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UNITY OF SCIENCE AND PRACTICE IN FORENSIC SCIENCE ACTIVITIES

The formation of Ukraine as a rule of law state, the improvement of the legal regulation of the use of special knowledge in order to properly and efficiently protect the rights and legitimate interests of individuals and legal entities and the state, eliminating the inconsistency of the provisions of the law regarding examination, objectively require an analysis of the current state of science and practice in forensic science activity. Forensic science covers a considerable number of scientific disciplines and actual problems of teaching expert science. The scientific article proposes to use the scientific potential of expert institutes, educational institutions and research institutions engaged in applied research. Cooperation between institutions involved in expert research, due to their scientific achievements and methodological developments, can increase professional ability in the investigation of certain categories of crimes, and will also contribute to the integration of forensic activities and will lead to the harmonization and improvement of national legislation, theoretical foundations of forensic activities, international recognition of its individual components and, in general, will increase professional masters of experts. Ways to improve the professional education of future judicial experts are analyzed. In this paper, the ideas for solving the urgent problem of unity and interaction of education, science and practice have been expressed, and hopefully they will be taken into account.

Keywords: specific expertise, forensic expert; higher education; educational process; professional thinking; forms of educational preparation; scientific activity; scientific workers; research institute; advanced training; professional qualities; scientific and methodological activity; specialized scientific council.

Formulation of Research Problem. Generalization of expert practice indicates that forensic examination covers almost all fields of human life. Work of a forensic expert is directly related to the science and education of future professionals. As a component of the justice system, it shapes the level of professionalism, responsibility, right to independent and qualified, focused on the use of the latest achievements of the science and technology of forensic expertise.

Research institutes in Ukraine possesses enormous potential.

Today, we have a significant amount of scientific work and techniques that are being commissioned and successfully implemented, with the highest level of expertise being held.

In this article, ideas about the forms of productive exchange of

ideas, reconciliation of theoretical positions and scientific work of specialists should be covered; to find unity of science, education and expert practice; provide guidance on how to tackle the three fundamental foundations of forensic science activity.

Analysis of recent research and publications. Issues of unity of science and practice in forensic activity in their works were investigated by domestic and foreign scientists: O. M. Kliuiev, E. B. Simakova-Yefremian, N. I. Klymenko, V. Iu. Shepitko, V. V. Yusupov, M. L. Tsymbal, L. M. Derecha, M. V. Skoryk, M. Ya. Sehai, N. M. Tkachenko, M. M. Skrypynyk, E. V. Bashynskyi, V. S. Sadovska, V. A. Remyzov, V. V. Semenov, Ye. R. Rosynska, O. I. Usov, M. T. Bilukha, O. V. Feldi, S. V. Yevdokimenko, V. Hoshovskyi and others¹. In our opinion, the experience of previous generations is very important, but with the development of society, a look into the future of the science of forensic

