Pak. j. life soc. Sci. (2025), 23(1): 3607-3617 E-ISSN: 2221-7630;P-ISSN: 1727-4915

Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2025-23.1.00287

RESEARCH ARTICLE

Quality of Military Education: Analysis of Perspectives from Aerospace Technology, Digital Literacy and Performance of Soldiers of the Indonesian National Army Air Force from Generation-Z

Umar Fathurrohman[1*], Sovian Aritonang[2], Aris Sarjito[3], Mhd Halkis[4], Robby M. Taufik[5]

[1,2,3,4,5] Defense University of the Republic of Indonesia, Indonesia

ARTICLE INFO

Received: Nov 17, 2024

Accepted: Jan 18, 2025

Keywords

Quality of Military Education

Aerospace Technology

Digital Literacy and

Performance of Air Force

Soldiers from Generation Z

***Corresponding Author:**

umarfathur1990@gmail.com

ABSTRACT

The quality system of military education and general development for Air Force (AU) military members in each country varies from the level of budget support, educational facilities and the length of study time of each varies greatly, whether organized by Air University, Maxwell AFB or Alabama. Of the three educational institutions in the United States, some offer Air War College (AWC) Education, Air Command & Staff College (ACSC) Education for military members, and Squadron Officer School (SOS) Education. The methodology used in the research is Quantitative Descriptive Analysis. The results showed a significant influence between the development of aerospace technology and the quality of military education. Digital literacy with the quality of military education. The performance of Air Force soldiers from generation Z with the quality of military education. And the development of military technology, digital literacy and the performance of Air Force soldiers from generation Z with the quality of military education.

INTRODUCTION

The progress of globalization has resulted in increased knowledge and technology. which is very significant to face every form of threat and phenomenon that emerges from every country. Therefore, its influence on the quality of military education varies greatly, starting from the success of education, increasing student competency, supporting facilities and benefits that can be used by military students who are studying.

The parameters of the strength of military personnel in each country in the world can be seen from various indicators of the number of active ones. Based on the results of a study by The International Institute for Strategic Studies (IISS), there were 19.83 million military personnel who were active soldiers and spread globally from each country in 2020. Then 47% came from Asian countries (9.32 million personnel), while the Chinese military had the largest number (2.03 million personnel) (Ihsan et al., 2022).

The quality system of military education and general development for members of the Air Force (AU) in each country varies from the level of budget support, educational facilities and the length of study time of each varies greatly, both organized by Air University, Maxwell AFB and Alabama . Of the three educational institutions in the United States, some offer a) Air War College (AWC) education, b) Air Command & Staff College (ACSC) education for military members, and c) Squadron Officer School

(SOS) education . (Kane, 2016).

The Military Security Strategy of Ukraine defines the objectives of implementing state policy in the military sphere, the field of defense and military construction. The development of military education and training of personnel for the defense forces is one of the important tasks. The military education system is in a phase of intensive transformation. The ambitious task is to achieve sufficient compatibility with the structures of NATO member states as soon as possible. A modern vision of the further development of this system encourages the implementation of NATO standards into the sphere of military education and training (Поліщук & Устименко, 2021).

In fact, military education in the United States, especially education at the Air War College (AWC), Air Command & Staff College (ACSC) Education for military members, and Squadron Officer School (SOS) Education (Ihsan et al., 2022), has allowed and permitted its students to use cellphones and the Internet as part of their daily lives. Even in current development, generation Z has not been optimally utilized. This can be seen from the fact that not many generation Zs play an important role as decision makers in a nation's problems.

The development of large-scale aerospace technology, such as threats to state sovereignty, is increasingly developing in accordance with increasingly advanced technological changes. The use of defense technology is often used as a contemporary way where it always encourages so that it provokes the ability to carry out deterrence which is the answer to a demand that needs to be responded to in order to anticipate every form of threat that is increasingly changing. For this reason, every defense product that is used as state of the art always has a defense industry that supports it so that it can be independent in order to create success as part of global activities (Kane, 2016) Technology development activities cannot be separated from the support of sophisticated and modern systems .

