#### THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH

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# THE IMPORTANCE OF ELECTRICAL ENGINEERING AND ELECTRONICS IN TRAINING MILITARY SPECIALISTS

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Abstract: This article shows the goals and tasks of teaching the basics of electrical engineering and electronics. Also, the importance of the ongoing training in the training of military specialists was revealed. It is mentioned in the article that in the training of future officers, the fundamentals of electrical engineering and electronics serve to form deep and solid knowledge.

**Key words:** electrical engineering, innovative technologies, goal, specialist, educational process, method, efficiency, armored vehicles.

World 21st century - in the era of intellectual work and the Internet, the globalization of the information space, openness and the strengthening of mass media are expanding the possibilities of providing intellectual development of learners in an integrated educational environment. In the process of modernization of the Armed Forces in developed foreign countries such as European countries, USA and Russia, machines, machines, production weapons and technical processes are being updated. By modernizing the educational system in higher military educational institutions, special attention is being paid to the training of highly qualified military specialists with creative, communicative abilities and professional competences.

From the first day of the establishment of our Armed Forces, the issue of training military personnel, improving the educational and material base and supply of higher military educational institutions, and creating conditions that meet the requirements of the time became urgent. We are pleased that our president emphasized the need to pay attention to the issue of providing higher military educational institutions with the most modern educational equipment, including modeling and simulation tools, computer equipment, and military range equipment.

Also, one of the most important directions of the reform of the Armed Forces of our country is a continuous system that prepares highly specialized military personnel and improves their qualifications, which ensures the formation of professional soldiers with high intellectual ability, strategic thinking ability, effective management of units under their command, and the ability to establish a healthy moral and spiritual environment in them. they

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emphasized the need for further improvement. Therefore, we teachers should actively participate in the improvement of this system with our new ideas and research, views and suggestions.

The development of military equipment and the increase in its use require highly qualified military specialists to have solid knowledge, sharp thinking, knowledge, skills and abilities in the use of equipment and weapons. Modern sophisticated military equipment changes the way a qualified military serviceman interacts with combat vehicles, weapons and their parts. After all, a military specialist working with combat equipment has to manage several objects at the same time.

In order to skillfully master and control combat equipment, one should thoroughly study the theoretical and practical foundations of general technical sciences and technical knowledge. One such subject is electrical engineering and electronics fundamentals. Therefore, I would like to dwell a little on the role of electrical engineering and electronics in military equipment. Today, the development of science and technology is developing to such an extent that the military sphere, like all spheres of society, cannot be imagined without electro technical and electronic equipment.

As the achievements of electronic science are effectively used in the development of armor technology, it certainly shows its effectiveness in achieving achievements in modern battles. For example, modern armored vehicles are now equipped with modern active protection systems. This is a modern active defense system - it consists of a number of electronic devices, including thermal imaging systems, electronic optical devices, laser rangefinders and computers. Such electronic devices increase not only the protection system of armored vehicles, but also its combat readiness. To use the system effectively, it is necessary to know the structure, application and basic characteristics of electronic equipment. In achieving such knowledge, electrical engineering and electronics are of great importance. Today, highly qualified military specialists must be able to not only use such electronic equipment, but also to eliminate any malfunctions that may occur on the spot.

As a result of the rapid development of science and technology, military equipment is being equipped with new, modern electronic equipment. Electronic equipment - equipment can be used not only in the protection system, but also for other purposes. The optoelectronic reconnaissance system placed in the tower of armored vehicles has the ability to automatically select targets and determine the distance to the target using a laser rangefinder.

The mechanical-driving fronts of such modern armored vehicles are also fundamentally different from their predecessors. A modern mechanical driver's

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panel consists of a liquid crystal electronic panel. It is equipped with control and measurement devices that determine the state of modern equipment with high accuracy, which also creates great opportunities in the management and use of armored vehicles. In order for our highly qualified military specialists to be able to manage such modern armored vehicles, modern electronic equipment must be able to handle the structure, principles of operation and, if necessary, some malfunctions of the equipment. For this, we teachers need to be in tune with the times and have a new approach to teaching. We must contribute to the improvement of the educational and material base and provision, to the creation of conditions that meet the requirements of the times. We need to train highly qualified military specialists with solid knowledge, sharp thinking, knowledge, skills and skills in the use of equipment and weapons.

In conclusion, it should be noted that today's scientific and technical achievements are applied to armored vehicles, and it is achieved by mastering the knowledge of electrical engineering and electronics at a high level in order to know their effective use. In order for a highly qualified officer to know the correct use of electronic equipment, he must first have basic knowledge of electrical quantities such as current, voltage, power, and the ability to separate and connect electrical circuits. For this, great attention is paid to theoretical knowledge as well as practical knowledge. Only when a cadet sees and does what he hears in practice will he acquire knowledge, skills and abilities.

### REFERENCES

- 1. Пазилова Ш.А. Электротехника ва электроника асослари фанини ўкитишда интерактив методларни қўллаш // Oʻzbekiston Respublikasi Qurolli Kuchlari Akademiyasi xabarlari. Toshkent, 2019. № 3(31) В.73-77.
- 2. Пазилова Ш.А.Организатция и проведение практических занятий по электротехнике и электронике в высших военных учебных заведениях // Инновационное развитие науки и образования: Международная научнопрактическая конференция. Павлодар. Казахстан, 2020. C.204-205
- 3. Фаберман Л. Б., Мусина Р.Г., Жумабоева Ф.А. Олий ўкув юртларида ўкитишнинг замонавий усуллари. Т.: 2002. 84 б.
- 4. Pazilova Sh.A. Development of basics of electrical engineering and electronics in higher military education. Current Research Journal of Pedagogics 3(04), 48-51, 2022