¹ Dyv., napr.: *Simakova-Yefremian E. B.* Do pyttannia pro vzaiemozalezhnist yevropeyskykh intehtratsiinykh protsesiv i tendentsii intehtratsii spetsialnykh znan v Ukraini [On the question of the interdependence of European integration processes and tendencies of integration of special knowledge in Ukraine]. *Teoriia ta praktyka sudovoi ekspertyzy i kryminalistyky*. Vyp. 17. Kharkiv : Pravo, 2017. S. 152–158; *Sopilnyk R. L.* Ekspertne zabezpechennia pravosuddia u konteksti yevrointehtratsiinykh protsesiv [Expert Justice in the Context of European integration Processes]: *Kryminalistychnyi visnyk*. №1 (23), 2015. S. 39–44; *Spitsyna H. O., Belevtsova S. O.* Shchodo pyttannia formuvannia novitnoi paradyhmy teorii ta praktyky sudovoi ekspertyzy v Ukraini [On the Formation of the Newest Paradigm of Forensic Theory and Practice in Ukraine]. Aktualni pyttannia sudovoi ekspertyzy i kryminalistyky : zb. materialiv mizhnarod. nauk.-prakt. konf., prysviachenoi 150-richchiu z dnia narodzhennia Zasl. prof. M. S. Bokariusa (Kharkiv, 18–19 kvit. 2019 r.). Kharkiv : KhNDiSE, 2019. S. 63–65; *Kliuiev O. M.* Mizhnarodni standarty ta mizhnarodne spivrobotnytstvo u sferi sudovo-ekspertnoi diialnosti v Ukraini [international Standards and international Cooperation in the Field of Forensic Expertise in Ukraine]. Aktualni pyttannia sudovoi ekspertyzy ta kryminalistyky : materialy mizhnarod. nauk.-prakt. konf., prysviachenoi 95-richchiu stvorennia Kharkivskoho naukovo-doslidnoho instytutu sudovykh ekspertyz im. Zasl. prof. M. S. Bokariusa (m. Kharkiv, 10–11 zhovtnia 2018 r.). Kharkiv : Pravo, 2018. S. 5–8; *Klymenko N. I.* Zahalna teoriia sudovoi ekspertolohii: poniattia i mistse v systemi naukovoho znannia [The General Theory of Forensic Expertology: Concept and Place in the System of Scientific Knowledge]. *Zb. nauk.prats. irpinskoi finansovo-yurydychnoi akademii (ekonomika, pravo)*. Vyp. 2. 2013. S. 101–106; *Shynkarenko I. R., Spitsyna H. O.* Istorychni vytoky ta perspektyvy rozvytku teorii ta praktyky sudovoi ekspertyzy [Historical origins and prospects of the development of the theory and practice of forensic examination]. Aktualni pyttannia sudovoi ekspertyzy ta kryminalistyky : zb. materialiv mizhnarodnoi naukovo-praktychnoi konferentsii, prysviachenoi 95-richchiu stvorennia Kharkivskoho naukovo-doslidnoho instytutu sudovykh ekspertyz im. Zasl. prof. M. S. Bokariusa (10–11 zhovtnia 2018 r.). Kharkiv : Pravo, 2018. S. 20–22 ta in. [in Ukrainian].

science, we need to form new ideas on this issue. The scientific work presents methods of obtaining special knowledge, their teaching and application in the practical activity of experts in forensic science.

Article Purpose. The purpose of this article is to discuss the issues of improving the process of obtaining special education in certain types of expert specialties, training and training of future specialists; the importance of educating a professional generation of forensic experts is analyzed; coverage of the problem of providing the future researcher with the knowledge on organization and carrying out of scientific work, formation of skills in carrying out such work; determining the forms and methods of professional development of practitioners; encouraging practitioners to participate in research. Ideas on the interaction of science, education and practice in the field of forensic expertise are offered.

Main content presentation. According to Article 1 of The Law of Ukraine *On Judicial Examination* defines forensic expertise as research based on specific knowledge in the field of science, technology, art, craft, etc. of objects, phenomena and processes in order to reach a conclusion on issues that are or will be the subject of litigation¹.

According to part 1 of Article 5 of the Law of Ukraine: *On Higher Education* of December 28, 2014 № 76-VIII, in the current version of 09.08.2019 the second (master's) level of higher education corresponds to the eighth level of the National Qualifications Framework, and provides for the acquisition of advanced theoretical and / or practical knowledge, abilities, skills in the chosen specialty (or specialization), general principles of methodology of scientific and / or professional activity, other competences, sufficient for effective performance of tasks of innovative character of the appropriate level of professional activities².

Special education is obtained by the Institute of Law and Postgraduate Education of the Ministry of Justice of Ukraine; under the specialty training programs NDUSE and at the corresponding faculty of training of forensic experts of the Kiev National University of Internal Affairs. It is the only educational institution in the Ministry of Internal Affairs system, which prepares applicants for forensic science (higher education: *bachelor* in the *law* Area of specialization) for units of the National Police of Ukraine, as well as for applicants for higher education

¹ Pro sudovu ekspertyzu [On forensic examination]: Zakon Ukrainy vid 25.02.1994 roku № 4038-KhII. URL : <https://zakon.rada.gov.ua/laws/show/4038-12> (data zvernennia 24.06.2019) [in Ukrainian].

