

Concerning some educational issues of forensic experts in the context of european integration

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Abstract

Ukraine's European integration is taking place in the context of large-scale Russian intervention, which has posed many challenges to forensics. A modern forensic expert needs to have a high-quality education to quickly adapt and think critically and systematically to effectively solve the tasks assigned to him or her. The purpose of the article is to identify the main problems related to the educational issues of forensic experts and to find ways to solve them. It is proven that to ensure the solid systemic knowledge of a forensic expert, it is necessary to implement an integrated approach to the process of his/her training. It is determined that under today's extreme conditions, such training requires expanding access to open educational Internet resources for forensic experts and persons intending to become them, which is one of the important factors affecting the quality of modern European education. Attention is paid to the need for the active involvement of forensic experts—practitioners, researchers and politicians—in cooperation with universities. It is pointed out that in the context of reforming forensic examination in Ukraine, it is necessary to take world experience in the form of international standards as a basis.

Keywords

competence, education, forensic expert

INTRODUCTION

The war unleashed by the aggressor country proved the readiness of Ukrainians to defend the independence of their country and the European path of its development, which is a conscious targeted choice of Ukrainian society, confirmed by many trials and strategically enshrined in legislation. Ensuring Ukraine's integration into the European political, economic and legal space to gain membership in the European Union is one of the main principles of Ukraine's foreign policy (Zakon Ukrainy, 2010). Resisting the large-scale armed Russian intervention and suffering from huge human, financial and economic losses, the country has now acquired the status of a candidate for accession to the European Union and continues to work hard on European integration and establishing partnerships with European states in various spheres of life, including in the field of justice.

Educational issues for forensic experts have been partially investigated by both domestic and foreign authors (O. Agapova, D. Davydenko, O. Kliuiev, O. Kataraga, O. Kurdes, K. Palkova, etc.). In their studies, integration into the European Higher Education Area, European Research Area and European Forensic Science Area anticipates the unification of scientific, technical and human resources that

have a common interest; they are concerned with different fields of science and the functioning of public institutions (Kliuiev et al., 2020).

Although in Ukraine there are a large number of scientific publications on forensic science, the issue of the formation and implementation of professional training for forensic experts in accordance with the new needs in the context of European integration is still unexplored and requires further research. This position is supported by several scholars. For example, Mulyk (2021) underlines that a forensic expert must be a competent and highly educated specialist in his/her field, combine fundamental scientific training with deep practical skills, constantly improve his/her level of professional knowledge and have high civil qualities. Analysing the organisational issues and prospects for the training of specialists in the field of forensic examination, Alekseychuk and Starodubov (2022) conclude that high-quality training and retraining of forensic experts are important for independent and objective judicial proceedings, which requires a balanced approach to the organisation of such training, ensuring high-quality, timely and substantiated training. Popovych (2019), studying the issue of the unity of science and practice in forensic science, concludes that 'the effectiveness of forensic science depends on the implementation of innovative technologies in the educational and research processes'. Baranyak (2014) states that the expert's education and experience in the field of science or practice, which are necessary for the examination,

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are the criteria by which the expert's competence is assessed. Andronova (2021) points out that the study of foreign experience in the field of forensic science is becoming increasingly important at the stage of the acquisition by our society of common European values in the field of education and training of new personnel.

Participation in continuing education is also a criterion for assessing the competence and qualifications of an expert, in the opinion of the legislator. Thus, the Ministry of Justice of Ukraine, in its monitoring report, amongst the general skills required by a forensic expert, also indicates awareness of the need for continuous education and training (Monitoring Report of the Ministry of Justice of Ukraine, 2021).

This study hypothesises that the introduction of substantive adjustments to the methodological and technological aspects of education in the field of forensic science and criminalistics, which have a European integration orientation, will contribute to the formation of professionally important qualities, competencies and professional motivation in future forensic experts. Therefore, the purpose of this article is to study in more detail the educational issues related to forensic experts using theoretical methods of systematic analysis of legislation and scientific literature.

