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DIGITAL TRANSFORMATION OF LEGAL EDUCATION

YULIYA KHARITONOVA,[1] LARISA SANNIKOVA[2]

[1] Lomonosov Moscow State University, Faculty of Law, Research and Education Center for Legal Studies of Artificial Intelligence and Digital Economy, Business Law Department, Moscow, Russia, sovet2009@rambler.ru
[2] State Academic University for the Humanities, Moscow, Russia, 7718609@mail.ru

CORRESPONDING AUTHOR
sovet2009@rambler.ru

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Abstract Employers and practicing lawyers face the challenges of digitalisation in society. Many lack enough experience and skills to work with digital technologies. To increase the competitiveness of their graduates, universities have established advanced training programmes related to digital technologies and law; however, a common approach has yet to be found. The development and implementation of the proposed Framework for the Digital Competence of Lawyers will assist in solving novel problems in the field of legal education. This framework should include general digital competencies for all legal professions. The use of computer or virtual simulators, demo versions of popular digital platforms, and LegalTech hackathons within the educational process has been proposed to improve the digital skills of law students, which will allow examining the essence of ongoing processes and better acquire theoretical knowledge about new technologies.

Keywords
digital skills and competence, future technology, ICT, employability, digital competence of lawyers

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1 Introduction: Conversion of the Legal Profession in the Digital Age

New digital technologies have a significant impact on the labour market, causing not only the emergence of new professions, but modifications to traditional ones as well. Education, being the most conservative social field, has failed to keep pace with the labour market's growing demands. Many professionals suffer because of this, including lawyers. Modern conditions require lawyers to apply various information technologies (IT) in their professional activities. Presently, too many legal professionals lack the competences to provide adequate legal support for client's or employer's high-tech business. Growing demands for legal knowledge and skills in a digital society pose ongoing challenges to traditional legal education. With this in view, we study the impact of digital technologies on legal education in order to provide recommendations for the specific skills legal students need to acquire to apply digital technologies in their professional activities.

The rapid digitalisation of society raises reasonable concerns whether certain professions are sustainable, at least without radical reforms. The legal profession is one of the oldest and most respected professions; however, even its future, according to some forecasts, is questionable.

A well-known study by Frey and Osborne (2017) examined the reduction in the number of occupations caused by computerisation. The percentage reducation for the following legal occupations are as follows:

- Legal secretaries 98 percent;
- Paralegals and legal assistants 94 percent;
- Court, municipal, and license clerks 46 percent;
- Judicial law clerks 41 percent;
- Judges, magistrate judges, and magistrates 40 percent;
- Detectives and criminal investigators 34 percent;
- Lawyers 3.5 percent.

Thus, the legal professions providing technical support to legal activities are subject to the greatest risk. The authors of the study emphasise that 'for the work of lawyers to be fully automated, engineering bottlenecks to creative and social intelligence will need to be overcome, implying that the computerisation of legal research will complement the work of lawyers in the medium term' (Frey & Osborne, 2017).

This conclusion was fully confirmed during the automation of legal activities, which is called LegalTech. LegalTech refers to technological solutions used by lawyers in rendering services or performing their professional activities. LegalTech allows legal professionals to avoid the routine work, thereby reducing costs, and accelerating their work.

LegalTech is most commonly applied in the following areas:

- Online services offering standard solutions for a specific category of legal issues;
- Programmes facilitating routine tasks (for example, preparing letter drafts and monitoring deadlines), processing repetitive tasks (for example, drafting and examining standard contracts, and recognising questionable provisions in documents for further analysis);
- Technologies reducing the complexity of the lawyer's work, analysing previous court decisions, and assessing the probable outcomes of legal issues or cases.

Significantly, in its embryonic stages, LegalTech was utilized by individual companies to help them decide whether certain aspects of their activities required automation.

Accordingly, y PwC Legal in cooperation with Legal Insight and Holger Zscheyge conducted the study 'Lawyers in Digitalization' (Infotropic Media). In the study, the contract drafting as well as the power of attorney issuing same and the legal databases were automated in companies with small legal departments (less than 10 lawyers), while one-half of the companies with medium-sized legal departments (11–50 lawyers) also included the automated feature that allowed issues/claims to be analyzed (i.e. forecasted). Consistently, the companies with the largest legal departments (more than 50 lawyers) also chose the automation to manage department matters as well.

