelligence, unmanned systems, data analytics, and other emerging technological areas. These directions should be regarded as prospective priorities derived from the identified transformation of contemporary military competency requirements rather than as effects already demonstrated by the present study.

Another important direction is the development of measurable indicators for evaluating military education outcomes. Such indicators could include admission and competition data, graduation and service outcomes, personnel retention, international educational mobility, curriculum structure, and cadet and graduate feedback.

The experience of NATO DEEP and other international military education systems may also provide relevant reference points for further institutional development (North Atlantic Treaty Organization, n.d.-a, n.d.-b). At the same time, international practices should be adapted to the institutional and educational context of Azerbaijan rather than transferred mechanically.

Finally, mechanisms supporting the professional transition of military personnel to civilian employment warrant further development and empirical investigation. More systematic information on the recognition of military competencies, graduate employment, career transitions, and post-service professional outcomes would enable the actual dual-use value of military education to be evaluated more objectively.

Discussion

The findings of the study indicate that the transformation of military education in Azerbaijan should be interpreted as a multidimensional institutional process rather than solely as a reform of curricula or individual military educational institutions. The identified developments encompass institutional restructuring, the introduction of modular and competency-based approaches, greater attention to technological competencies, the integration of military research with education, international educational cooperation, and mechanisms linking military education with the broader social and professional environment. Taken together, these dimensions support the interpretation of military education as an element of both defence capability development and national human capital formation.

The results are broadly consistent with the theoretical approaches to military professionalism and civil–military relations developed by Huntington and Janowitz. Huntington's approach emphasizes specialized professional knowledge, institutional responsibility, and the

professional autonomy of the military institution (Huntington, 1957), whereas Janowitz places greater emphasis on interaction between the military profession and society and on the changing managerial and technological requirements placed on military personnel (Janowitz, 1960). The developments identified in Azerbaijan demonstrate elements of both perspectives. On the one hand, the consolidation of military educational institutions within the National Defence University strengthens the institutional framework for professional military education. On the other hand, greater interaction with civilian education, science, technology, and international educational environments reflects a movement toward a more open model of military education.

At the same time, the findings do not provide sufficient evidence to conclude that institutional integration automatically produces greater educational effectiveness. The establishment of a unified institutional structure may create favourable organizational conditions for coordinating education, scientific research, and personnel development, but the available sources do not provide longitudinal data that would allow the effects of these changes on educational quality, graduate performance, recruitment, or personnel retention to be quantified. Therefore, institutional modernization and demonstrated educational effectiveness should be treated as analytically distinct categories.

The findings concerning modular and competency-based education are generally consistent with the direction of educational modernization promoted through NATO's Defence Education Enhancement Programme (North Atlantic Treaty Organization, n.d.-a). The analysed materials indicate increasing attention to interactive teaching, critical thinking, operational analysis, and simulation-oriented learning. This suggests a shift from an education model centred predominantly on the transmission of knowledge toward one that places greater emphasis on the development of applied professional competencies. However, the available evidence does not include comparative curriculum data, learning-outcome measurements, or longitudinal assessments that would make it possible to determine the magnitude of this change or its direct impact on educational outcomes.

A similar distinction is required when interpreting the technological transformation of military education. The growing attention to telecommunications, cyber defence, unmanned systems, and related technological competencies (İbrahimov & Həsənov, 2015) is consistent with broader changes in the requirements placed on contemporary military personnel. The results therefore support the conclusion that technological competencies are becoming an increasingly important component of military education in Azerbaijan. Nevertheless, the study does not provide sufficient quantitative evidence to determine how rapidly these fields have expanded within curricula or what proportion of military education programmes they currently represent. Thus, the observed technological orientation should be understood primarily as a qualitative institutional trend.

The integration of military education with civilian education and scientific institutions constitutes another important finding. From the perspective of civil–military relations and human capital development, such interaction may facilitate the exchange of knowledge and competencies between the military and civilian sectors. It may also contribute to the transferability of competencies acquired during military education beyond active military service. In this respect, the development of dual-use qualifications can be interpreted as an important potential mechanism linking military education with the civilian labour market.

However, the actual effectiveness of this mechanism remains insufficiently documented. The available materials do not contain systematic data on the employment of former military personnel, recognition of military qualifications in the civilian labour market, career transitions after military service, or employers' assessment of competencies acquired through military education. Therefore, the dual-use value of military qualifications should currently be regarded as an institutionally plausible potential rather than as an empirically demonstrated outcome. This distinction is particularly important for avoiding an overestimation of the effects of military–civilian educational integration.

The results concerning international educational cooperation should be interpreted with similar caution. NATO DEEP and Azerbaijan's cooperation with international partners provide an institutional framework for curriculum development, faculty improvement, and the exchange of educational experience (North Atlantic Treaty Organization, n.d.-a, n.d.-b). The available sources support the conclusion that international cooperation constitutes an important direction of military education modernization. At the same time, they do not provide systematic longitudinal statistics on the number of exchange programmes or participants. Accordingly, the study cannot establish quantitatively the extent to which international educational mobility has increased or determine its direct impact on the quality of military education.

The analysis of incentive mechanisms demonstrates that the attractiveness of military education and military careers cannot be adequately explained by a single factor. The identified mechanisms include financial and material support, social guarantees, educational opportunities, professional development, and career prospects (Azərbaycan Respublikası, 1991; Məmmədşadə, 2025b). Their combined existence indicates that military career incentives form a multidimensional institutional system.