RESEARCH RESULTS AND DISCUSSION

Analysis of educational requirements for persons seeking to become forensic experts or those who want to improve their qualification level

One of the current features of the development of Ukrainian society is its transition to the stage of democratic transformations in the fields of education and science, which is characterised by new requirements for their development and outlines the corresponding qualitative changes in the country's social, economic and educational policies. At the same time, the main factor in the country's sustainable social and economic recovery should be ensuring the growth of the intellectual potential of citizens, and the introduction of scientific, technical and technological developments into the life of society.

According to Article 26 of the Universal Declaration of Human Rights, everyone has the right to education, which shall be directed to the full development of the human personality and the promotion of human rights and fundamental freedoms. Education shall promote understanding, tolerance and friendship amongst all nations, racial or religious groups and shall support the activities of the United Nations to maintain peace (UN General Assembly, 1948). Also, the Convention on Technical and Vocational Education (UNESCO TVE, 1989) states that the development of technical and vocational

education should contribute to the maintenance of peace and friendly understanding between different countries.

In accordance with the 'Action Program for the Implementation of the Bologna Declaration (994_525) in the Higher Education and Science System of Ukraine', the main purpose of which is to take measures to ensure the entry of the national education and science system into the European space, Ukraine's development is determined in the general context of European integration with a focus on the fundamental values of world culture, which is an integral attribute of a civil democratic society. At the same time, the integration process consists of introducing European norms and standards in education, science and technology, as well as disseminating Ukraine's own cultural, scientific and technical achievements to the European space, with the aim of enhancing Ukraine's European cultural identity and integrating into the European intellectual, educational, scientific and technical space (Order of the Ministry of Education and Science, 2004).

Thus, the current stage of development of human civilisation, defined as the transition to a knowledge society, is characterised by qualitatively new requirements for the development of education and outlines democratic transformations that affect the corresponding changes in the country's social, economic and educational policies. The leading factor in the sustainable social and economic development of the country is ensuring the growth of the intellectual potential of the community and the introduction of scientific, technical and technological developments in the life of society (Petrychenko, 2023).

Due to the rapid changes taking place in world society, military intervention and crisis conditions, it is important for a modern forensic expert to adapt quickly, learn well and think critically and systematically. The rapid development of knowledge and the continuous introduction of innovations require the same continuous retraining of employees of forensic institutions. According to Alekseychuk and Starodubov (2022), high-quality training and retraining of forensic experts is important for the implementation of independent and objective legal proceedings, which requires a balanced approach to the organisation of such training, ensuring quality, timely and substantiated training. So, it can be concluded that the qualitative level of educational training of competent forensic experts is one of the main criteria for the effectiveness of forensic activities in general and the entire system of expert support in particular, as well as one of the indicators of the effective performance of the tasks assigned to it by the state by a forensic institution. In addition, the high level of competence of the employees of a forensic expert institution is its important competitive advantage in the market for the provision of expert services not only in its own country but also abroad.

As to the term 'competence', it should be noted that amongst the scientific community, it is considered to a

