# APPLICATION OF WEB-BASED TECHNOLOGIES FOR PRACTICE-ORIENTED TRAINING OF FUTURE LAWYERS AT UNIVERSITY

## I. Ainoutdinova, A. Khakimzyanova

Kazan Federal University (RUSSIAN FEDERATION)

### **Abstract**

The article considers web-based technologies (WBT) that accompany the digital transformation of society and the legal profession in terms of their alignment with the tasks of practice-oriented training (POT) of future lawyers at university. The relevance of the topic is due to the contradiction between the demand for lawyers with a set of "soft skills" and "digital skills" in addition to professional knowledge and competencies ("hard skills") and their "deficit" in the legal services market. Thus, to improve the quality of higher education and competitiveness of university graduates in the labor market, it is necessary to revise the methodology and technology of training future lawyers in accordance with the realities and challenges of the digital era, the abilities of a new cohort of Z students and the emerging requirements of the legal profession. This approach will help engage students in an active educational process and bring them closer to the real needs of the digital society, with adaptation to the rapidly changing working conditions as the top priority.

In light of this, the psychological and pedagogical conditions of a comfortable practice-oriented learning environment at university were examined and defined. These include: innovative and technically equipped infrastructure of university; interconnection and interaction between innovative teachers, their students and internship sites of potential employers; responsive feedback and predictive feedforward; individualization of learning styles; objective technical means of control, evaluation and self-evaluation of learners, etc. Due application of legal WBT and cutting-edge methods and tools aimed at developing students' skills in algorithmization, automation, optimization and digitalization of their future legal activities shall also be an integral part of educational process.

The purpose of this article is to analyze and describe the main trends in the field of legal technologies and to distinguish such groups of online apps and Internet services as LawTech, LegalTech, RegTech (Regulatory Technology) and SupTech (Supervisory Technology). In doing so, we considered key differences in technologies related to the type of target audience (B2C – general users and lawyers; B2B – businesses and law firms; B2G – government departments and agencies) and the type of tasks for which a particular technology can be applied. Based on this, we have developed the author's classification of legal WBT for training future lawyers and methodological recommendations for the use of a variety of Internet-assisted technology by teachers in practical classes at university.

The methodological framework of the study relies on the socio-pedagogical, integrative, competency-based and comparative approaches that allow focusing on certain competencies and best teaching strategies for the use of legal WBT by leading universities. The main result of the study is the creation of an integrative model of practice-oriented learning environment that improves the quality of higher education and increases the degree of students' involvement in professional identity and career.

Key words: university, web-based technologies (WBT), practice-oriented training (POT), future lawyers.

### 1 INTRODUCTION

The research topic is addressed due to the widespread influence of information and communication technologies (ICT) on all spheres of our life, including higher education [1]. Processes of globalization, informatization, technologization and digitalization gaining speed have led to the fact that in the course of its development, our civilization has turned into a technologically advanced "information society", where life and professional activities of both individuals and the entire teams have become directly dependent on a variety of technical means of communication [2]. Information and knowledge, as the main means of production and consumption, began to play a key role in various spheres of social life, politics and economy, which, naturally, led to the requirement to improve the culture of modern people's handling of information, technologies and digital resources [3]. As a result, such basic skills as searching, processing, analyzing and transferring information, the ability to store and use it to obtain new knowledge, implement professional tasks and generate innovative solutions have come into demand At the peak of its development, the information society has spawned the formation of a new cohort of

university students, which many authors consider as the so-called "Zoomers" or "Linksters" (aka Generation Z, iGen, etc.) and the main driving force of a new Digital Age (Information Age) [4; 5; 6].

