IMPROVEMENT OF THE SYSTEM OF TRAINING FORENSIC EXPERTS

Medetbayeva Aksungul Sharapatdin kizi
Teacher of training institute for lawyers under the Ministry of Justice of the Republic of Uzbekistan, The Republican Center of Forensic Expertise named after Kh. Sulaymonova under the Ministry of Justice of the Republic of Uzbekistan, Scientific research institute of forensic expertise PhD student of 12.00.09 - Criminal proceedings. Criminology, investigative law and forensic expertise
e-mail: medetbaevaaksungul@gmail.com
https://doi.org/10.5281/zenodo.15524718

Annotation

This article analyzes the current state of the forensic expert training system, its systemic problems, approaches based on international experience, innovative achievements, and the need for legal and institutional reforms. The article presents conceptual proposals for improving the strategy for training personnel in the field of forensic examination based on the experience of Germany, the USA, and other foreign countries. The article considers the coordination of the level of professional training with the technological development of modern forensic examination as a pressing issue.

Keywords: forensic examination, training system, professional qualifications, legal foundations, foreign experience, accreditation, digital forensics, scientific and methodological base, institutional reform.

Forensic experts are the foundation of a fair and transparent judicial system, and their conclusions often determine the reliability of evidence. Judicial bodies often accept the expert opinion as a decisive factor in the evaluation of evidence. The expert's qualifications, scientific and methodological training, practical experience, and adherence to ethical principles directly affect the legality and fairness of the court decision. In the case of an incorrect or superficial expert opinion, this can lead to the punishment of an innocent person or the evasion of punishment by the criminal.

Today, forensic experts are obliged to independently analyze issues related to legal, technical, medical, financial, digital, and other complex areas and provide substantiated conclusions. Therefore, the system of their training should be aimed not only at theoretical knowledge, but also at the formation of deep knowledge and skills in practice, technology, and professional ethics.

Experts should also be sufficiently trained in the field of artificial intelligence, database analysis, and digital evidence assessment, which are considered reliable technical tools in the modern judicial system. Consequently,

the national system for training experts must have a standardized and continuous professional development system based on international experience.

Measures for improvement based on the Decree of the President of the Republic of Uzbekistan dated July 5, 2021 No-6256. In accordance with the Presidential Decree, the following systemic measures have been defined for the training and professional development of forensic experts:

- Training based on the principle of dual education;
- Improving practical skills by introducing at least 6-month expert courses for undergraduate or graduate students;
- Creation of departments in the Republican Center for Forensic Expertise named after Kh. Suleymanova;
- Opening of permanently operating departments for retraining and advanced training of forensic experts;
- Innovative teaching technologies;
- Advanced training based on the credit-modular system;
- Modernization of the educational process through online webinars, simulations, virtual laboratories;
- Advanced training at the place of work;
- Implementation of a system for improving professional training without interruption from work;
- Expansion of international cooperation;
- Allocation of a grant annually for internships and advanced training abroad for at least 10 experts;
- Attracting foreign experts as speakers;
- Training seminars for investigative and judicial bodies;
- Conducting seminars and webinars on the collection and preparation of research objects for examination;
- Orientation towards scientific activity;
- Creation of special benefits and conditions for specialists with academic degrees;
- Granting expert institutions the status of a scientific institution;

These measures will allow for the harmonization of theoretical and practical aspects in the training of forensic experts, the formation of a system of continuous education, and the integration of international experience into the national system.

Currently, in Uzbekistan, there are existing problems in improving the qualifications of forensic experts in the field of forensic examination, which can be analyzed by dividing them into the following categories:

1. Insufficient systematization of the regulatory framework:

•There is no clear and independent legislative act on the training, certification, and accreditation of forensic experts.

•The activities of experts are often limited by general regulatory documents, which hinders the formation of a specialized training system.

2. Lack of specialized areas of education:

•In many higher educational institutions, "Forensic Examination" does not exist as a separate field of study.