² Pro vyshchu osvitu [About higher education]: Zakon Ukrainy vid 28.12.2014 roku № 76-VIII. URL : <https://zakon.rada.gov.ua/laws/show/1556-18#n77> (data zvernennia 24.06.2019) [in Ukrainian].

Master in the specialty *Law* Special education is obtained by the Institute of Law and Postgraduate Education of the Ministry of Justice of Ukraine; under the specialty training programs – RIFE and at the corresponding faculty of training of forensic experts of the Kiev National University of Internal Affairs. It is the only educational institution in the Ministry of Internal Affairs system, which prepares applicants for forensic science (higher education «bachelor» in the specialty «law») for units of the National Police of Ukraine, as well as for applicants for higher education *Master* in the *Law* Area of specialization *Forensic Science* for the units of the Expert Service of the Ministry of Internal Affairs of Ukraine.

Professionalization of forensic expert activity is based on the fundamental training of the future Forensic Expert in Institution of higher education where for the applicants for the Master's degree majoring in 081 *Law* certification programs are performed for training of experts of the Ministry of Internal Affairs of Ukraine in the following areas: Forensic Engineering; Forensic drug examination; Forensic computer technical examination; Forensic molecular genetic examination; Forensic merchandising; forensic transport and trace evidence examination; comprehensive exam. Use of specific expertise in criminal proceedings; forensic chemistry; forensic support of pre-trial investigation; technical and forensic support of investigation of crimes related to the use of ammunition, firearms, explosives (devices) and technological explosions; digital technology.

Problems arise in obtaining specific expertise by students.

Teaching of *Forensic expertology* is a holistic view of the procedural, organizational, methodological, scientific and tactical bases of the appointment of judicial expertise, their current types and capabilities, as well as developing skills in the preparation, appointment of forensic expertise and evaluation of expert's findings in the investigation. Main tasks of studying the discipline of Forensic Expertise are to consolidate the theoretical knowledge gained by the students at lectures and as a result of independent work, as well as to acquire practical skills in the appointment of forensic expertise and the assessment of expert opinions; but the lack of modern textbooks complicates the process of cognition. This tutorial will contain a comprehensive analysis of the regulatory framework and procedural issues related to appointment and performing forensic examinations, evaluation of forensic scientist conclusions, as well as the specifics of prevailing types of research in civil and economic proceedings. From 2016 for the same purpose, but on a different procedural and practical basis, a training manual Forensic Science in administrative proceedings is being developed, and from 2018, the

participation as co-executors in the preparation of a tutorial Forensic Science in criminal proceedings is planned. The success of teaching depends largely on the availability of technical training, that is, a multimedia textbooks and manuals, and therefore the level of clarity and quality of perception of the material. In our opinion, the aforementioned tutorials will become a solid didactic basis for forensic scientist training at the modern level of Forensics Science development.

We believe that it would be advisable to conclude agreements on scientific and practical cooperation between the departments of various higher education institutions, bureau of forensic and scientific institutes in the organization and improvement of the educational process, joint development and implementation of measures aimed at improving the level of student learning. Equally useful would be the involvement of practitioners in practical training.

We believe that professional thinking is important, namely the professional thinking of an expert, which is formed in the early stages of higher education and professional specialization. This thinking is not just a certain amount of knowledge that, of course, needs to be constantly updated, it is also the use of them in practical activity, it is a process of consciously structuring the skills for the necessary and unnecessary and forming a structure of priorities.

In our opinion, it is necessary to educate students of higher educational institutions *forensic thinking* that can be called *conceptual* which is a process of perception, understanding of information, ability to interpret, combine in ideas, to draw a number of conclusions from certain data or perceived information. Thanks to this skill, they will be able to identify or detect, through research using the knowledge gained, some information not found in the original source. Components of this psychological process are:

At first, a sensory system that allows you to perceive and process information that a person receives through sight and hearing; Second, the working memory in which information is processed and integrated at the time it is received; Third, long-term memory is the primary function of which is to store mental schemas through which we can exercise thoughtful thinking.

