



## IMPROVING FORENSIC EXPERTISE WITH THE HELP OF INNOVATIVE TECHNOLOGIES

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### Abstract.

The problematic issues of the use of innovative technologies in forensic activities are considered. The ways of improving forensic expert activity are shown, due to new approaches in expert practice and when teaching the basics of forensic examination.

**Key words:** innovative technologies, method, methodology, information support, forensic activity.

Modern achievements of science and technology occupy a strong place in the institution of forensic expertise of our country. Thanks to the use of innovative technologies, not only various areas of forensic expertise, but also forensic expertise in general are being improved.

It is known that technology (Greek techne - skill, art + logos - teaching) means 1) processing or processing of raw materials, materials, semi-finished products, etc. in a field of production, methods used to change their state, properties and form. set of methods"; 2) the science of methods and ways of processing raw materials and materials with the help of production tools" is understood.

It follows that the technology of forensic examination is a set of operations and actions based on special knowledge. These operations and actions are carried out during the research of material evidence - research objects in the performance of the tasks assigned to the forensic expert.

Innovative technologies in forensic examination are the use of new methods and tools that help to perform the specified tasks at a high quality level.

It is known that due to the development of new technical tools, methods and research methodology or the improvement of existing ones, forensic examination in our country is rapidly and continuously developing. Such an approach depends on many reasons. This is reflected in the growth of crime, new methods of committing crimes, and the emergence of new research objects. The more unusual the new forms of crime, the more complex the expert research.

Therefore, the main requirements for the research methods of expertise include: the scientific basis of the methods (reliability of the methods in terms of obtaining correct results); the permissibility of the methods (compliance with the rules of legality and ethics of the method, safety for the expert) and a number of other requirements that must be followed when developing new methods. In this regard, the analysis of the processes of introduction of new methods and techniques to practical expert work contributes to the achievement of the goals of improving forensic expert work.

Considering the problems related to the information supply of forensic activity, taking into account its specific features, this process should be constantly improved by developing theoretical, methodological and organizational foundations, new methods, methods and technical tools, and developing innovative technologies.

Information support of forensic expertise should be a scientifically organized and continuous process of selecting, preparing and providing systematic scientific and technical information necessary for solving the tasks of forensic expertise.

One of the ways to improve the practice of forensic expertise is to automate the processes of conducting expertise. This process consists of the use of technical tools, mathematical methods and activity programs that partially or completely free the forensic expert from direct participation in the processes of obtaining, processing, transmitting and using the necessary information during the conduct of expertise. Therefore, there is a need to introduce and operate automated information systems that help to increase the efficiency of information search, collection, processing, storage, analysis and presentation. The purpose of the operation of such automated systems is to achieve the maximum result with minimal time, effort and effort, which helps to increase the efficiency of providing information to forensic experts.

One of the ways to improve the activity of forensic experts is to prevent mistakes made by forensic experts in their practical work. Therefore, it is necessary to periodically summarize and analyze the expert practice in various fields of forensic expertise in order to identify various errors, including the use of new methods of conducting forensic examinations or cases of neglect to the extent that their use did not lead to a positive resolution of the questions. It is necessary to pay special attention to the correctness of complex examinations, evaluation of the obtained results and their formalization.

Innovative technologies consist of many components, among which information programs occupy an important place. This approach increases the importance of scientific support for new types and classes of expertise, forensic expertise, which requires highly qualified specialists and researchers to perform them. In this regard, issues of increasing the scientific level of expertise, training scientific personnel (candidates of science and doctors) and forensic experts are also important.

Based on the essence of forensic expertise, which is a unique professional activity, the training of forensic experts will have its own characteristics.

The effectiveness of training in forensic specialties depends on the professional skills and experience of the teacher. He must know not only new expert methods, new educational and scientific literature, modern procedural legislation covering all areas related to the implementation of forensic expertise, but also must constantly cooperate with practitioners - forensic experts who conduct expertise and the person (bodies) appointing expertise.

Increasing the level of professional skills and qualifications in judicial expert activity covers several areas.

One of the most important directions is the practice of teachers in a forensic institution, which will allow them to get acquainted with the new research methods and methods of forensic examination, the base of new technical and criminalistic tools, and to learn about the actual examinations that are being conducted. In such internships, it is useful to discuss the specific terms, the form of the final answers of expert opinions and how reasonable and reliable they are, the photographs that support these final opinions, and many other positive and negative



aspects that are present when conducting a specific type of forensic examination with forensic experts.

This approach allows the teacher to develop a single tactic in the process of training forensic experts, and the practicing forensic expert - in the process of conducting forensic examinations. Undoubtedly, informal friendly communication during the internship process has a positive effect and benefits both parties. Therefore, the teacher's acquaintance with expert practice and study of practical activities should be deep and meaningful.

Cooperation with law enforcement agencies, other similar institutions and international organizations is also important to increase the effectiveness of training specialists in various areas of forensic expertise.

All state forensic institutions of our republic have positive experience in this direction. For example, the Republican Forensic Expertise Center named after Kh. Sulaymonova under the Ministry of Justice of the Republic of Uzbekistan today not only conducts expertise research, but also introduces new types of expertise into practice, retrains state and non-state forensic experts, increases their legal knowledge, and provides special training to courts and law enforcement agencies. has been working on assistance by applying knowledge.

A number of positive activities have been carried out in the field of international cooperation in the Republican Forensic Expertise Center named after H. Sulaymonova, cooperation with a number of foreign forensic institutions has been established, and memorandums have been signed. In the future, in order to further expand the scope of international cooperation, it is planned to become a member of the World Association of Forensic Experts (IAFS) and the Asian Forensic Expertise Network (AFSN).