Increasing Digital Literacy (LD) in the central government , this is an increase in the healthy internet program and a flagship program so that the current generation can be more creative. Many parties from various circles in the program facilitated by the government use the internet more. The Healthy Internet Program and the Creative Program are still unable to manage LD problems. In fact, the Government really needs LD in order to run its work program so that it can be seen and felt by the Community. In the use of LD, the government has positioned itself appropriately in order to support the LD it manages. In the academic field, based on the results of research, LD can be discussed through e-learning and social movements (Emejulu & McGregor, 2019).

Performance (performance) Organizations have become the most important issue for every organization, both profit and non-profit, although researchers have different opinions and definitions regarding performance which is still being debated among organizational researchers (Prayoga et al., 2022). Performance is a need that must be known and communicated to certain parties to find out the level of achievement of institutional results related to the organization's vision and to find out the positive and negative impacts of an operational policy taken (Listiani, 2015). According to (Jitmart & Wongkittiporn, 2021; Jam et al, 2017), there is a fundamental difference regarding performance whether organizational performance can be defined as individual performance or collective performance.

Performance is a record produced from the function of a particular job or activity during a certain period of time (Krisnawati & Bagia, 2021). On the other hand, performance is the achievement of individual goals which can be in the form of quantitative or qualitative output, creativity, reliable flexibility or other things desired by the individual himself (Sihombing et al., 2018; Jam et al., 2011). In another opinion, performance is a person's overall results during a certain period in carrying out tasks, such as work result standards, targets or targets or criteria that have been determined in advance and have been agreed upon. In another view, (Shalakitskaia et al., 2021; Romi et al., 2024)

argues regarding performance measurement or performance which has one general characteristic, namely that all are related to two terms including effectiveness and efficiency. Effectiveness as an indicator of the degree of achievement of goals and efficiency as an indicator of resources consumed to achieve the level of achievement

Results of the Forum Group Discussion (FGD) on Gen Z's multitasking abilities and their implications for military education, Leveraging Technology: military education can combine simulations and digital tools that require students to coordinate multiple tasks at once, reflecting real-life scenarios where TNI AU soldiers must manage multiple operations simultaneously (computerization, navigation and monitoring). Then in Enhanced Situational Awareness: the program must emphasize situational awareness training that requires trainees to be able to assess multiple sources of information, improving their decision-making abilities under pressure.(Nengah, 2024).

The data analysis used (results from the 1st and 2nd FGDs), among others, is intended to obtain the results of the analysis of the influence of the development of aerospace technology, digital literacy and the performance of TNI AU soldiers from generation Z on improving the quality of military education. Then design a follow-up plan for the findings (novelty) from the influence of the development of aerospace technology, digital literacy and the performance of TNI AU soldiers from generation Z on improving the quality of military education. Furthermore, design the development of a TNI AU Education management policy model in order to realize quality generation Z soldiers. (Siegel et al., 2024).

This dissertation discusses the influence of technological developments and digital literacy on the quality of military education, especially for TNI AU soldiers from generation Z. This study found that with increased understanding and digital skills (Digital Literacy), military education can be adjusted to meet the needs of Generation Z who are familiar with technology and digital learning methods. Because technology plays an important role in presenting innovative learning methods that are more efficient and relevant.

This study focuses specifically on Generation Z military personnel in Indonesia, which has previously been rarely studied in the context of military education and digital literacy. This study provides insight into how technological developments and the use of digital literacy can be integrated into military training, to create education that is more adaptive and responsive to modern needs and challenges.

LITERATURE REVIEW

Quality of Military Education

The quality of military education is a critical factor in shaping the competencies, readiness, and effectiveness of military personnel. For the Indonesian National Army Air Force, integrating advancements in aerospace technology, digital literacy, and generational characteristics of Generation Z (Gen Z) presents both opportunities and challenges. This literature review examines the interplay between these factors and their implications for enhancing the quality of military education.

Aerospace Technology and Military Education

Advancements in aerospace technology have revolutionized the operational landscape for air forces worldwide. The integration of cutting-edge tools such as unmanned aerial vehicles (UAVs), radar systems, and advanced fighter jets demands a curriculum that aligns with these technological advancements. Studies indicate that air force training programs must incorporate technical knowledge of avionics, flight mechanics, and cyber-defense systems to prepare personnel for modern

warfare. The Indonesian National Army Air Force, in particular, faces the challenge of developing education systems that keep pace with global aerospace trends while considering resource constraints.