Today, the Russian society is actively advancing towards digital transformation (DT) of all aspects of its life, which leads to significant technological, organizational and procedural shifts in the economic, social, political, and cultural spheres [2; 7]. Within the framework of Presidential Decree No. 474 of 21.07.2020 "On National Development Goals of the Russian Federation until 2030", digital transformation (DT) is recognized as one of the five national development goals of Russia until 2030. These are: preservation of the population, the health and welfare of the people; conditions for self-fulfillment and the unlocking of talent; comfortable and safe environment; decent and effective jobs and successful enterprise; and digital transformation, which are primarily aimed at improving the quality of life of Russians. At the same time, in order to achieve all the stated objectives, a number of strategic problems must be overcome, one of which is the shortage of specialists in the labor market with sufficient digital competencies to implement the DT [7]. The need to develop the competitive potential of human resources necessitates universities to move in the paradigm of modern processes and search for new, more effective ways to train future specialists who, in addition to hard skills, would possess soft skills and digital skills [4; 7], allowing them to easily and productively adapt to the rigorous conditions and demands of digital transformation and the changing landscape of the legal profession.

Whilst solid professional qualifications and experience as a lawyer are still essential, employers increasingly expect even newly hired lawyers to possess a set of complementary skills that will set them apart and give them a strong competitive advantage [7]. While the concept of "hard skills" mainly refers to a person's professional knowledge and competencies in a particular field, which can be gained through training or education and enhanced through practice and experience, then "soft skills" reflect character traits and interpersonal skills that characterize a person's relationships with other people and are used as a supplement to already acquired "hard skills" [7; 8; 9]. The digital age, however, requires lawyers to have skills and competencies that go beyond "hard" or "soft" abilities to accelerate the adoption and assimilation of technology and digital resources in the legal profession [8; 9]. Thus, a new approach to training of future lawyers is emerging that may allow for the creation of an interdisciplinary bridge that connects spaces between law, computational reasoning, and web-based technologies [4].

The inclusion of web-based technologies (WBT) and strategies for their mastering in the curricula of universities and training programs for future lawyers is an important and timely step in this regard, since the formation and development of professional identity and personal growth of a future specialist is laid at the stage of higher education as a prerequisite for success in the chosen profession [10]. Given the fact that in modern conditions the work with information and its large flows is gradually shifting to the Internet space, the readiness of future lawyers to work with various digital devices, network resources, platforms, and applications is of particular importance [11]. Therefore, training of future lawyers at university level should take into account breakthrough digital solutions and innovative services for lawyers and their clients centered on the integration of web-based technologies, products and systems such as LawTech, LegalTech, RegTech and SupTech [10]. They will be useful both at the training stage for students to solve practice-oriented tasks and later, in their professional activities.

Each of these web-based technologies can equally be focused either on specific target audience (for example, B2C – general users and lawyers; B2B – businesses and law firms; B2G – government departments and agencies) or a general target audience that encompasses users from all groups. Thus, the type of target audience as well as the type of tasks to which a particular technology can be applied determine the main distinction between the above mentioned WBTs, namely, LawTech (Law Technology), LegalTech (Legal Technology), RegTech (Regulatory Technology) and SupTech (Supervisory Technology) [10]. It is clear that being an effective lawyer in the 21st century means facing the many changes and challenges that the digital age has brought to the legal profession and being able to respond adequately to these demands by knowing how to apply these WBTs in a meaningful way.

The relevance of the topic is, thus, due to the contradiction between the demand for lawyers with a broad set of necessary skills (as a combination of "hard", "soft" and "digital" skills and competencies) and the "deficit" of such specialists in the legal services market [7]. Consequently, in order to improve the quality of higher education, increase the competitiveness of university graduates, ensure their successful career and eliminate the shortages in the legal services labor market, it is urgent to change the paradigm of training future lawyers at university in accordance with the realities of the digital era, the abilities of the new cohort of Z students, and the emerging requirements of the legal profession.