greater extent to be the possession of relevant knowledge and abilities that allow a person to effectively carry out professional activities and as a key to updating the content of education (Bardinova, 2023; Ovcharuk, 2003). According to American tradition, which considered competence to be mainly a description of employee behaviour, the term was first introduced in 1959 by White (1959) to describe the individual characteristics of a person that helped him or her to perform the assigned work at the highest level. This approach was developed by McClelland (1998), who proposed to predict the effectiveness of employees based on the assessment of competence rather than intelligence. In the works of O. Ovcharuk, according to the definition of the International Department of Standards for Learning, Achievement and Education, the concept of competence is defined as the ability to perform activities, tasks or work in a qualified manner. The concept of competence includes a set of knowledge, skills and attitudes that enable a person to act effectively or perform certain functions aimed at achieving certain standards in a professional field or a certain activity (Ovcharuk, 2004). In general, we can say that the concept of 'competence' is defined by scientists as a complex concept that identifies a certain level of knowledge, skills, abilities, value orientations and personal qualities of a specialist that ensures efficiency and quality in professional activities. At the same time, some scholars distinguish between the concepts of 'competence' and 'competence' in their studies, arguing that 'competence' is a broader and more integral concept. For example, Gruzina (2021), analysing these two concepts, concludes that 'competence' can be defined as a high level of mastery and active use of competencies in professional activities, which ensures that the employee has a thorough knowledge of the essence of the tasks performed, the ability to apply effective ways and measures to achieve the intended goals and the skills of making timely rational decisions, guided by their own intuition and social and professional experience. At the same time, the researcher concludes that it is not the employee's competencies but rather his or her competence in a particular area of professional activity, which is a prerequisite for successful work within a particular position or organisation as a whole. From the point of view of creating and operating a competent organisation, taking into account the competencies of employees allow one to identify their potential and abilities, rationally distribute tasks, build a training and development system and thereby increase the competitiveness of the organisation. This is important for filling positions with employees, involving employees in the development and implementation of strategic decisions who, having certain competencies, are potentially ready to perform tasks of this level. It is mandatory to develop competencies to the level necessary to acquire the desired competence in a specific range of issues (Gruzina, 2022).

As for more official sources, the Recommendation on Human Resources Development, 2004 (No. 195) of the International Labor Organization states that the term 'competencies' covers knowledge, skills and experience that are applied and improved in specific conditions. At the same time, along with this term, another term is distinguished—the term 'qualifications', which means a formal expression of the employee's technical or professional skills that are recognised at the international, national or sectoral levels (Recommendations, 2004).

In most cases, obtaining the qualifications of a forensic expert requires a comprehensive higher education (Alekseychuk and Starodubov, 2022). Thus, the current legislation in Ukraine establishes requirements for persons seeking to obtain or confirm the qualification of a forensic expert. In particular, it is stated that forensic experts may be persons who have the necessary knowledge to provide an opinion on the issues under investigation, have appropriate higher education, an educational qualification level not lower than a specialist and know the legislation of Ukraine on forensic examination and have undergone appropriate training (training/internship in a state forensic institution in the relevant specialty), as a result of which they passed the exam and received the qualification of a forensic expert in a particular specialty (Zakon Ukrainy, 1994).

Problems in the educational processes of forensic experts

There are currently certain problems in the process of educational training of competent forensic experts in Ukraine, which include, amongst others,

- Insufficient theoretical fundamentality of the training of forensic experts and their practical mastery;
- exclusion from the curriculum of the disciplines necessary for the full training of forensic experts;
- overloading the curriculum with an excessive number of disciplines not related to expert activity;
- imperfection of the system of approaches to the selection of future specialists;
- insufficient development of the mechanism for supporting the activities of specialists and;
- shortcomings in the system of control and self-control of the level of professional training of experts (Kofanov, 2013).

To this list should be added the obvious lack of familiarity of experts with all existing methods of the Register of Forensic Examination Methods in the relevant specialties and the possibility of their practical application in providing an opinion. There is also the problem of limited access to the most modern equipment and resources, which prevents experts from gaining new practical experience.

Some scholars also note that the working conditions of the forensic expert, which are often associated with the negative emotional impact of the objects of study, somehow deform his

psyche. Properly organised psychological training prevents these negative findings and maintains the efficiency of the expert at the appropriate level (Kurdes, 2021). Thus, another problem is identified—the problem of psychological training of a forensic expert.

The main reasons for the crisis of professional and psychological training in general are:

- lack of conditions for self-realisation, improvement and development;
- deterioration of the image of the specialty, wrong choice of profession;
- instability of the socio-economic situation;
- professional deformation of the personality;
- maladaptation to the activity;
- reduction of staff positions;
- insufficient wages and;
- difficult living conditions (Babenko and Ostapovych, 2016).

To this list can now be added work in the difficult conditions of martial law in Ukraine, which undoubtedly has a moral and psychological impact on the forensic expert.

Practical recommendations

Foreign countries' experience shows that the greatest success in economic development is achieved by those institutions that create favourable conditions for the realisation of the creative abilities of each employee and introduce advanced innovative technologies for human capital management (Uhrovetskyi et al., 2023).