Therefore, the professionalization of expertise should be based not primarily on the retraining of specialists in certain fields of knowledge, not on the system of advanced training (although this case is quite important and necessary) but on the basic education of a future forensic expert.

We offer the use of a whole range of different forms of educational and vocational training for students, namely: updating e-learning

professional education: m-learning; u-learning; f-learning; blended-learning, which uses interactive and computer-based learning technologies, as well as the use of case studies as case studies; debate; business games; case study; trainings; video conferences; *brain storm*; focus groups; role games; group discussions; method of projects; scientific conferences and seminars; Web conferencing; individual work with experts of expert activity; scientific experiments; educational practice; study tours for students of law and medical universities in the office-museums of research institutes, for example, in the office-museum of Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations, etc.

Also, we consider it advisable for students to develop, on the basis of higher education institutions, together with the Forensic science Institute of, a certification educational program called *Forensic Science Activities*. To involve not only leading teachers of universities, but also well-known practitioners in the field of forensic expertise both from Ukraine and from abroad, to teaching disciplines. Upon completion of training in the chosen program to issue the appropriate certificates, which will be taken into account in future employment; or create a joint master's program of double diploma together with foreign universities or research institutes in the framework of international cooperation in the field of forensic science. Forensic examinations in state specialized forensic science institutions of the Ministry of Justice of Ukraine are performed by specialists possessing qualification of forensic expert in the relevant specialization and are researchers. The issues of providing the future researcher with knowledge of management and carrying out of scientific work, formation of skills in carrying out such work are often left unanswered. Such knowledge is acquired independently during research, i.e. in the process of self-study. It should be noted that on several occasions attempts were made in various higher education institutions to include in the curricula of some areas of specialization (mainly technical ones) the Research Fundamentals discipline. Several textbooks and manuals have been prepared and published in this discipline, but mastering such a discipline without practice does not produce high results. Such manuals are designed to provide the very basics of knowledge on research, and this is obviously not enough for an employee of a forensic science institution.

Therefore, there is an urgent need to establish a systematic work in the Institute of Forensic Expertise, aimed at familiarizing researchers with the system of organization of scientific work, methodological bases of scientific knowledge, information support of research. We believe that it is

necessary to start such work during the preparation of employees for the passing of the relevant qualification exams. As part of the system of such training should be training to improve not only the professional but also the scientific level of employees. It should also be added that Article 19 of the Law of Ukraine «On Scientific and Scientific and Technical Activities» specifies that the main forms of training of scientific personnel are postgraduate and doctoral studies. At the Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations which is a state specialized scientific institution belonging to the sphere of administration of the Ministry of Justice of Ukraine, and, in accordance with the legislation of Ukraine, in 2018 opened a postgraduate / doctoral study program for training of higher qualification of the third (educational-scientific) higher education level. The Institute is one of the oldest state forensic institutions of Ukraine with sufficient experience in personnel training. One of the main indicators of the Institute work is the preparation and defense of dissertations by its staff. Throughout its existence, the Institute was concerned with the training of highly skilled scientific personnel, because it is a guarantee of obtaining qualitative, thorough conclusions of the examinations. The creation of a specialized scientific council for the dissertation on the basis of this postgraduate study allows to enrich the expert staff with specialists of higher qualification (PhD).

The Institute carries out scientific, forensic, scientific, technical, scientific-organizational and educational activities in the field of forensic, criminalistics and law. Institution scientific activity is manifested in the development of theoretical and methodological provisions of forensic examination, (according to annual plans approved by the Ministry of Justice of Ukraine for all state specialized forensic science institutions that are within the scope of its management). Institute staff takes part in research works and according to the results, original, unique author's works of theoretical and methodological orientation are created. It is safe to say that the leadership in the number and importance of scientific development belongs to the KhRIFE: more than half of all subjects of the judicial and expert institutions of the Ministry of Justice of Ukraine are being developed⁶.