•Bachelor's, Master's, and PhD programs in areas such as digital forensics, financial expertise, and medical-biological expertise are now developing.

3. Weak practical training:

•Students are often not involved in real forensic practice.

•The practice of dual education provided for by the Decree has not yet been widely implemented.

•Lack of a modern educational environment equipped with laboratories, models, and equipment.

4. Slow international integration:

•The number of joint projects and grants with foreign expert centers is limited.

•Although the decree stipulates that 10 experts will undergo training abroad annually, this figure is significantly lower than the need.

•There is little use of international experts, teachers, and resources.

Also, the scientific and methodological base is outdated, educational literature, methodological manuals, and modern textbooks are scarce and not updated. There are no resources in native languages on digital technologies, artificial intelligence, forensic algorithms.

In my opinion, the reforms initiated on the basis of Presidential Decree N-6256 are very important for solving these problems, but it is necessary to transform them into an institutional system, have a solid legal basis, and provide real financial and technical resources.

For example, several reforms have been implemented in foreign countries in this regard. **Education and accreditation:** FEPAC (Forensic Science Education Programs Accreditation Commission) accredits undergraduate and

graduate programs in forensic examination in the USA. These programs include natural sciences, chemistry, biology, and criminology.[1]

RTI International and the US **National Institute of Standards and Technology (NIST)** are organizing seminars on the implementation of AI technologies in forensic examination. They conduct research aimed at solving technical problems in the field of evidence analysis, automation of investigative processes, and forensic examination using AI.[2]

Marymount University is conducting research on the application of AI technologies in forensic examination. They are aimed at accelerating investigative processes using AI, reducing human error, and increasing the accuracy of evidence analysis.[3]

In Germany, the Forensic Analysis Laboratory (FoSIL) of the Mittweida University of Science and Technology is engaged in the integration of AI technologies into forensic examination. They conduct research aimed at analyzing crime scenes, automatically identifying evidence, and optimizing investigative processes using AI, and all of this is one of the important stages in improving the qualifications and experience of forensic experts.[4]

On the above-mentioned issues, work is being carried out in the USA, Germany, and other countries to improve the qualifications of experts, work together with artificial intelligence and improve the qualifications of experts, as well as to develop the work of experts in the judicial system based on the analysis of evidence and conclusions, and to ensure justice.

Adaptation recommendations for Uzbekistan:

- Inclusion of the basics of AI in the curricula: Forensic examination courses in higher educational institutions should include courses on the basics of AI, machine learning, and digital forensics.
- Organization of practical training: Practical training and seminars on the use of AI technologies should be organized for forensic experts and investigators.
- Development of international cooperation: international cooperation should be established to study best practices in the USA and Germany and adapt them to the conditions of Uzbekistan.

[1] https://www.aafs.org/fepac/about-fepac
[2] https://forensicrti.org/harnessing-ai-forensics
[3] https://marymount.edu/blog/the-role-of-ai-in-forensics
[4] https://forensik.hs-mittweida.de/en

•Testing AI technologies: AI technologies can be gradually implemented through testing and evaluating their effectiveness in forensic examination processes.

•Development of ethical and legal norms: It is necessary to develop ethical and legal norms related to the application of AI technologies in forensic examination.

In conclusion, improving the qualifications of forensic experts and carrying out work in conjunction with the latest technologies, as well as the integration of artificial intelligence into forensic examination, will increase the reliability, scientific validity, and international competitiveness of this field in Uzbekistan. The strategic approach, formed on the basis of the experience of the USA and Germany, allows us to create a modern, advanced, and effective system of forensic examination. In addition, large-scale reforms and the necessary legislative acts aimed at improving the qualifications and experience of forensic experts, increasing the effectiveness of work, will give impetus to its development.

Literature:

1. https://www.aafs.org/fepac/about-fepac
2. https://forensicrti.org/harnessing-ai-forensics
3. https://marymount.edu/blog/the-role-of-ai-in-forensics
4. https://forensik.hs-mittweida.de/en