### 2 METHODOLOGY

Within the framework of socio-pedagogical, integrative and competence-based approaches, the authors have identified and analyzed the main characteristics of the information society at the present stage [1; 2; 3; 4]; studied and defined the generational characteristics of Z students, their values, requests and incentives to obtain higher education [5; 6]; established psychological and pedagogical conditions of the educational environment of university, necessary for the effective practice-oriented training (POT) of future lawyers in the new conditions [10; 12; 13; 14]; revealed and highlighted the most in-demand innovations and solutions in the field of teaching methods and technologies that influence the success of training future lawyers at the university in the digital age [4; 10; 15; 16; 17]; uncovered and reported the most popular trends in the web-based technologies (WBT), sufficing the educational tasks of university education and allowing teaching law students to work with WBT and understand the essence of automation, algorithmization and optimization of legal processes [10; 18; 19; 20; 21; 22].

The results of this study consist in the specification of the conceptual apparatus of the research; the author's classification of EduTech (educational technologies) used in the teaching/ learning process on the basis of industry-specific technological solutions "Legal" in the field of law by areas, types of target audience, tasks and sectors of their application (LawTech, LegalTech, RegTech and SupTech); recommendations to revise university curricula and training programs for future lawyers as an important and timely step to supplement them with practice-oriented methods, techniques and technologies aimed at improving the quality of legal education, creating an interdisciplinary bridge connecting the spaces between law, computational thinking and web technologies and leading to the development of skills in automation, algorithmization and optimization of legal activities in law students.

In the empirical part of the study, the authors conducted a survey among law students at two Russian universities – Kazan Federal University and University of Management "TISBI" [10]. We aimed to determine the attitude of young people to the introduction of web-based technologies in education. The survey data, in general, confirmed the positive attitude of modern students to the introduction of web-based technologies (82%) and other innovations (68%) in the educational process of university. However, it also became evident from the respondents' answers that they noted the insufficient level of literacy and competence of some teachers in the field of ICT (17%); misunderstanding and conflicts between teachers and students due to the age differences (11%), lack of feedback during networking (10%), and others. Paradoxically, some respondents have not heard of "Legal" WBTs (5%); do not understand the essence of technologies and services for lawyers (12%); do not see the difference between the segments LawTech, LegalTech, RegTech and SupTech and their capabilities (17%) [10].

### 3 RESULTS

The research and analysis of numerous sources has shown that it is quite difficult to find a universally accepted definition of what exactly can be considered an "information society" and its impact on the population. Most authors, however, agree that such a society is characterized by understanding of the importance of technologically mediated information and knowledge, which serve as the key features of the world development in modern conditions [1; 2]. It is also important that information and knowledge became strategic and transformative resources of the society and, as the main means of production and consumption began to play a key role in various spheres of social life, including education, which, naturally, led to the request for improving the culture of modern people's handling of information, technologies and digital resources [3]. At the same time, the society itself provides support in obtaining knowledge, its preservation, processing and exchange within the framework of network communities.

The study and examination of the thematic literature and statistical data has shown that being a lawyer in the 21st century means facing the many changes and challenges that the digital age has brought to the profession, which stimulates the need to master new skills and competencies ("soft", "digital", "meta" and "transferable" skills) beyond traditional legal knowledge and professional expertise ("hard" skills). "Soft" skills are character traits, qualities and abilities that, when combined with technical knowledge, expertise and experience, shape a person's career and can be equally used in any job and position. Examples of essential "soft" skills for lawyers include: strong communication abilities, negotiation skills, emotional intelligence, problem-solving and critical thinking capabilities, time management, teamwork and collaboration, client service and adaptability, integrity, and professionalism based on responsibility, integrity, accountability, excellence, as well as persuasion and advocacy [8]. "Transferable" skills are similar to "soft" skills in this context and apply to all areas of practice being the key to changing the field of law, while "meta-skills" are often regarded as innate, permanent, higher-order skills that enable adaptability of lawyers and foster success in whatever conditions their future brings [4; 8; 9; 10].