Start-ups proposing technological solutions for the legal services market, either for the legal business or for the consumers, constituted the next stage of the LegalTech development. The primary spheres for these start-up projects included legal research, law practice management software, robot lawyer, contact analysis and legal forms, documents creators, litigation funding, lawyer search/marketplaces, online legal services, and notarisation tools.

Technological legal services provided to clients are known as LawTech in the legal literature. While LawTech seeks to meet clients' demands LegalTech targets lawyers. Ultimately, there are no significant reasons to justify such division since the same service, a robot lawyer being an example, can both facilitate lawyers' work by eliminating routine tasks and respond to clients' legal consulting demands. In our opinion, LawTech represents the next evolutionary stage of LegalTech's development, progressing from the automation of legal processes to the implementation of digital technologies.

However, it is the artificial intelligence (AI) and blockchain application that indeed threaten the traditional legal profession. Blockchain is a distributed database that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in a digital format. Blockchains are best known for their crucial role in cryptocurrency systems, such as Bitcoin, for maintaining a secure and decentralized record of transactions. Blockchains are having a dramatic impact on society. Bitcoin blockchain, being the first, allowed only a brief transaction record to be entered into the block. Modern bitcoins can contain programmes with implementation conditions as well.

A smart contract is a computer programme or a transaction protocol which is intended to automatically execute, control or document legally relevant events and actions acccording to the terms of a contract or an agreement. The programme will verify whether all the conditions to the contract or agreement have been satisfied and will confirm the transaction with an algorithm to exchange digital assets for goods. The smart contract's self-performance is commonly associated with the preliminary algorithmisation of contracts' performance obligations under certain terms, such as the automatic transfer of funds from the counterparty's account or termination of the contract if a payment is missed (Sannikova & Kharitonova, 2019).

Accordingly, the smart contracts were intended to fully eliminate lawyers, while the blockchain allows resorting to intermediaries. However, legal knowledge and skills are required to draft smart contacts as well as provide their due diligence. Gradually, legal practitioners must obtain additional skills to collaborate in the drafting process of smart contracts.

The AI application in the legal activities framework also raises reasonable concerns. Some recent studies reveal the AI scope for various legal fields (Re & Solow-Niederman, 2019; Surden, 2019). AI proved its efficacy in both the repeated utilization of standard legal papers as well as for review of legal precedents, as it assists in making assessments regarding a client's legal position and can anticipate the likelihood of how a court will rule based on the concrete facts of the case in light of the court's past rulings in cases involving the same or very similar factual situations.

AI is also involved in judicial systems, promoting court decisions. Some jurisdictions, like Estonia, consider using AI not only for consulting matters, but also for resolving cases by a judge robot. The European Commission for the Efficiency of Justice of the Council of Europe has adopted the first European Ethical Charter on the use of AI in judicial systems. While AI undoubtedly can be useful in many legal fields, presently it is not advanced enough to fully substitute for human beings.

Eventually, the modern digital technology is going to transform traditional legal business significantly (Hongdao et al., 2019; Jenkins, 2007). Notaries, known as a very conservative legal profession, are an excellent example. A modern Russian notary provides legal assistance for remote transactions, maintains the unified notary actions database, and provides support using electronic signatures to both citizens and legal entities. The introduction of advanced technologies, as well as the creation of convenient services under modern societal demands, has led to an increased demand for notarial services in civil relations.

However, the relevant question is how to combine notarys' capabilities with the advancements in digital technologies, such as smart contracts, blockchain, etc. For example, the digital inheritance will continue to grow in popularity worldwide, meaning the universal succession for both tokens and cryptocurrencies, as well as for accounts and digital content (i.e. letters, messages, and photos) (Berlee, 2017). In addition, it is only the unique relationship between notarys' skills and knowledge that

can ensure effective security of individual and entities' rights within new emerging relations.

It is essential to acknowledge that introducing digital technology into the legal sphere will subject the law to significant changes and will have global consequences . The future of law in the digital century is widely discussed presently by the legal science both in Russia and abroad.

Lessig proposed a fundamentally different approach to individuals' activity within virtual space. He stated that 'code means law', implying possibly replacing legal regulations by algorithms, as they are more effective due to their high degree of formalisation, lack of ambiguity, which collectively reduces if not totally eliminates room for interpretation (Lessig, 2009). Digitalisation may cause narrowing of the legal scope, since the digital platforms provide an opportunity to establish self-managing by self-performed smart contracts.