Digital Literacy in Military Training

Digital literacy has emerged as a core competency for modern military personnel. The proliferation of digital tools in command, control, communication, and intelligence systems requires soldiers to be proficient in utilizing and securing digital platforms. In the context of Gen Z, who are digital natives, military education programs have the advantage of building upon existing digital skills. However, a gap remains in contextualizing these skills for military applications, such as cybersecurity protocols and information management. Research emphasizes the importance of hands-on digital simulations and the inclusion of scenario-based training to bridge this gap effectively.

Performance of Gen Z Soldiers

Generation Z soldiers bring unique characteristics to the military environment, including adaptability, tech-savviness, and a preference for collaborative learning. However, they also pose challenges, such as shorter attention spans and a demand for meaningful engagement. Military education systems must adapt by adopting interactive and technology-driven pedagogical methods to maintain engagement and enhance learning outcomes. Studies highlight that gamification, virtual reality (VR), and e-learning platforms significantly improve retention and skill application among Gen Z soldiers.

Challenges and Integration Efforts

Despite these advancements, integrating aerospace technology and digital literacy into military education is fraught with challenges. Financial limitations, infrastructure constraints, and resistance to change are recurring barriers in the Indonesian context. Furthermore, there is a need for policy frameworks that prioritize lifelong learning and continuous skill development to sustain technological adaptation in military operations. Collaborative partnerships with academia, industry, and international allies can address these gaps by providing access to cutting-edge training tools and expertise.

METHODOLOGY

Each author has the desire to discuss the results using qualitative research methods or using quantitative. The use of quantitative research methods to describe research problems that must be identified and limited to problems that must be formulated (Cudai Nur et al., 2019). In this study, the research technique uses the Quantitative method. To support quantitative data, the author uses the help of qualitative methods in the form of interviews as supporting data for quantitative research results. This is supported by the opinion of (Cudai Nur et al., 2019) who said that quantitative research methods are research methods in the form of numbers to find correlation results or influences from relationships between variables so as to produce more comprehensive, valid, reliable and objective data.

RESULTS

Data Description (Variable Overview)

Description of Aerospace Technology Development Variable Data

Mean, Median, Mode, Variance, and Standard Deviation of Aerospace Technology Development

Variable (X1). The data presented to analyze the variable of Aerospace Technology Development (X1) in descriptive statistical analysis includes mean, median, mode, variance, and standard deviation. The following is the calculation of mean, median, mode, variance, and standard deviation using Statistic Product Service Solution (SPSS 24.0) on the variable of Aerospace Technology Development (X1):

Statistics									
		X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X1.7	X1.8
N	Valid	171	171	171	171	171	171	171	171
	Missing	0	0	0	0	0	0	0	0
Mean		3,6023	3.7485	3,6901	3,7251	3,3977	3.6784	3,6023	3.4386
Median		4,0000	4,0000	4,0000	4,0000	3,0000	4,0000	4,0000	3,0000
Mode		4.00	4.00	5.00	5.00	3.00	3.00	5.00	3.00
Std. Deviation		1.07090	,94616	1.06432	1,10635	1.22944	1.04968	1,16558	1.09035
Variance		1,147	,895	1,133	1,224	1,512	1,102	1,359	1,189

Source: Processed Data (2024)

Description of Digital Literacy Variable Data

Mean, Median, Mode, Variance, and Standard Deviation of Digital Literacy Variable (X2). The data presented to analyze the Digital Literacy variable (X2) in descriptive statistical analysis includes mean, median, mode, variance, and standard deviation. The following is the calculation of mean, median, mode, variance, and standard deviation using Statistic Product Service Solution (SPSS 24.0) on the Digital Literacy variable (X2):

Statistics										
		X2.1	X2.2	X2.3	X2.4	X2.5	X2.6	X2.7	X2.8	X2.9
N	Valid	171	171	171	171	171	171	171	171	171
	Missing	0	0	0	0	0	0	0	0	0
Mean		2,9766	3,2047	3,1520	3,1287	3,0702	2,9532	3,2281	3,3450	3,5322
Median		3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	4,0000
Mode		3.00	3.00	3.00	3.00	3.00	2.00	3.00	3.00	4.00
Std. Deviation		,99972	,88728	1,00014	,99164	,91123	1,11045	1.02356	1.00774	1.02490
Variance		,999	,787	1,000	,983	,830	1,233	1,048	1,016	1,050