The KhRIFE research consists of scientific topics on theoretical and organizational issues of forensic activity. Work on the monograph. «Improving Forensic science classification»¹. Through the efforts of

¹ *Klymenko N. I. Osnovni vydy diialnosti Kharkivskoho NDi sudovykh ekspertyz i napriamy yikh udoskonalennia [Main types of activity of the Kharkov Research institute of Forensic Expertise and directions of their improvement], 2018 r.*

scientists and practitioners in the field of forensic graphology, a technique is developed to study handwritten records made in Roman alphabet. For the first time in Ukraine, an algorithm for studying records written with letters of the Roman alphabet will be created. It is a non dominant writing system in Ukraine but more and more actively used in circulation in recent times. Linguistic direction is also in the area of scientific search, and recently the work on the method of linguistic research of offensive expressions has been completed. Questioned document examination (QDE) in the aspect of scientific topic is related to development of a methodology for research on new banknotes of Ukraine, as well as with the participation of our Dnipropetrovsk colleagues on the diagnostic study of extinguished cash receipts. Trace evidence analysis is presented by the development of methods for diagnostic and identification studies of animal tracks – this topic has aroused interest from British colleagues. Ballistics in the scientific subjects of the KhRIFE is accordingly presented by the method of determining the properties of balls after bounce. Expertise of materials, substances and products has a wide object spectrum, in which scientists of KhRIFE are engaged in the development of different methods: this is the study of binary and complex mixtures of petroleum products and the study of meat and meat products. In the field of scientific development of experts in the field of transport engineering – a comprehensive method for detecting a person who was driving a motorcycle or other motor vehicle during an accident; development of parameters of braking of freight trains in different road conditions and expert assessment of road transport situations involving vehicles with special signals continue. In the field of Construction and Technical examinations forensic scientist efforts are aimed at creating reliable methodological approaches to determining the criteria of capital construction objects. A full range of scientific developments in life safety is related to method development of integrated Engineering Technological examinations; researches on electrical injuries, as well as the determination of conditions for safe elevator operation. As computer technology is developing rapidly, conducting its expert research requires rapid improvement. In this direction, experts are developing a technique for establishing the facts of destruction and recovery of information on digital media⁷. This is not full range of scientific topics that are developed at the Institute, demonstrates the high potential of its staff and the

URL : http://www.hniise.gov.ua/user_files/File/sbornik/ (data zvernennia 24.07.2019) [in Ukrainian].

possibility of scientific progress in the field of forensic science of justice in Ukraine.

We consider that Performing conferences (including international ones), seminars, round tables that is one of the forms of scientific work of the Institute. Only in the past year in this kind of activities organized by the Institute was attended by representatives of Ukraine and many countries near and far abroad. Another form of scientific activity is the publication of its results in various publications, for example, monographs, articles, manuals, abstracts, papers, declarative patents, etc.

As the already noted, State specialized research institutions of forensic examinations of the Ministry of Justice of Ukraine are characterized by a certain specificity in personnel selection. As these organizations have the status of research institutions, they also include scholars in addition to the positions of forensic experts (judicial expert, senior judicial expert, leading judicial expert, chief forensic expert). The researchers also include persons who have a degree and work in a specialty according to a group of specialties in the branches of sciences, according to which a degree⁵ has been awarded.

In addition, it should be noted that it is precisely the foreseen qualification of the posts of employees of research institutes of forensic examinations of the Ministry of Justice of Ukraine established the rule that as scientific workers who have the qualifications of a judicial expert, on the instructions of the leadership, KhRIFE conducting forensic examinations (expert studies) with the use of scientific methods of forensic science and forensic examination, as well as forensic experts in accordance with the technical tasks, carry out scientific work on the creation of methodologies (methodological recommendations) conducting forensic examinations.

In our opinion, such an approach is optimally correct, because it combines the theory and practice of forensic examination. During the performance of the functions of a court expert, professionals work in tense conditions that are related to such peculiarities of their work: complex scientific nature and intensity of intellectual work, its unregulated duration in the conditions of performing urgent and especially important tasks for expert support of justice; socially influential consequences of the importance of work, high social responsibility for their work and its results; constant moral and psychological load and tension, performance of official duties during the conduct of forensic expert activity in stressful situations; systematic staying on business trips, including trips to places of committing crimes, while performing official duties with a risk to health and life; manifestations of moral and psychological pressure, threats and

immediate threats against a forensic expert in connection with the performance of his duties. These actors perform their duties in the conditions of a shortage of time, influence on them of particularly strong stimuli and the dominance of negative emotions in the absence of positive, increased responsibility in making decisions and the need for immediate action, etc¹. As in any other profession, the expertise of forensic experts lies in the possession of appropriate means skills and work operations. In the current state of forensic activity, the profession of subjects of forensic expertise becomes especially relevant.