However, this does not mean that there will be no legal regulation of the digital space. Formal rules stipulated by the laws are not respective legal regulation tools, but rather constitute technological solutions. As smart contracts have revealed, legal services are an integral part of digital platforms service. The respective technical solutions should conform to common law principles such as good faith, contract freedom, and equity.

These conditions have increased the demand for professionals possessing both the legal knowledge and knowledge in digital technologies. A question is whether and to what extent this demand is known and appreciated in the relevent legal communities and can be satisfied by higher education.

2 Legal Education Worldwide

Leading universities have already proposed various courses devoted to digital technology, such as blockchain, cryptocurrency, and bitcoin. The Coinbase platform has conducted interesting research. It includes the Qriously survey of 735 U.S. students aged 16 and older, a comprehensive review of courses at 50 international universities, an analysis of research citations and non-coursework offerings, and interviews with professors and students. As the study stated, in 2019, 56 percent of the world's top 50 universities offered at least one course on crypto or blockchain,

up from 42 percent in 2018. Especially noteworthy is that law school classes added another 10.7 percent in 2019 compared to 2018, while computer science classes are still the most common, accounting for 32.2 percent. However, finance, business, and economics classes collectively tally 19.8 percent.

Considering that law schools are proposing increases in courses related to digital technologies, it is essential to analyse the contents of respective educational programmes rather than merely their number.

To proceed with the analysis, we selected educational programmes related to the blockchain technology and crypto assets, so there were no any AI-related programmes, although some schools provide such courses. Moreover, we tried to include an array of law schools from various continents and countries, regardless of their world rating.

The present study analysed educational programmes (advanced training courses), master's degree courses (short-term courses), and independent master's programmes (2–3 years of study) that are intended for lawyers or provide lawyer's qualifications. We have also considered programmes associated with cyber-security science. However, we did not include the latter in our report because they are unrelated to law education.

The analysis of educational programmes focused on the content of educational programmes with specific training courses, materials, and learning outcomes to be achieved by students as a primary target. The results of the comparative analysis of educational programmes are presented in three tables according their type.

The study proved that universities more often launched professional development programmes providing knowledge and skills (Table 1).

Table 1: Professional Development Programmes with a Professional Certificate

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
Oxford Blockchain Strategy Programme, Oxford University's Saïd Business School, Oxford, UK	University degree, work experience; 6 weeks online, 10–15 hours a week	– Understanding blockchain – The blockchain ecosystem – Innovations in the value transfer – Decentralised apps and smart contracts – Transforming enterprise business models – Blockchain frontiers	– Understand blockchain technology and its impact on the future of the company and the field – Understand the possibilities of integrating blockchain technology into a business strategy
Master of Laws in LegalTech (LLM), Innovative jurisprudence in the digital economy, HSE, Russia	University degree; 8 months	– Technological innovations in the legal field – Constructing effective legal processes based on information technologies – Digital potential for improving the company's legal efficiency	– Automate processes in the company – Create smart contracts – Manage the legal ecosystem – Apply gamification – Use application programming and cryptography (chatbots, virtual reality (VR)
Blockchain, Cryptocurrency, and Law, Franklin Pierce School of Law, The University of New Hampshire, USA	University degree; two semesters online	– Fundamentals of blockchain law – Regulation cryptoeconomics and blockchain governance – Data privacy & security – Smart government – Blockchain for social impact – Ethics of distributed systems in health care	– Discover in-depth knowledge about the economic impact of token issuance, the intellectual property implications of blockchain technology, and various cases of governmental use to address and solve a host of public sector problems

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
Digital Law, Doctoral College, the Faculty of Law and the Faculty of Mathematics and Computer Science at the University of Heidelberg in cooperation with the University of Ulm, Germany	Doctorate in the field of digital law; short term	– LegalTech Hackathon – Law ex Machina—Support for legal solutions – Defining the use of language in law: methods and perspectives – Block lecture 'Legal Technologies' – Seminar 'Legal Thinking'	– Be able to obtain a degree in the field of digital rights – Be able to conduct fundamental research to prepare and support legal expert systems – Know theoretical and legal issues in the field of artificial intelligence – Know the constitutional requirements for using self-learning systems

Usually, advanced training courses focus on the essentials of modern legal practice and knowledge on blockchain and cryptocurrency. Education often provides only courses that impart information on topical and theoretical matters on respective technologies, and fail to teach actual skills critical to digital technologies. Therefore, although students receive theoretical knowledge pertaining to available digital tools, curricula in the past have not include courses that teach students how to apply that theoretical knowledge in practice.