Source: Processed Data (2024)

Description of TNI AU Soldier Performance Variable Data from Generation Z

Mean, Median, Mode, Variance, and Standard Deviation of Indonesian Air Force Soldier Performance Variables from Generation Z (X3). The data presented to analyze the variable of TNI AU Soldier Performance From Generation Z (X3) in descriptive statistical analysis includes mean, median, mode, variance, and standard deviation. The following is the calculation of mean, median, mode, variance, and standard deviation using Statistic Product Service Solution (SPSS 24.0) on the variable of TNI AU Soldier Performance From Generation Z (X3):

Statistics											
		X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	X3.7	X3.8	X3.9	X3.10
N	Valid	171	171	171	171	171	171	171	171	171	171
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		2,9532	3,0292	3,1404	2,9415	2,9883	3,1871	3,0526	3,0585	3,0994	3,1754
Median		3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000
Mode		3.00	3.00	3.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00

Std. Deviation	,98705	,99070	1.08094	1.00999	1,10074	1.08468	1.04748	1.15151	1,10961	1.14465
Variance	,974	,981	1,168	1,020	1,212	1,177	1,097	1,326	1,231	1,310

Source: Processed Data (2024)

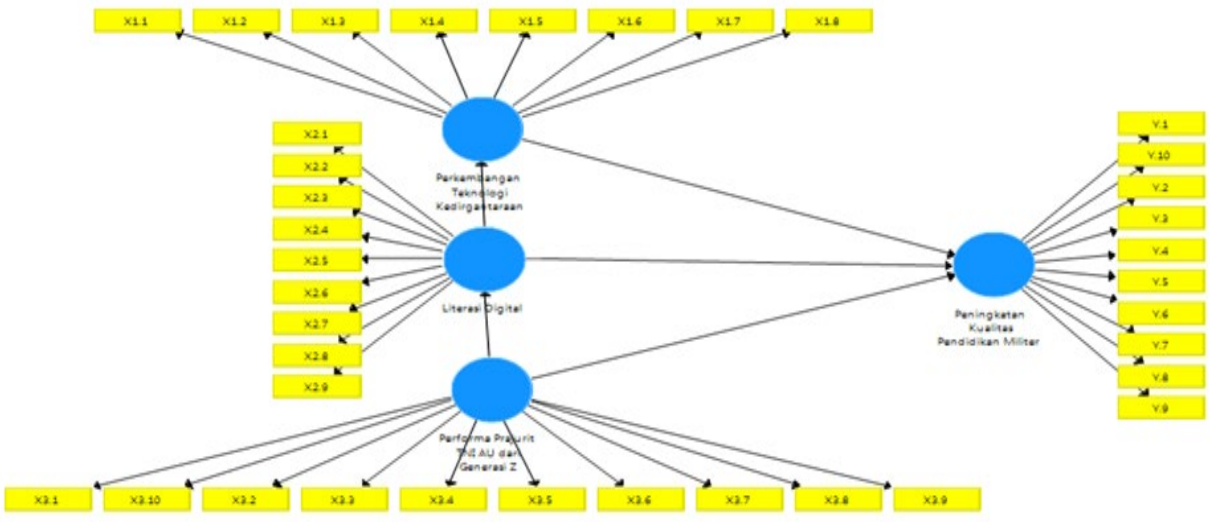
Description of Data on Military Education Quality Improvement Variables

Mean, Median, Mode, Variance, and Standard Deviation of the Military Education Quality Improvement Variable (Y). The data presented to analyze the variable of Improving the Quality of Military Education (Y) in descriptive statistical analysis includes mean, median, mode, variance, and standard deviation. The following is the calculation of mean, median, mode, variance, and standard deviation using Statistic Product Service Solution (SPSS 24.0) on the variable of Improving the Quality of Military Education (Y):