To succeed in the digital age, however, lawyers need to master new "digital" skills and competencies that can range from basic, which constitute a certain user level of any modern person [10], to advanced, which allow professionals to build interdisciplinary connections between law, computational reasoning and web-based technologies [4; 9]. Thus, lawyers need to acquire such skills and competencies that will enable them to embrace the innovations of today's times of change and uncertainty, and to experiment with different approaches and technological solutions. As a result, digital literacy should evolve from basic digital knowledge and competencies into innovative mindset of a lawyer enabling to effectively and efficiently use a variety of web-based technologies, platforms, services and tools; put into practice their broad technological opportunities for legal activities, such as artificial intelligence, blockchain, smart contracts, etc.; understand the legal and ethical implications of applying digital technologies, such as data protection, privacy, cybersecurity, intellectual property issues, etc. [8]. More specific goals may include: e-discovery proficiency for managing electronic data and evidence; capability to work with document research, management, automation and algorithmization tools, client relationship management (CRM) systems, legal analytics platforms, artificial intelligence (AI) and practice management software, etc.

On the way of its transition to the digital reality, however, Russian society has faced an unexpected problem of a shortage of legal specialists in the labor market with sufficient digital competencies to implement the goals and objectives of digital transformation (DT) [7]. This occurs, in our opinion, against the background of the contradiction between the colossal technological breakthroughs in the field of information and communication technologies (ICT), the expansion of means and channels of information and communication and their accessibility, the emergence of digital generation Z, becoming the largest demographic group in the workforce, on the one hand, and the insufficient development of the psychological and pedagogical strategy of effective training of future specialists in higher education, on the other. In our case, we mean some omissions in the training of future lawyers.

In our opinion, there is a gap between the expectations of success in training competitive human resources for the needs of the digital economy and the shortcomings in its achievement, which puts the academic community in charge of revising the methodology and technology of training future specialists at university. It is important not only to change teaching methods and technologies, but also to create a comfortable educational environment of university [14], which should include: innovative and technically equipped infrastructure; interconnection and interaction between innovative teachers, their students and internship sites of potential employers; feedback; individualization of learning styles; objective technical means of monitoring, evaluation and self-assessment of learning outcomes, etc.

The study showed that most of the recent trends in the methodology and technology of training future specialists at university are related to the use of computers and the Internet as the best tools and sources for improving the efficiency and effectiveness of higher education at all levels, both in formal and informal environments [15; 16; 17]. According to some academic researchers, educators and practitioners the most favored trends, challenges and opportunities for the 21<sup>st</sup> century teaching and learning serve as robust solutions for continued educational success in the digital era and include: Web-based technologies, e-Learning, mobile learning, blended learning and other forms of online and hybrid education; real world or practice-oriented applications that allow students to apply theories to realty and see them in action; open source textbooks, massive open online courses (MOOCs), crowdsourcing and networking, cooperation, collaboration, and gamification, etc. [15; 16; 17; 23].

The research of web-based technologies intended for legal activities, which can be included in the curricula of universities and training programs for future lawyers, allowed us to identify four segments of tools, services, platforms and products, conventionally called "Legal", which include: LawTech, LegalTech, RegTech (regulatory technologies) and SupTech (supervisory technologies) [10; 20; 21]. For example, LawTech is a basic web-based toolkit that comprises a wide range of websites, online applications and services and provides various kinds of legal information on demand for any users, both lawyers and their potential clients [10]. LegalTech is a technologically more sophisticated web-based toolkit for lawyers that is used to improve the efficiency of legal services, automate workloads; simplify routine operations when working with big data, blockchain, machine learning, smart contracts, etc.; optimize and algorithmize typical legal processes using artificial intelligence (AI), etc. [21]. While RegTech helps organizations and enterprises comply with state regulations and avoid risks, SupTech is most often used by government and supervisory authorities in parallel with RegTech to increase the efficiency of control over the activities of financial market participants (FinTech) and business companies, as well as to improve the quality of data analytics, risk identification, etc. [10; 19; 20; 22].