In addition, some advanced training requires programming skills from the students or interaction with the respective experts. So, a Master of Laws degree in the LegalTech (LLM) programme suggests a basic programming introduction together with legal subjects. During its Digital Law (Doctoral College, the University of Heidelberg in cooperation with the University of Ulm, Germany) course, lawyers cooperate with software developers to develop and introduce software and app prototypes at the hackathon that are useful and valuable in the legal field.

Universities have already realised that there is a need for a more detailed study of digital technologies and have introduced appropriate courses for students enrolled in master programmes (Table 2).

Table 2: Special Courses Within the Framework of General Master's Training

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
***Blockchain and Cryptocurrencies: Law, Economics, Business and Policy*, Stanford University, Stanford, California, USA**	Students of Law School; one semester	Legal framework of (1) The technologies themselves (2) The scope and nature of business applications (3) The pertinent legal and regulatory structures with a particular emphasis on securities regulation aspects	– Exhibit knowledge and understanding of key concepts in substantive law, procedural law, and legal thought – Demonstrate facility with legal analysis and reasoning – A combination of skills such as synthesising cases, identifying and applying relevant principles, and mastering modes of inquiry (whether scientific, social scientific, or humanistic)

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
***Blockchain and Cryptocurrency Law*, The University of Melbourne, Australia**	Graduate and master students; 150 hours	– Introduction to cryptocurrencies and blockchains, and to smart contracts and governance design – Regulation of finance and securities markets in the age of blockchain – Initial coin offering (ICO) and their regulatory framework – Digital identity and privacy – Intersection of blockchain technologies with existing legal frameworks – Cases of legal services use for blockchain technologies	– Mastery of the principal areas of law as they relate to blockchain technology – Expert, specialised cognitive, and technical skills for critical and independent thought and reflection in the context of blockchain technology and its use cases (including crypto currencies) – Mastery of technical research skills relevant to blockchain regulation – Skills to solve problems, including through the critical evaluation of research relevant to the area of blockchain technologies

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
***Legal regulation of business activities in a digital economy, 'Law and business'*, Business Law Department, Lomonosov Moscow State University**	Bachelor's; 16 hours	– Digital economy and the transformation of law – Virtual business environment, digital ecosystems – Law and digital assets – Smart contracts – Digital market – Protection of the rights of businesses on digital markets	– Skills to reveal blockchain capabilities and legal issues in digital business markets – Skills for preventing and suppressing unfair competition in digital markets – Be able to conduct legal examination of documents, protect the rights and legitimate interests of businesses in the digital economy – Be able to collect evidence in digital form for the court and investigations

Programme	Applicant Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
MBA in blockchain and economics of cryptocurrencies, E-learning ***Link Campus University*****, The International University in Rome, Italy**	Bachelor of Art Degree or equivalent; not suitable for technical professionals intended for a high level of programming;100 hours	– The logic behind blockchain and cryptocurrencies – Blockchain legal fiscal and financial environment – Smart contract – Tracking and data management on blockchain – Fintech and payment systems with cryptocurrencies – Health and blockchain	– Understand the law and rules of blockchain – Be aware of the constantly changing landscape – Have the knowledge and clarity necessary to assist blockchain companies in solving the key problems they face and avoiding any future problems – Possess the legal know-how to navigate dynamic space, including knowledge of business tokenisation and the securities market

What is special about such courses is their aim to teach students the legal consequences of a new global technology. Master's students should be aware of the legal results of distributed ledger technology, blockchain, cryptocurrency (Bitcoin, Ethereum, etc.), smart contracts, and decentralised applications.

As the period of masters courses (about one semester) is not longer than for the above-mentioned advanced training courses, we can not presume any substantial difference in the contents of the courses. However, as we have noticed, as a rule, the contents of respective special courses depends on the topic of the master's programme (business, finance, etc.). Thus, the capability of graduates to examine the

functions of digital platforms to solve specific legal problems in the concrete field is highlighted as the studying outcome.