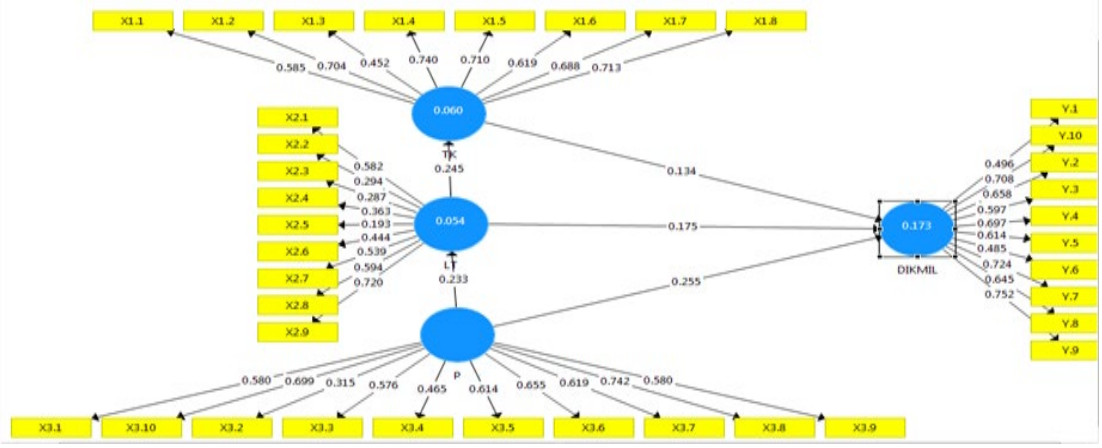
Statistics										
		X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	X3.7	X3.8	X3.9	X3.10
N	Valid	171	171	171	171	171	171	171	171	171	171
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		3,1988	3,3567	3,3684	3,2573	3,2222	3,1287	3,3509	3,3158	3.4327	3.4386
Median		3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000	3,0000
Mode		3.00	3.00	3.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00
Std. Deviation		1.04386	,98590	1.00525	1.03662	,96879	1.04928	1.01445	,97301	,95787	1.04630
Variance		1,090	,972	1,011	1,075	,939	1,101	1,029	,947	,918	1,095

PLS SEM and SPSS 24.0 results

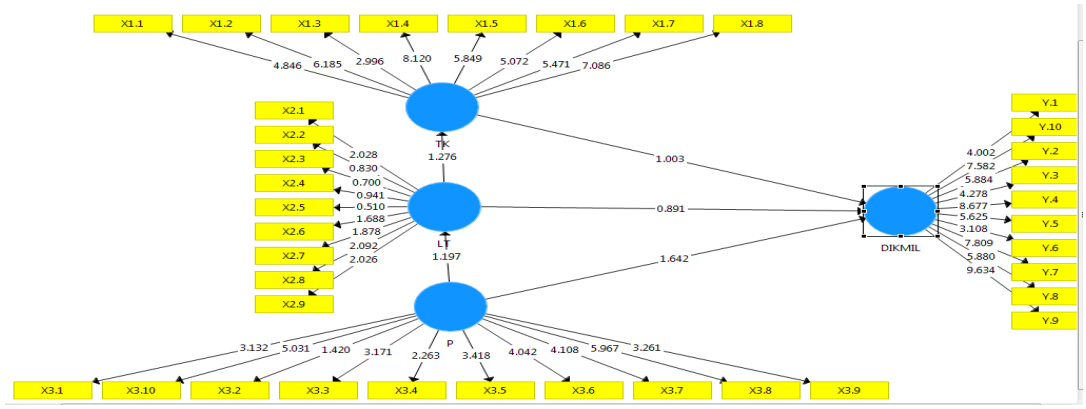
PLS SEM RESULTS



PLS SEM Design



PLS Algorithm Calculation Results



Bootstrapping Calculation Results

DISCUSSION

The aircraft industry is very important for national defense and is related to various other industries. The development of the aircraft manufacturing industry and the role of the government are very important in the efforts to build the domestic military industry . Although late to enter this industry, the aircraft industry has been developing and producing basic trainer aircraft and jets since the 1990s. Meanwhile, the government has made efforts to share technology, integrate large companies, and provide financial incentives to manufacturers. The government also supports the strengthening of human resources and establishes government research institutions dedicated to the aircraft manufacturing industry. In the early 2020s, the industry began producing advanced fighter jets using its technology. Based on experience, the policy implications for developing countries are very important, because the government must play an important role in the aircraft manufacturing industry, which is an example of the aviation industry argument . In the early stages of development, developing countries can learn advanced technologies through licensed production contracts and by requesting technology transfer when purchasing aircraft. The government needs to provide appropriate incentives, especially for research and development activities, human resource development, and government research institutions dedicated to aircraft manufacturing. In addition, regulating the number of domestic aircraft manufacturers can improve efficiency.