Nevertheless, the study does not establish the relative importance of individual incentive mechanisms. In particular, the available evidence does not demonstrate whether financial support, housing opportunities, professional prestige, educational opportunities, or career prospects exert the strongest influence on decisions to pursue military education. Consequently, it would be methodologically inappropriate to identify any individual component as a decisive determinant of career choice without survey data or other empirical evidence from applicants, cadets, graduates, or serving military personnel.

This consideration is particularly relevant when interpreting the possible relationship between the establishment of the National Defence University and young people's interest in military education. Changes in recruitment cannot be attributed exclusively to institutional reform. Alternative explanations may include changes in the social prestige of military service, financial and social guarantees, career opportunities, broader socio-economic conditions, and other factors. Since the present study does not isolate these variables empirically, causal conclusions concerning the effect of any individual factor should be avoided.

The findings also indicate that the relationship between military science and military education is developing institutionally. The existence of military research structures within the National Defence University provides an organizational basis for linking scientific activity with professional military education (Azərbaycan Respublikası Müdafiə Nazirliyi, n.d.). This arrangement corresponds conceptually to the model in which education and research function as interconnected elements of a military university. However, the available sources do not provide indicators of research productivity, technology transfer, implementation of research results in curricula, or measurable educational effects. Therefore, the present study establishes the existence of an institutional framework rather than its demonstrated effectiveness.

From a broader theoretical perspective, the findings suggest that the Azerbaijani case can be understood through the interaction of several analytical dimensions: professional military education, civil–military relations, military human capital, technological development, military–civilian educational integration, military research, professional reintegration, and career incentives. The scientific contribution of the study therefore lies not in proposing a new universal model of military education but in integrating these dimensions within a single analytical framework for examining the institutional transformation of military education in Azerbaijan.

This interpretation also clarifies the principal limitation of the study. The research is predominantly qualitative and is based on normative legal documents, institutional materials, international documents, and scholarly publications. The available source base enables the identification and theoretical interpretation of institutional and educational developments but does

not allow the magnitude or effectiveness of these developments to be measured statistically. In particular, systematic longitudinal data on admissions, competition ratios, graduate career outcomes, employment, personnel retention, international mobility, and perceptions of cadets and graduates are unavailable within the analysed source base.

Accordingly, the results should be interpreted as evidence of the directions and institutional characteristics of the transformation of military education rather than as quantitative proof of the effectiveness of individual reforms or incentive mechanisms. Future empirical research based on longitudinal statistical data and surveys of applicants, cadets, graduates, military personnel, and other relevant stakeholders would make it possible to test the relationships identified in this study and to assess more precisely the effectiveness of institutional reforms, dual-use qualifications, and mechanisms for promoting military careers.

Conclusion

The study demonstrates that the integration of military education with society in Azerbaijan is a multidimensional institutional process that encompasses professional military education, civil–military relations, military human capital development, technological modernization, military–civilian educational interaction, military research, professional reintegration, and mechanisms for promoting military careers.

The analysis identified several principal directions in the transformation of Azerbaijan’s military education system, including the consolidation of military educational and research institutions within the National Defence University, the development of modular and competency-based approaches, greater attention to technological competencies, the expansion of international educational cooperation, and the strengthening of institutional links between military education and scientific research.

The findings indicate that these developments are broadly consistent with contemporary approaches to professional military education and with the principles reflected in the theoretical concepts of civil–military relations and in international military education practices. At the same time, institutional alignment with international approaches should not be interpreted as direct evidence of equivalent educational effectiveness.

The study also demonstrates that the integration of military and civilian education may create opportunities for increasing the transferability of competencies acquired during military service and for strengthening the dual-use potential of military qualifications. However, the actual effectiveness of these mechanisms in supporting the professional reintegration of military personnel into the civilian labour market has not yet been empirically established within the available source base.

The analysis of incentive mechanisms shows that the attractiveness of military education and military careers is associated with a combination of financial, social, educational, and career-related factors. Nevertheless, the present study does not provide sufficient empirical evidence to determine the relative influence of individual incentives on decisions to pursue military education or to remain in military service.

Accordingly, the results of the study should primarily be interpreted as evidence of qualitative institutional and educational trends rather than as quantitative proof of the effectiveness of specific reforms or incentive mechanisms. The available source base does not contain sufficiently systematic longitudinal data on admission, competition ratios, graduate employment, career outcomes, personnel retention, international educational mobility, or perceptions of cadets and graduates.

Further research should therefore focus on the systematic collection and analysis of quantitative and qualitative empirical data, including admission and competition indicators, graduate career trajectories, employment outcomes, personnel retention rates, international

mobility, curriculum changes, and surveys of cadets, graduates, instructors, and military personnel. Such evidence would make it possible to assess more objectively the effectiveness of institutional reforms, the practical value of dual-use qualifications, and the impact of incentive mechanisms on the attractiveness of military careers.

Thus, the future development of military education in Azerbaijan depends on maintaining a balanced relationship between professional military requirements and broader educational, scientific, technological, and labour-market environments, while ensuring that further institutional reforms are accompanied by measurable indicators of their effectiveness.

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The authors declare that they have no competing interests.

Use of Artificial Intelligence

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