Programmes entirely devoted to digital technologies and law were in the minority (Table 3).

Table 3: Master's Degree Programmes

Programme	Applicants Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
MSc in Digital Currency, Master of Science in Blockchain and Digital Currency, The University of Nicosia (UNIC), Cyprus	Bachelor's degree; work experience is preferable; three semesters or 1 year.	– Introduction to digital currencies – Money and banking – Open financial systems – Regulation and digital currencies – Principles of disruptive innovation – Blockchain technology and applications – Cryptographic systems security – Digital currency programming – International currency markets – Digital currencies in the developing world – Financial markets and alternative investments – Emerging topics and practical considerations in blockchains project	– Identify and analyse challenges, prospects, and risks of cryptocurrencies and devise business proposals and/or develop blockchain systems and services – Apply and advance practice or research on blockchain technology, cryptography, decentralised systems architectures, and information systems to design innovative systems and services that complement and extend the existing cryptocurrencies ecosystem – Review, analyse, and compare different regulatory environments (banking, payments, commerce, legal, accounting, etc.)

Programme	Applicants Requirements and the Period of Study	General Topics	Generic Skills and Outcomes Achieved
Master of Cybersecurity (Law, Business Ops. & IT), La Trobe University, Melbourne, Australia	Bachelor's degree; 2 years	– Cyber algorithms – Network security fundamentals – Cyber risk management and compliance – Entrepreneurship in information technology – Cyber security principles – Computer forensics – Cyber law – Surveillance and privacy in the digital age – Introduction to cyber forensics and the law – International cybercrime – Cyber terrorism and international warfare	– Cybersecurity fundamentals – Crisis communication – Learn effective ways to communicate with clients and stakeholders following a security breach. – Auditing and risk mitigation – A network is only as strong as its weakest link – Legal and ethical frameworks – Surveillance, privacy, warfare, and the threat of cyberterrorism – Gain an understanding of the complex global forces that continue to play a central role in cybersecurity
Computer law and information security IT Lawyer, Higher school of state audit, MSU named after Lomonosov	Bachelor's degree; 2 years	– Legal support of information security – Legal issues of access to information – Legal regulation of relations in the field of e-Commerce and banking secrecy – Forensics – Examination of computer offenses	– Skills in legal support of the digital economy and e-Commerce (finance, trade, marketing, banking) – The ability to identify the computer offenses – Ability to ensure business information security (create information systems and resources, e-justice)

Two-year master's programmes involve not only a general explanation of the blockchain operation, but also courses regarding how digital technologies are implemented into state authorities or business entities, as well as the related skills. This sphere can be labelled as Cyber Law—the law affecting information and communication technology (Arno, 2016), that is, the law regulating the internet issues. This field is rather broad, covering several topics such as relevant competition rules, drafting and negotiating information and communications technology (ICT)-related contracts, electronic transactions, privacy issues, and computer crime. Such knowledge is critically important for the lawyers who intend to practice in the digital sphere. These universities provide courses that impart the skills necessary to apply appropriate digital applications for specific objectives. These courses include financial services and crypto exchange, cryptocurrency programming and smart contracts, as well as cyber-criminalistics forensics (applied science of solving crimes related to computer information).

Based on an analysis of the educational programmes that we studied we make the following conclusions: The courses related to applied digital technology have been implemented very deliberately in all educational institutions, whether in law departments or law schools, despite the high demand. Accordingly, it is easier to find an advanced training course yielding only a certificate than a specific programme leading to a master's degree in law. The fact that studying digital tools within the legal profession and ensuring business security still forms a small part of the educational market, is a rational explanation for the gradual approach. However, the majority of lawyers are willing to obtain knowledge and skills on the digital economy to better understand the general processes involved and to apply them in their practices, and in order to develop models to use the blockchain for business.

Either short- or long-term legal study programmes include general modules or courses as an introduction to a basic understanding of blockchain and cryptocurrency, smart contracts and digital products management design, and digital ecosystems. Obviously, the nature and extent of the topics offered differs depending on the programme. Nevertheless, the above-mentioned courses are considered common (core) subjects in legal studies. Contemporary society requires lawyers to be aware of how to automate processes, manage cryptocurrency payments, and interact with a digital government. In our opinion, all legal students should be required to take these basic courses so as to obtain such knowledge and skills.