South Korea has experienced rapid economic growth along with changes in its industrial structure since the early 1960s. For example, the textile and garment industry, which is a labor-intensive sector, dominated the manufacturing sector and led exports until the mid-1980s. Rising wage levels led to the emergence of more value-added and technology-intensive industries, which began to occupy a major position in the Korean economy in the late 1980s. These industries, such as electronics and automobiles, have dominated Korea's manufacturing sector since the early 2020s. This development can be partly attributed to the implementation of active industrial policies in the country. That is, the Korean government has implemented policies to promote heavy and chemical industries (HCI) since the mid-1970s before actively implementing research and development (R&D) policies in technology-intensive sectors in the mid-1980s (Mah, 2007).

Korea's entry into the aircraft manufacturing industry was half a century behind countries that had been developing their industries since the early 1900s. It was not until the 1970s that Korea made its debut in aircraft component manufacturing during the active promotion of HCI. Reflecting the rapid development of the aircraft manufacturing industry over the past few decades, the production value of Korean-made aircraft and aircraft components reached US$6.0 billion, and its exports reached US$2.8 billion in 2019 (Yim & Mah, 2024).

In the developments described above, the key players are governments, with the public sector negotiating international agreements on licensed production and ensuring efficiency by selecting companies capable of fulfilling contracts. Government involvement is natural, since the initial stage of the aircraft manufacturing industry's entry revolves around national defense. Therefore, the contracts negotiated are primarily aimed at producing military aircraft, since self-sufficiency in supplying such vehicles is the government's initial goal for advancing the industry. The high initial costs of producing an aircraft make significant investments necessary, prompting governments to provide substantial subsidies to entities processing aircraft projects (Jeon et al., 2020). Government involvement is also motivated by the fact that aircraft manufacturing is a high-value-added industry with an important role in defense and positive spillover effects on the national economy and other related sectors.

Korea's late entry into the aircraft manufacturing industry and high barriers to entry are due to the complex characteristics of the industry. This study aims to explain the evolution of the Korean aircraft manufacturing sector and the important role of the government in this process. This study is unique in that there is limited comprehensive research examining the development of the aircraft manufacturing industry in a country that has experienced rapid development, such as Korea, with a focus on the role of government policies during its development.(Villalón-Huerta et al., 2024)

The ability to think and practice pedagogically closely related to the ability to analyze data and reality theoretically is a general skill. It combines both skills with the skills that form the basis of the transition process from explicit thinking to abstraction that occurs at the level of intuition, experience and theory. The ability to bring analysis to the theoretical level is one of the most important tasks in training future military teachers (Gumil) of military education. In general, the conformity of a military teacher (Gumil) to the requirements of professional characteristics means that pedagogical skills correspond to aspects related to pedagogical thinking and practice. Regardless of the level of generality of pedagogical tasks, one of the main problems is the creation of a science-based system.(Lyu, 2023)

The development of professional competence is the development of creativity, the ability of military teachers (Gumil) to quickly adapt and manage environmental changes, the ability to react quickly, socio-economic and spiritual. The development of these processes depends on the level of professionalism of military teachers (Gumil). Changes in modern modern information systems force military teachers (Gumil) to improve their professional skills and abilities, which means that they must improve professional competence. The main goal of modern education is the adaptation of

society, the state, the individual to modern education, the education of a comprehensively developed person.