The study confirmed our assumption that if future lawyers today learn to use digital technologies effectively and efficiently, while maintaining and expanding their professional knowledge, standards and values through practice-oriented training at university, their legal career path will be successful.

### 4 DISCUSSIONS

To better understand the influence of internal factors on the need to use web-based technologies in the educational process of any university, we believe that the characteristics, mentality, socialization features, interests, learning styles, requests and incentives for obtaining higher education by the new generation Z (aka Zoomers, Linksters, iGen, etc.) should also be taken into account [5; 6]. From the point of view of generational cyclicity, Z is a cohort of modern students born between 1998 and 2012, who received their name Z or "Zoomers" due to the inextricable connection from birth with the Internet, web-based technologies, various digital gadgets, network communication and collaboration etc. and subsequently considered by many authors as the main driving force of the new information or digital age.

Zoomers are characterized by such specific personality traits as individualism; impatience; consumption orientation; clip thinking; inclination towards the values of integrity, honesty and ethics; manifestation of hyperactivity amid a lack of or gaps in live (face-to-face) communication; disposition to interdisciplinary and multitasking approaches; desire for an individual pace of learning and self-education via the Internet, etc. [5; 6]. Thus, training programs for future lawyers in higher education, which allow to simultaneously transfer and acquire professional qualifications, universal and personal skills and competencies, should be formed taking into account the personal profiles of students Z and breakthrough technologies with digital solutions, which will be useful both at the stage of study at university and in future professional legal activity. For this we will further take a closer look at innovative services for lawyers based on the integration of web-based technologies, products and systems, such as LawTech, LegalTech, RegTech and SubTech and examples applicable in Russian universities in the context of digital transformation.

The LawTech arsenal provides users with quick access to any legal content and often allows clients (end-users) to receive legal advice and solve their problems through chatbots (robots) without the traditional involvement of lawyers. Although LawTech is rather addressed to the clients of lawyers and is applicable to the description of the new concept of legal services and legal aid, however, familiarity with the software products of this cluster will be useful for future lawyers to understand the essence of automation and optimization of legal processes [21]. Examples of LawTech include: legal reference systems such as GARANT (https://www.garant.ru/), ConsultantPlus (http://www.consultant.ru/), etc.; websites of legal services companies in different fields of law such as Amulex (https://amulex.ru/), Pravoved (https://pravoved.ru/), etc.; platform-constructors where, based on dozens of templates, users can create and edit their own documents or contracts, e.g., Doczilla (https://doczilla.ru/). LegalDesign projects are aimed at popularizing legal knowledge and building communication with the public and business via visualization and presentation of complex legal information; for example, the Accounts Chamber posted on its YouTube channel a training course "Understandable language", the Federal Antimonopoly Service issued a booklet "All about competition in questions and answers", etc.

The LegalTech innovation segment is used to provide information and technological services to legal professionals in order to improve the efficiency of their legal services or legal support of business and is mainly used to describe complex technological solutions to automate the work of lawyers, simplify routine operations, in particular, work with big data and optimize typical processes in the legal field [21]. Solutions in LegalTech are usually considered within three groups, these are: 1) implementation tools (e.g., software in the field of information security and cloud solutions); 2) technologies to ensure organizational work (e.g., electronic document management (EDM) and reporting systems); 3) technologies to solve basic and specialized legal tasks (e.g., databases of legal documents, reference systems and resources, etc.). [24]. Current trends in LegalTech web-based technologies include: building neural networks for selecting court practice in a particular case and mathematically accurate prediction of court decisions; automation of the legal environment based on an open API (application programming interface); application of blockchain technology to record smart transactions through smart contracts; standardization and unification of the content of electronic documents, etc. [21; 24].