As our analysis of the contents of the educational programmes we studied revealed, presently only students in the field of cyber law are provided with the courses required to obtain the skills necessary to work with digital services, including programming elements. As for the students who chose a broader field, such as corporate law or financial markets, the limited courses provide them only with a chance to obtain theoretical knowledge pertaining to innovative digital technology, as well as on related services and products. However, digital processes are drastically revolutionalizing the legal profession and will likely compel all lawyers, regardless of their specialisation field, to understand digital technology and have the know-how to apply it in practice. In addition, as the survey revealed, legal practitioners, both lawyers and students, are aware of this.

Thus, contemporary legal education does not fully meet the growing demands of the labour market for professions in the legal field. In the digital age, the main challenge to legal education is to provide future lawyers with both theoretical knowledge and practical skills related to digital technology. Furthermore, the best solution will be to design curricula that will ensure that all legal professions, regardless of their field of specialization, will be competent to deal effectively with the digital world.

3 The Perspective of Lawyers' Digital Competencies

The rapid growth of digitalisation has awakened society to the fact that citizens must acquire the skills necessary to apply and work with digital facilities, as well as to be aware of them and the digital sphere in general, in order to successfully study, work, communicate, and interact with the state authorities. Various terms are used to describe such skills and knowledge related to digital technologies, such as *digital fluency*, *digital literacy*, and *digital competence*. However, as studies have shown, there is no unified approach to their content or relationship (Ferrari et al., 2012; Spante et al., 2018). Therefore, it is essential to study these concepts in reference to legal professions.

In the field of academic education in the Bologna process, the key concept applied is *competence* (Lozano et al., 2012), so it is reasonable to start with the review of digital competences for lawyers.

The Recommendation of the European Parliament and of the Council of 18 December 2006, on key competences for lifelong learning (2006/962/EC) provides the following definition:

> *"Digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet.«*

To understand the nature of digital competence, the European Commission has developed a set of digital competences for citizens (DigComp), divided into the following five spheres: information and data literacy; communication and collaboration; digital content creation; security; and problem solving. An overview of digital competence concepts conducted by Silva and Behar (2019) stated that most authors treat digital competences as a set of elements: knowledge, skills and attitudes, digital/technological means, and problem solving.

Digital competence varies across different professional fields. The European Framework for the Digital Competence of Educators (DigCompEdu), stipulating 22 educator-specific digital competences is a good example (Caena & Redecker, 2019).

The broader legal community has recognized the critical importance for its members to garner the skills and knowledge related to digital technology. For example, the American Bar Association stipulated the following requirements regarding lawyers' digital competence in the Model Rules of Professional Conduct:

> *"To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject."*

Nevertheless, in our view, the general requirement of having digital competence, though necessary, is not sufficient. What is more important is to develop strategies to develop concrete, compulsory digital competences.

To develop a common approach in selecting digital competences, it is reasonable to create the Framework for the Digital Competence of Lawyers. Digital competence allowing the use of LegalTech for legal activities should lie in its core, as the above-mentioned LegalTech is an inevitable part of every lawyer's activity, regardless of the specialisation field. The databases of law and judicial acts (such as the Consultant, Garant in Russia) are considered the most obvious examples of documents whose search LegalTech can facilitate.

Many LegalTech solutions were directed to the automation of certain activities, but after some improvement and development, their application was enhanced significantly. For example, in Russia, the state automated system Justice (SAS Justice) was intended to form a unified information space of general courts, as well as the system of the Supreme Court of the Russian Federation. But after 2016, it became possible to file and submit claims and other procedural documents to federal courts and obtain legally significant decisions from the courts via the internet. Accordingly, the ability to use this system has become an important competence not only for judges and individuals working in the judicial system, but also for all other lawyers.

All practicing lawyers, regardless of their area of specialisation, were indoctrinated into how to conclude contracts using a digital signature, exchanging of electronic documents by email, and online registration procedures.

Nonetheless, some areas of the law require special skills and knowledge. So, are digital technologies the main development driver in the financial field? It is vital, for example, that financial lawyers understand the origin of transactions and consequences, digital assets, blockchain voting, and big data collecting. Moreover, they should also be aware of relative technologies applications to support FinTech projects legally. Accordingly, they should be capable of working with services based on digital technologies involving blockchain, related to ICO conducting, cryptocurrency payments, crypto exchange activity, and others. It also is essential for lawyers working in the fields of RegTech and SupTech to possess specific digital competences.