To provide thorough, solid, systematic knowledge, it is necessary to implement a comprehensive approach to the learning process, which consists of observing the unity of three parameters:

1. The educational process should be a unity of social, psychological and pedagogical.
2. The unity of all learning functions (educational, developmental, educational).
3. Unity in any methodological system of all components of the educational process: goals, content, methods, organisational forms and means of learning, with the leading role of learning goals (Sliepkan, 2005).

Furthermore, the training of forensic experts within the framework of their advanced training requires individualised training programmes that take into account the specificity of the acquired knowledge and the specifics of the mission of expert institutions in ensuring justice in Ukraine. The training of forensic experts and their advanced training within a particular specialty in today's critical learning environment requires expanded access to educational Internet resources. In the context of global digitalisation, it is advisable to study the experiences of European countries that are more progressive in terms of access to education. Every European seeking to

obtain a specific education has the opportunity to freely use the materials of the educational institution where they study. The adoption of such experience is logical and appropriate within the framework of European integration processes in Ukraine, and the exchange of educational resources will help strengthen international partnerships and improve the quality of training of specialists in any field (in particular, forensic science) (Davydenko et al., 2023).

As for the psychological support of employees of forensic institutions, we support the position of Kurdes (2021) that the functions of organising psychological training should be entrusted to the departments of advanced training of state forensic institutions, expanding their tasks and powers. At the same time, the main time of psychological training of forensic experts should be devoted to practical training using innovative methods, technologies and interactive forms of training, including business games, simulations of situations and training involving employees of psychological research units of forensic institutions, specialists of specialised departments of higher education institutions, specialised enterprises, institutions and organisations in conducting these classes (Kurdes, 2021).

An important aspect of raising the level of education and competence of forensic experts and researchers at state expert institutions is their participation in international projects and programmes. A striking example is the large-scale project 'Open Educational Resource: Forensic Science' implemented by the National Scientific Center 'Hon. Prof. M.S. Bokarius Forensic Science Institute' of the Ministry of Justice of Ukraine and Rīga Stradiņš University, which created a universal solid basis for the educational training of forensic experts. The project's videos are dedicated to topical issues in forensic science and criminalistics and provide free remote access to them for students of various levels of education, researchers and forensic experts from other countries. Researchers and practitioners give positive feedback, which demonstrates the effectiveness of such projects. For example, some scholars note that 'the experience of the Ukrainian-Latvian partnership is a model of openness and accessibility of educational resources that demonstrate a voluminous information array that allows the user to self-educate in the chosen field of study and receive the appropriate training necessary to develop professional competencies. The implementation of projects aimed at providing free access to educational materials not only helps to adapt to the conditions of online learning but also expands the educational opportunities of applicants. For example, the training of forensic experts within the framework of the Open Educational Resource: Forensic Science project facilitates the exchange of experience between Ukrainian and Latvian specialists, positively influencing the formation of their knowledge and the remote acquisition of the necessary theoretical and practical basis for further professional

activities'. (Davydenko et al., 2023). Others emphasise that 'Open educational resources are among the important factors that affect the quality of contemporary education. The new form of education has been recognised by UNESCO and has become an important element in reaching sustainable development goals in educational sector. Open educational resources can enhance quality of the learning process at two levels at least. First, it is the quality of teaching and secondly, it is the new digital approach to learning environment that allows access to all studies necessary to perform forensic expert activities' (Palkova et al., 2022).