Employees of law enforcement agencies participate in educational processes organized for forensic experts, relevant seminars and practical trainings, are invited to organized scientific-practical conferences, roundtable discussions, scientific-practical seminars. In these processes, they discuss the procedural aspects of the appointment and conduct of forensic examinations, the provision of materials necessary for conducting research, including samples for comparison. Such meetings help to improve the effectiveness of training forensic experts and carrying out separate educational investigative actions (examination of the scene of the accident in order to identify various traces and take them in the prescribed manner, conduct an expert experiment at the scene of the accident, etc.).

Taking into account the fact that education is a teacher-controlled process of acquiring knowledge, skills and abilities, it is worth noting that another approach to improving the level of professional skills and qualifications in forensic expert work is to provide ready-made knowledge with the help of textbooks, training manuals and various didactic tools and techniques. It would be appropriate to rationally manage the process of acquiring knowledge and effective perception of relevant information, especially new literature, not only recommending knowledge and literature for study, but also preparing extended comments for each source. This allows listeners and students to correctly perceive the content of literary sources.

Another direction that contributes to the improvement of teaching skills in the training of forensic experts should be noted — it is the mutual cooperation of teachers who give lectures on criminology and forensic science. Since the science of forensic examination as an independent academic discipline began much later than the science of criminology and only in a few higher educational institutions, some topics are still taught within the scope of the science

of "Criminology", in particular, its department "Criminal technique". The same topics are studied in a much deeper way in the field of Forensic Science. For example, the tactics of examining the scene of the incident and conducting it by the investigator, and the participation of a specialist (expert) in the same investigative action. The mutual cooperation of these procedural entities should be carried out on the basis of full understanding of each other, their actions should be clearly coordinated. Therefore, teachers need to have common ideas and views on how to present a certain material related to the subject to the audience and students. To ensure the comprehensiveness of the educational process, the teacher must know new expert methods, not only educational, but also scientific literature, personally participate in the development of new pedagogical technologies and apply them (for example, interactive whiteboards, multimedia tools, etc.) to educational processes.

In order to effectively teach and teach the theoretical and legal foundations of forensic expertise, it is necessary to systematically continue the preparation of special textbooks, methodological and training manuals on the types of forensic expertise and areas of specialization.

An effective form of preparation of such educational and scientific publications is the joint publishing activity of a teacher and a leading specialist of a state forensic institution. When writing a specific educational or scientific work, such joint activity successfully complements each other and, as a result, undoubtedly has a positive effect on the development of the expert's specialty. For example, the Republican Forensic Expertise Center named after Kh. Sulaymonova under the Ministry of Justice of the Republic of Uzbekistan published a training manual entitled "Modern Forensic Expertise Possibilities" for the students of judicial and investigative bodies, lawyers, specialized higher education institutions and other segments of the population. In the field of forensic expertise, a single magazine "Forensic Expertise of Uzbekistan" was established, and this year it was included in the list of scientific publications recommended by the Higher Attestation Commission to publish the main scientific results of dissertations on legal sciences and political sciences.

In cooperation with the Prosecution Academy of the Republic of Uzbekistan, an electronic guide was created for pre-investigation investigation, inquiry and preliminary investigation bodies and court officials dedicated to obtaining physical evidence, appointing a forensic expert and clarifying its capabilities.

According to the decisions of our Government adopted on the basis of the Decree No. PF-6256 of the President of the Republic of Uzbekistan dated July 5, 2021 "On Measures to Improve the Forensic Expertise System in the Republic of Uzbekistan", for the first time in the history of our Republic X. The activities of the Research Institute of Forensic Expertise of the Republican Forensic Expertise Center named after Sulaimanova have been established. With the establishment of the Institute, a Scientific Council was established at the Center, which awarded the degrees of Doctor of Philosophy (PhD) and Doctor of Science (DSc) in legal sciences. "Criminal procedure" at this Scientific Council. It is allowed to conduct the defense of dissertations on the specialty "criminology, investigative law and forensic expertise".

The "Forensic Expertise Accounting System" and "Electronic Education Platform" which are considered important for this direction have been introduced, and the "sudekspert.uz" information portal, the program for identification of physical evidence submitted for expertise has been put into operation in order to quickly deliver information about the field of forensic expertise to the population. In addition, in order to ensure mutual document circulation and



security of law enforcement bodies, courts and forensic institutions, in cooperation with relevant ministries and agencies, the electronic information system "E-Expertiza" has been implemented in our activities.

The above-mentioned priority areas of cooperation between practicing forensic experts, representatives of law enforcement agencies and teachers include:

regular replenishment of various collections, information funds and use in activities; creation and introduction of new (including joint) developments of criminalistic techniques for practical activities of forensic institutions; organization of joint scientific-research works to create new methods of conducting forensic examinations; systematic organization and conducting of mutual practice (internship) and seminars of experts of forensic institutions; implementation of mutual informational and methodical support of judicial expert activity, etc.

New approaches are needed to describe forensic research objects, measure traces and injuries, develop a uniform methodology for conducting forensic examinations of a specific type, and a uniform structure of expert opinion. It is also recommended to create "Automated Information Retrieval Systems (AIRS)" containing information about various types of objects (for example, shoes, human hair, soil, paint, etc.).

The above-mentioned confirms that the introduction of innovative technologies not only helps to increase the quality and efficiency of forensic expertise, but also has a positive effect on the detection and investigation of crimes.

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