Therefore, we can conclude that the Framework for the Digital Competence of Lawyers should include general digital competencies for all members of the legal profession, as well as specific digital competencies depending on the field of specialisation (for example, financial, intellectual property, notary, and criminology).

It is not sufficient for lawyers to possess only the digital literacy that an ordinary citizen might possess. Rather, as a professional, all members of the legal profession must possess a heightened level of digital competency.

Digital literacy means the ability to choose and use appropriate digital tools and technology to achieve specific results. According to the National Agency for Financial Research analytical centre, in 2018 only 26 percent of Russians demonstrated a high level of basic competencies in the digital environment, and generally, the digital literacy index was 52 out of 100 possible.

The basic digital skills and knowledge are to be formed at school and become a basis of digital professional competencies. Higher educational schools should assess the basic digital competencies of the students to be able to provide them with new professional ones while studying. As a negative example, we can consider the Information Technologies in Legal Activity programme of Kutafin Moscow State Law University (MSAL). It contains eight practical classes devoted to text document editing, and working with worksheets and presentations. The programme principally concerns the application of Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. The major shortcoming in this programme is that these skills are usually obtained as a part of the computer science programme during Grades 6–9, at the age of 12–16 years.

Developing the Framework for the Digital Competence of Lawyers will assist high educational institutions in introducing relevant educational programmes. In our opinion, digital competencies as a component of digital literacy shall be formed during the undergraduate studies. Furthermore, the master's programme will provide an opportunity to acquire additional digital competencies for respective specialisation fields.

Commonly, digital literacy includes typical technology applications, while digital fluency refers to a higher level of digital competencies that allows creative application of technology or their targeted adaptation: 'the ability to leverage technology to create new knowledge, new challenges, and new problems and to complement these with critical thinking, complex problem solving, and social intelligence to solve the new challenges' (Sparrow, 2018).

A lawyer possessing digital fluency is capable of drafting smart contracts using a smart contracts library. Regarding the question whether a lawyer needs programming skills, we note that it is unlikely that this requirement is justified as mandatory at the current stage of technology development. However, having these skills can offer a lawyer a significant competitive advantage in the labour market.

Digital technologies, as they are rapidly evolving, and not stagnant, will cause gradual modifications in the digital competencies. As Ferrari (2013) fairly notes, 'Digital competency is a versatile evolutional process subjected to permanent change along with new technology emergence'. Thus, digital literacy training of lawyers within their legal field secures not only high demand on the labour market after graduation, but also ensures their professional development.

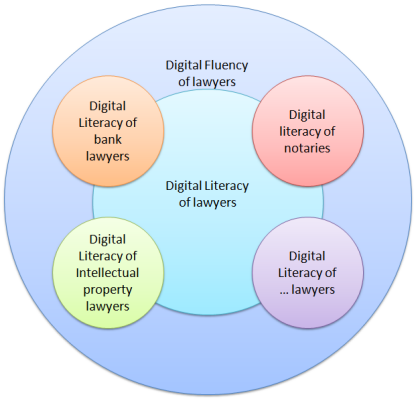

Figure 1
Source: own.

4 Problems Encountered while Developing Lawyers' Digital Skills

Digital skills are an essential part of digital competence. However, educational institutions commonly focus on theoretical (not practical) knowledge, and this problem can be clearly observed in the example of Russian higher education.

During the Soviet period, higher education was strictly divided into full time and part time, and only part-time students could combine their studies with work, attending a minimum number of classes before passing exams and tests (Hendley, 2018). It was assumed that full-time students would be able to master the necessary

skills during traineeships included in the curriculum. The situation has not changed significantly for the bachelor's degree, but master's students usually successfully combine regular class attendance with work. At the same time, master's students have practical skills as their target. The survey conducted has also revealed the willingness of students to learn practical skills related to digital technologies. As the study of educational programmes has demonstrated, courses mostly focus on theoretical ideas regarding the opportunities and risks of new digital technologies.