In the formation of professional competence of a military teacher (Gumil) who has experienced military education, pedagogical and technical-technical problem situations are noted as a set of conditions that allow the creation of a pedagogical process. Pedagogical Conditions not only create this process, but also determine its current state. The formation of professional competence of a military teacher (Gumil) of military education is carried out in stages, through the integration of pedagogical disciplines, didactic synthesis and solution of pedagogical tasks and problem solving at the level of interdisciplinary communication. A military teacher (Gumil) of military education thinks about how to present new material using various methods and techniques in the preparation of lessons. It selects the object of work taking into account the individual characteristics of students, their experience, physical development, and other factors affecting productivity. As you know, modern production is developing very rapidly. military weapons, technological processes are constantly improving. To some extent, this should be reflected in military education. This means that the future military teacher (Gumil) needs to constantly monitor the development of science and technology, inform students about them in an understandable way, and train their skills.

In terms of requirements for the level of professional training of graduates, competence refers to the ability of students to apply a set of knowledge, skills and methods of activity in specific situations. In higher pedagogical educational institutions, basic competencies are defined at the level of educational blocks and disciplines for each stage of education. The core of social and personal experience in accordance with the main goals of professional pedagogical education in determining the sequence of basic competencies is of great importance in the process of organizing professional activity in a social society. From this point of view, basic competencies are divided into: holistic - meaningful, socio-cultural, educational-cognitive, informational, communicative, socially active, self-improving. The professional development of a military teacher (Gumil) of military education is as follows: pedagogical system, process and results. Social norms are reflected as an important basis for assessing the level of professional formation, and in turn, are recorded in the context of the State Educational Standard. In assessing the performance of the education system, it is possible to distinguish the main indicators related to the effectiveness and development of the pedagogical system (Abdujabbarov & Ahmedov, 2010).

These indicators justify the logic of assessing the level of professional development of military teachers (Gumil). It is known that lectures and practical training have didactic potential in the professional development of military teachers (Gumil) of military education. The fact that lectures and practical classes are aimed at developing a more theoretical level of pedagogical awareness often leads to the fact that students' knowledge is oral. The organization of an independent educational process plays an important role in the formation of professional competence of military teachers (Gumil) of military education. Future military teachers (Gumil) of military education in the study of the problem of preparing bachelors for independent pedagogical education It is important to focus on the acquisition of deeper pedagogical knowledge, and for this - not on improving the necessary knowledge, skills and practical abilities, but on the formation and development of certain personality traits. This is what the verse means. All these tasks are carried out together. Organization of the full-time learning process and learning in addition to teaching and learning: general (frontal), group and individual. Including their joint use. Various means of information, especially computer information, are used in the successful implementation of the learning process, including independent learning. Training is carried out by audit and independent (independent) learning. In the training of military teachers (Gumil) of military education, information and methodological support plays an important role in the formation of their professional competence.(Lantis & Homan, 2022)

CONCLUSION

Discussing the quality of military education: analysis of the perspective of aerospace technology, digital literacy and the performance of TNI AU soldiers from generation-z, it can be suggested as follows: It is necessary to issue policies that support the development of aerospace technology so that the quality of military education in Kodiklatau can run well. Budget support is needed to improve digital literacy so that the quality of military education will increase. It is necessary to issue policies to improve the performance of TNI AU soldiers from generation Z so that they can improve the quality of military education in Kodiklatau. It is necessary to support all parties together between the development of military technology, digital literacy and the performance of TNI AU soldiers from generation Z, so that the quality of military education can increase.

REFERENCES

Abdujabbarov, A., & Ahmedov, B. (2010). Test particle motion around a black hole in a braneworld. *Physical Review D—Particles, Fields, Gravitation, and Cosmology*, *81*(4), 44022.

Cudai Nur, A., Akib, H., Niswaty, R., Aslinda, A., & Zaenal, H. (2019). Development partnership strategy tourism destinations integrated and infrastructure in South Sulawesi Indonesia. *International Conference on Public Organization (ICONPO)*.

Emejulu, A., & McGregor, C. (2019). Towards a radical digital citizenship in digital education. *Critical Studies in Education*, *60*(1), 131–147.

Ihsan, B. W., Abidin, Z., & Kuleh, J. (2022). The Effect of Electronic Word of Mouth Communication and Website Quality on Purchase Decisions through Trust as a Mediation Variable at Ruparupa. Com in Samarinda. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *5*(2), 12776–12785.