Another idea of scientific interest is the proposal by Indian scholar Nilendu (2024) to actively engage educators, practitioners, researchers and policymakers to collaborate and implement an evidence-based education system (EBES) in forensic science. The incorporation of an EBES in forensic education offers a range of potential benefits. One key advantage is the enhancement of critical thinking skills amongst forensic students. For instance, consider a case where students are presented with a complex simulated crime scene involving a mix of physical evidence, including fingerprints, bloodstains and trace evidence. This hands-on, research-based approach illustrates how the integration of evidence-based education principles can effectively bridge the gap between theoretical knowledge and practical application in the field of forensic science (Shumba, 2015). Evidence-based education encourages students to critically evaluate and analyse information, enabling them to develop a deeper understanding of forensic concepts and principles (Ledbetter, 2012). Such educational programmes make it possible to train highly qualified specialists in the field of forensic science at the stage of studying in higher education institutions. A similar opinion is shared by Ukrainian scientists, who, based on the results of reviewing the experience of implementing student research work at the Department of Microbiology, Virology and Immunology, conclude that the participation of higher education students in research contributes to the formation and development of future professionals, such as rational and effective acquisition and use of knowledge in research and future professional and practical activities, readiness to improve professional skills, continuous self-education and development of leadership and organisational skills (Polianska et al., 2022). Currently, in Ukraine, the number of similar projects and programmes in the field of forensic science is too small. At the same time, international conferences, educational seminars and trainings on expert support for justice in general and forensic science in particular are becoming more practical. Of course, at present, in difficult military conditions, such trainings are held in Ukraine in a remote form.

It is also undeniable that the educational activities of forensic experts in Ukraine currently require effective measures for their

unification, which should be carried out within the framework of international, regional and national standardisation. The globalisation processes currently taking place in Ukraine require the implementation of international norms into national legislation and a detailed study of the foreign practice of regulating forensic activities, which will provide opportunities to achieve a new level of quality and professionalism in conducting expert research by forensic experts. Scientists note that the standardisation of forensic expert activity should be considered as a tool for building an institution management system for providing quality and efficient research and, as a result, meeting the needs of customers (Kipouras and Ovsiannykova, 2021). At the same time, in the context of reforming forensic examination, world experience in the form of international standards should be taken as a basis and move in the same direction with colleagues from the entire forensic community of countries that also share this approach. The efforts of professionals who will influence changes in legislation and bylaws should be aimed at developing uniform rules and regulations under which all subjects of forensic examination, and forensic science and all stakeholders will receive a result that is beyond doubt (Tatarnikova, 2020). Therefore, in the context of standardisation generated by modern globalisation processes, membership in international forensic organisations, in particular in The European Network of Forensic Science Institutes (hereinafter referred to as ENFSI), which is the leading and most developed association of forensic institutions and contributes to improving the quality of forensic examination and improving the mutual exchange of information in the implementation of forensic activities, is also an important step to ensure international standards of forensic science.

CONCLUSION

In summary, it can be concluded that education is a structured systematic process through which a forensic expert reaches the level of scientific knowledge and experience necessary to conduct examinations. In the course of the study, it was determined that the system of education of forensic experts in Ukraine is currently underdeveloped, has certain shortcomings and requires effective measures to unify it within the framework of international, regional and national standardisation.

It has been established that, in most cases, a comprehensive higher education is required to obtain the qualification of a forensic expert. As an expert's professional thinking is formed at the early stages of higher education and professional specialisation, the professionalisation of expert activity should begin to be based on the fundamental education of a future forensic expert. A part of such a training system should be

the interaction of research institutions and higher education institutions aimed at improving the level of education of students who intend to become forensic experts. It has been proven that the early introduction of state educational programmes in higher education institutions aimed at combining the theoretical knowledge and practical experience of practicing experts is an effective mechanism for obtaining highly qualified personnel for the expert examination system. At the same time, such modern educational programmes should be based on the principles of accessibility and openness and should be aimed at creating the most favourable conditions for the training of forensic experts and at continuous improvement of their professional training by deepening and expanding their professional knowledge, skills and abilities. To our mind, it is advisable to conclude agreements on scientific and practical cooperation not only with domestic but also with foreign partners. It would be equally useful to involve forensic experts themselves in the exchange of foreign experience.

Based on the study, the author identifies the causes of the crisis of professional and psychological training of personnel, and in particular, the author suggests that the properly organised psychological training of a forensic expert, which would support his/her activities at a high professional level, is an extremely topical issue that requires the special attention of scholars and may become a relevant area for future research.

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