The gap between the labour market demands and higher education should be eliminated by a more extensive implementation of practical classes using digital services and based on innovative technology. Here the proposal to create special labs deserves special attention:

> *A Legal Profession lab could be taught in a computer lab to small groups of twenty to twenty-five students so they could directly engage in material such as how to encrypt an email and wireless communication, use a word processor without leaving meta-data behind, building a marketing website, securely manage and delete client data and other basic technical skills (Eicks, 2012).*

However, in our opinion, it is not necessary to emphasise technical equipment. Instead, emphasis should be placed upon the content of practical classes using information and computer technologies. Although classes in a specially equipped computer lab are an essential part of Russian legal education, they are not highly efficient. The programmes that were mastered before (for example, Microsoft Office) together with the ones easy to apply without any digital skills (for example, reference databases) should be used by students.

Currently, students possess basic digital literacy together with various technical skills for using devices. Therefore, they reasonably expect to obtain from the higher educational process both the knowledge on innovative digital technologies and skills to work with. Thus, relatively new educational methods are to be widely implemented. These are computer or virtual simulators, which proved to be efficient in different educational fields (Vahed et al., 2016). Computer simulation refers to creating and studying the process of dynamic models in the framework of legal systems and has been thoroughly examined since the end of the 20th century as an efficient learning method (Widdison et al., 1997). However, as the related literature on virtual simulation in legal education has indicated, the aim is to 'create

opportunity for social interaction between individuals and communities, create personalised learning opportunities, a community presence and a sense of belonging within the simulation community, likely to lead to deep learning' (Thanaraj, 2016).

We suggest developing technical skills on digital platforms operating with virtual simulators. With this assistance, students will learn to open cryptowallets, execute cryptocurrency transactions, and arrange distributed ledger technology (DLT) voting. Thus, students will better acquire not only theoretical knowledge but also understand the nature of ongoing technical processes. Moreover, popular digital platforms' demos have been proposed to be involved in the educational process.

Hackathon training should be provided in addition to the use of computer simulators. Hackathon refers to the event uniting programmers as well as other specialists to develop a project(s) for a technological solution to a given problem. As for the LegalTech hackathon, it provides a platform for lawyers and programmers' cooperation to develop LegalTech projects, such as chatbots, mobile apps, and calculators for providing legal services.

As mentioned above, some educational programmes for digital lawyers involve the hackathon arrangement. The LegalTech hackathons are becoming increasingly popular in Russia, but currently they are not included in educational programmes for lawyers. Instead, they have exclusive LegalTech product development as a target, which requires a high level of digital knowledge and skills. In our opinion, while conducting the hackathon with educational purposes, students can acquire skills to interact with programmers to set tasks, correct their realisation, and test the solution efficiency. This approach will contribute to post-graduate skills of digital lawyers and help meet employer demands.

In conclusion, the forms of studying offered should not be concentrated exclusively within one or more educational courses. The task facing legal education is to ensure that all graduates possess digital competencies depending on the stage of education (bachelor's, master's, and advanced training courses) and specialisation (financial law, notary, corporate law, etc.). Therefore, the training methods described above should be harmoniously implemented into traditional educational programmes.

5 Conclusion

The conducted survey revealed that professionals who possess digital skills in addition to legal knowledge will be in demand in the labour market in the near future. LegalTech has become an inevitable part of legal activity regardless of the specialisation field. The results of the study investigating the opinions of law professors, legal practitioners, and master's students show that current and future lawyers are aware of the changes in the legal profession caused by digitalisation and understand the need to significantly change the educational process. At the same time, we found that the respondents expect the educational process not only to focus on providing knowledge of new digital technologies, but also on developing the necessary skills and abilities to work with these technologies.

The comparative analysis of educational university programmes worldwide confirmed the assumption that modern legal education does not fully meet the growing needs of the labour market for legal professionals. The main challenge to legal education that comes with digitisation is that future lawyers must acquire skills to work with digital technologies. Digital competencies for legal profession specialists are the solution to this challenge.

We believe that to develop common approaches to the selection of lawyers' digital competencies, it is necessary to create the Framework for the Digital Competence of Lawyers, enabling them to use LegalTech in their activities.Computer or virtual simulators are considered to be new methods to acquire skills to work with online platforms, digital platforms demos, and LegalTech hackathons. These will lead to a better understanding of ongoing processes together with a successful comprehension of theoretical knowledge. As a result, digital literacy training for lawyers within their professional field secures not only a high demand in the labour market following graduation but also their further professional development.

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