Professional diagram is a certain set or system of skills and abilities, psychological qualities necessary for the successful pursuit of professional activity. Thus, V. O. Konovalov, examining the professional qualities and psychology of persons conducting proceedings in the case, distinguished among the professionally necessary qualities such qualities as creative thinking, communication skills, volitional qualities, organizational abilities, ability to withstand negative emotions. In addition, she points to the need for constant work on themselves, in order to prevent professional deformation. In particular, it is proposed to make a mutual exchange of positive experience, self-control, self-criticism, and strive to creatively solve professional problems².

Scientists have proposed other qualities which a professional expert must possess on a par with the development of a generalized reference model of a modern expert-professional. When developing the profession of a subject of forensic expertise, we consider it necessary to take into account the provisions of the Guide to the qualification characteristics of the positions of employees of the research institutions of forensic examinations of the Ministry of Justice of Ukraine. In the Professional diagram it is possible to consolidate the knowledge of normative legal acts regulating forensic expert and scientific activity; methodologies and

¹ Tkachenko N. M. Do pytannia profesiinoi pidhotovky sudovoho eksperta [On the Issue of forensic expert training], 2018. URL : http://www.hniise.gov.ua/user_files/File/sbornik/2018/%d0%9a%d0%be%d0%bd%d1%84_%d0%90%d0%ba%d1%82%20%d0%bf%d0%b8%d1%82%d0%b0%d0%bd%d0%bd%d1%8f%20%d1%81%d1%83%d0%b4%20%d0%b5_2018.pdf (data zvernennia 24.06.2019) [in Ukrainian].

² Perlin S. I., Baranov P. Yu. Problemy naukovo-metodychnoho zabezpechennia ekspertnoi diialnosti [Problems of scientific and methodological support of expert activity]. 2018 r. URL : http://www.hniise.gov.ua/user_files/File/sbornik/2018/%d0%9a%d0%be%d0%bd%d1%84_%d0%90%d0%ba%d1%82%20%d0%bf%d0%b8%d1%82%d0%b0%d0%bd%d0%bd%d1%8f%20%d1%81%d1%83%d0%b4%20%d0%b5_2018.pdf (data zvernennia 24.06.2019) [in Ukrainian].

special literature on conducting forensic examinations in the field of research; modern achievements of science and technology in the relevant field of knowledge, including the use of special equipment; rules and norms on occupational safety and safety, fire safety; rules of internal labor regulations. In addition, the profессиogram of the subject of forensic expert activity should also include requirements for his personal qualities and abilities. Particular attention should be paid to the issue of forensic experts training provided by the Institute of Law and Postgraduate Education of the Ministry of Justice of Ukraine.

In order to improve the qualification of employees of the judicial and expert institutions of the Ministry of Justice of Ukraine, representatives of research institutes of judicial expertise should take part in relevant thematic training courses and trainings. The main purpose is to update and develop the knowledge and skills of professionals necessary to effectively solve the problems of professional forensic activities. The topics of the course may include, for example, the training of forensic experts in theoretical, organizational and procedural matters.

We offer a remote process of professional development of certain types of forensic examinations. For example, by performing web conferencing; listening to audio recordings of lectures; passing proficiency tests and co-operation skills (such tests were developed and implemented in the justice system of the Ministry of Justice of Ukraine for examinations in order to obtain (confirm) the qualification of a forensic expert, but due to lack of funds equipment of the corresponding rooms, equipped as exam computer classes, the idea could not be put to life, but in the modern world, mini-computers are available in every On on hand, which simplifies the possibility of passing the training tests); participation of practitioners in the educational process of students, as guest lecturers, etc.