Jeon, J., Suh, Y., Jung, D., Cho, H., & Lee, S. (2020). Market Oriented Export Strategy for Advanced Pilot Trainer (T-50). *Journal of the Korean Society for Aviation and Aeronautics*, *28*(1), 90–105.

Jitmart, C., & Wongkittiporn, A. (2021). Figurative Language Used by an American Singer: A Case Study of Lauv's Songs. *Proceeding of the 6th RSU International Research Conference*, 48–56.

Kane, R. B. (2016). *So Far From Home: Royal Air Force and Free French Air Force Flight Training at Maxwell and Gunter Fields during World War II*. NewSouth Books.

Krisnawati, N. K. D., & Bagia, I. W. (2021). Pengaruh kompetensi kerja terhadap kinerja karyawan. *Bisma: Jurnal Manajemen*, *7*(1), 29–38.

Lantis, J. S., & Homan, P. (2022). *US foreign policy in action: an innovative teaching text*. Routledge.

Listiani, H. (2015). *An analysis of figurative language found on the song lyric by Taylor Swift's "Speak Now" album*. IAIN Salatiga.

Lyu, Z. (2023). State-of-the-art human-computer-interaction in metaverse. *International Journal of Human–Computer Interaction*, 1–19.

Mah, J. S. (2007). Industrial policy and economic development: Korea's experience. *Journal of Economic Issues*, *41*(1), 77–92.

Nengah, M. I. (2024). Alternative strategies for mitigating global warming through the application of rice straw waste composting technology. *International Journal of Recycling of Organic Waste in Agriculture*.

Prayoga, N. B. S., Hidayah, S., & Handayani, S. B. (2022). Analisis Pelatihan dan Insentif terhadap Kinerja Personel Militer dengan Organizational Citizenship Behavior Sebagai Variabel Intervening (Studi Empirik Pada Personel Militer PUSDIKPENERBAD di Semarang). *Dharma Ekonomi*, *29*(55).

Shalakitskaia, A., Ignatyeva, O., & Samsonowa, T. (2021). Artificial Intelligence that Feels: Disruptive Business Models for Emotion Recognition. *ISPIM Conference Proceedings*, 1–8.

Siegel, S. V, Trimarsanto, H., Amato, R., Murie, K., Taylor, A. R., Sutanto, E., Kleinecke, M., Whitton, G., Watson, J. A., & Imwong, M. (2024). Lineage-informative microhaplotypes for recurrence classification and spatio-temporal surveillance of Plasmodium vivax malaria parasites. *Nature Communications*, *15*(1), 6757.

Sihombing, S., Astuti, E. S., Al Musadieq, M., Hamied, D., & Rahardjo, K. (2018). The effect of servant

leadership on rewards, organizational culture and its implication for employee's performance. *International Journal of Law and Management*, *60*(2), 505–516.

Villalón-Huerta, A., Ripoll-Ripoll, I., & Marco-Gisbert, H. (2024). A survey and characterization of Close Access Cyberspace Operations. *International Journal of Information Security*, *23*(2), 963–980.

Yim, J., & Mah, J. S. (2024). The Role of the Government in the Development of the Aircraft Manufacturing Industry in Korea: Implications for Developing Countries. *Journal of Aerospace Technology and Management*, *16*, e1524.

Поліщук, І. В., & Устименко, О. О. (2021). ПРАВОВЕ РЕГУЛЮВАННЯ ПИТАНЬ ПРОБЛЕМИ КОСМІЧНОГО СМІТТЯ. *9April, 2021*, 64.

Romi, I. M. (2024). Digital Skills Measures for Digitalization-An Aggregative Analysis. Pakistan Journal of Life and Social Sciences (PJLSS), 22(1), 960-971.

Jam, F. A., Sheikh, R. A., Iqbal, H., Zaidi, B. H., Anis, Y., & Muzaffar, M. (2011). Combined effects of perception of politics and political skill on employee job outcomes. *African Journal of Business Management*, *5*(23), 9896-9904.

Jam, F., Donia, M., Raja, U., & Ling, C. (2017). A time-lagged study on the moderating role of overall satisfaction in perceived politics: Job outcomes relationships. Journal of Management & Organization, 23(3), 321-336. doi:10.1017/jmo.2016.13