Since the vast majority of forensic researches is of a unique creative nature. The creativity of a forensic expert allows him to solve creative expert tasks. Many judicial experts lack the motivation, and often the conditions, to engage in scientific and methodological activities. The scientific and methodological activity of a forensic expert is an activity aimed at providing forensic experts with new knowledge that contributes to solving expert problems. Based on this concept, this activity is an important component of the expert activity, because the expert's conclusions are always new to the decision-maker (judge, investigator, lawyer). As a result of such activity, new knowledge is created not only for the client of expertise, but also for colleagues, namely: forensic experts⁹.

To achieve a high level of scientific and methodological activity of forensic experts, it is necessary to achieve a high level of motivation, that is, to create such conditions under which the expert would have a persistent need for creative reasoning. The level of scientific and methodological activity motivation should reflect one of the most significant criteria for evaluating the performance of a forensic expert. In this regard, a system of evaluative modeling of the level of motivation of a forensic expert to the scientific and methodological activity is being developed and implemented at the Kharkiv Scientific and Forensic Expert Center of the Ministry of Internal Affairs of Ukraine. The main parameters in the developed qualimetric evaluation model are: the level of participation in the development of techniques; in the examinations corresponding to the category of difficult; in the preparation of reports at scientific and methodological conferences; authorship of publications in scientific publications; the number of references to scientists for author's works, etc.⁹. In order to encourage practitioners to participate in the scientific and methodological activity; it is necessary to find free publication options, and even more, options with subsequent honorarium.

Unfortunately, many periodicals are now published, publishing authors' materials only for a fee.

In our opinion, this is unacceptable from different points of view, and, first and foremost, because an intellectual intellectual product must have value and therefore value. If the product is to be paid for by the author, then this product has no value or copyright infringement. It should also be noted that the subject of stimulation should be not the number of formal factors (number of publications, speeches, etc.), but also the importance and level of expert participation in the scientific and methodological activity which results in new fruitful ideas that qualitatively improve the expert activity. Considering that each forensic expert is capable of creative activity due to the specifics of the expert activity; it is necessary to take into account the individual personality traits of the expert that can prevent him from practicing scientific and methodological activity; lack of experience in writing articles, experience in speaking at conferences, developing manuals, etc. These formal reasons often prevent the expert from expressing himself in the scientific and methodological activity, despite the presence of significant creative abilities. One way to encourage employees to participate in the scientific and methodological activity is to develop a specialized academic board as a whole from forensic expertise and through specific specializations (sections) with involvement of participants in the presence of creative potential. The only specialized scientific council in Ukraine created at the

Hon. Prof. M. S. Bokarius Kharkiv Research Institute of Forensic Examinations. We believe that the institution has created the conditions under which practitioners seek to participate in the work of sections of the Academic Council. However, recognition of scientific achievements in the form of the thesis defense is of great stimulating importance. This requires the encouragement of experts to participate in the writing of scientific articles, abstracts and more.

False practices should be avoided when the author has to pay the publisher for the publication of his intellectual product¹. One of the significant factors for expert participation in scientific and methodological activity is co-authorship in the development of techniques for complex and up-to-date expert research. Availability of such techniques, which have been tested in leading expert institutions and received regulatory status, greatly increases the effectiveness and validity of research. An important role is played by the growing role of the expert that is author of the tried and tested method. It is necessary to expand the use of international forensic science activity. Unfortunately, the normative base of expertise in Ukraine in fact precludes this, including the application of international standards. To simplify access to scientific and methodological activities and motivation, we propose to declare ourselves, to announce a new philosophy of work between experts, academics and students of higher educational institutions. Together with practicing experts, create quality, up-to-date and useful products, services and tools for the experts themselves, academics and students to take education and science to the next level. We believe that this requires the creation of an online platform that will provide free services and tools for work, self-education of forensic experts, such as: conferences, video lectures, tests, online workshops, material library, news, test and work designer, use of personal blogs etc. By creating your own account, blogging, practicing expert scientists will be able to place free of charge their own, author's scientific and methodological researches in the form of abstracts, articles and more.

For our high level of professionalism, active use of services and tools, and for the achievement of outstanding results, we believe that practitioners and scholars should be encouraged to receive documentary honors free of charge, such as publication certificates, some of which can be considered as personal development trainings. The value of such award

¹ Ofitsiyniy sait Kharkivskoho NDi sudovoykh ekspertyz im. Zasl. prof. M. S. Bokariusy [Official site of Kharkiv NDiSE] URL : <http://www.hniise.gov.ua/14333-asprantura-ta-doktorantura.html> (data zvernennia 24.07.2019) [in Ukrainian].

papers will be that they are not purchased but issued solely for a high professional and scientific level.

Such a platform will allow open collaboration between practitioners and academics, academics and university students.

Conclusions. Many suggestions for resolving existing issues are outlined in the text of this article. Summing up, we can say that the analysis of scientific publications of the modern period of formation of the Ukrainian School of Forensic Theory on the influence of science on the development of practical activity testifies to the regularity of integration of scientific knowledge of different branches of scientific knowledge and the formation of innovative approaches to solve existing problems. In our opinion, solution of the forensic theory to the field of legal science seems to lie in the plane of an integrative approach to scientific knowledge (the theory of information dissemination in social systems, etc.). In our opinion, each component of the innovation process consists of a relevant chain: – education: fundamental knowledge (state and law theory, criminal law, constitutional law, etc.), professional knowledge (forensics, forensics, etc.), knowledge testing (trainings, role-playing games), practice); science: fundamental – applied research of problems of forensic activity, approbation of the obtained knowledge; transfer of knowledge into practical activities: development of proposals on creation of a system of state and non-state judicial-expert institutions; determining the place of forensic activity in criminal, administrative, economic, civil processes; definition of functions-tasks of authorized judicial-expert institutions; creation of innovative technologies for research of separate objects and development of scientifically-grounded methods of expert researches; practical activity: realization of knowledge in practical forensic activity.

Thus, the effectiveness of forensic activities depends on the implementation of innovative technologies in educational and research processes and, as a consequence, the formation of an effective organizational model of expert institutions. This determines the need for a more detailed appeal to modern views on the development of the theory of forensic science as an area of applied legal science and the main characteristics of scientific knowledge, as well as the peculiarities of its formation in the framework of integration into European forensic science.

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ЄДНІСТЬ НАУКИ ТА ПРАКТИКИ В СУДОВО-ЕКСПЕРТНІЙ ДІЯЛЬНОСТІ

Становлення України як правової держави, вдосконалення правового регулювання використання спеціальних знань з метою належного та ефективного забезпечення захисту прав і законних інтересів фізичних та юридичних осіб і держави, усунення неузгодженостей положень законодавства в частині проведення експертиз, об'єктивно вимагають аналізу сучасного стану науки та практики в судово-експертній діяльності. Судова експертиза охоплює значну кількість наукових дисциплін і актуальних проблем викладання експертної науки. У статті пропонується використовувати науковий потенціал експертних інститутів, навчальних закладів і дослідницьких установ, які займаються прикладними дослідженнями. Співробітництво між установами, що займаються експертними дослідженнями, завдяки їх науковим досягненням і методичним розробкам, може підвищити професійну здатність у розслідуванні окремих

категорій злочинів, а також сприятиме інтеграції судово-експертної діяльності в європейський простір і призведе до гармонізації та удосконалення національного законодавства, теоретичних основ судово-експертної діяльності, міжнародного визнання окремих її складових та в цілому підвищить професійну майстерність експертів. Проаналізовано шляхи вдосконалення професійної освіти майбутніх судових експертів та запропоновано ідеї проблеми єдності, взаємодії освіти, науки та практики, які, сподіваємось, будуть взяті до уваги.

Ключові слова: спеціальні знання; судовий експерт; вища освіта; навчальний процес; професійне мислення; форми освітньої підготовки; наукова діяльність; наукові працівники; науково-дослідний інститут; підвищення кваліфікації; професійні якості; науково-методична діяльність; спеціалізована вчена рада.

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