Russia is home to hundreds of tech startups, and, according to IP Academy & Skolkovo LegalTech, Russia's "Top 5 Best Innovative and Creative Legal Technology Projects" can be viewed as follows: 1) CosmoVisa online service (https://cosmovisa.com/) – which allows to challenge a transaction free of charge through the bank's payment protest procedure (chargeback); 2) Platforma (https://platforma-online.ru/) – is online litigation funding service for obtaining litigation investments and finding lawyers; 3) UR-LI/ JUR-LI (https://ur-li. ru/) – an expert intelligent (AI) system for turnkey stream scoring (evaluation system) and accounts receivable recovery for medium and large businesses; 4) SPLIT FAMILY (https://splitfamily.ru/) – a marketplace of divorce services, which is based on AI algorithm and produces results without direct involvement of a lawyer; 5) KPMG (a Russian branch named Kept) – is an audit and tax consulting service based on Privacy Automation Tool (https://www.kpmg.us/) [10; 21].

Today, Russia's leading telecommunications companies are investing heavily in the development of LegalTech. For example, MTS – the largest mobile network operator in Russia – has developed and started selling the "Norma" system, which uses artificial intelligence (AI) to enable lawyers to work automatically with any documents; and Megafon – the leading Russian integrated telecommunications operator – has developed the "Digital Back Office service" to automate the work of a large company's operational staff. Many consulting and technology companies are also actively bringing new solutions to the market (PwC, Deloitte, ABBYY, etc.). Despite the attractiveness of LegalTech solutions, Russia has an extremely low level of technology penetration in the legal sphere – only 15% of law firms use technology in their activities. In short, we have to admit, that legal innovation in Russia is currently largely based on online marketplaces, document automation and similar low-tech solutions [7; 21; 24].

RegTech (Regulatory Technology) is a relatively young segment of the digital technology market in Russia, designed to help highly regulated industries with a large number of rules (companies, financial organizations, corporations, etc.) to simplify operations and comply with new legal requirements or existing regulations, monitor compliance, provide reporting and avoid risks [22; 25]. Big data, cloud computing, artificial intelligence (AI), machine learning and blockchain are at the core of RegTech markets, which are evolving towards comprehensive automation and digitalization of key processes, development of adaptive regulation and a risk-based approach with a focus on preventing breaches before they occur. While the subjects of RegTech are mainly financial market participants (FinTech), government and supervisory authorities (regulators) are using SupTech (Supervision Technology) in parallel with RegTech to monitor compliance with regulatory requirements and increase the efficiency of company control. In fact, SupTech solutions are present in almost every segment of the RegTech market [22; 25]. However, the main problem of using artificial intelligence (AI) technologies and algorithms in the legal services sector in Russia is the minimum level of legal regulation and control.

It should be noted that the demand for RegTech and SupTech solutions in Russia is just emerging, which is likely due to low entrepreneurial and investment activity in the Legal segment. However, in recent years there has been an increase in interest in RegTech and SupTech solutions, both from financial or credit organizations, and from the government. For example, the internal compliance control system, initiated by the Bank of Russia in 2019, made it possible to improve the quality of the bank's activities in the field of control and supervision and optimize the processes of compliance with requirements by participants of the financial market (FinTech). Also, "Know Your Customer" (KYC) technology, based on verification of customers and counterparties, allows banks, exchanges, bookmakers, and other companies working with private individuals' money to track unusual transactions and manage risks associated with money laundering; the other example is "multifactor identification" that helps combat cyber threats [24; 25]. As part of the reform of control and supervisory activities, a Unified Register of Types of Control (URTC) has been introduced in Russia since 2021, which has become available to all citizens of the country since 2022 (https://ervk.gov.ru/). By selecting the type of control of interest, any user can see in relation to whom and by who this or that type of control can be carried out, etc. In addition, the URTC website contains direct links to officially published regulations governing this or that type of control (about 100 types of control are presented in total), which allows to speak about transparency and uniformity of control data in the country [24; 25].

An analysis of the presented web-based technologies shows that, in fact, the boundaries between LegalTech, LawTech, RegTech and SupTech are not fully defined or explored, and individual solutions from each segment may be present in another or all at once. Thus, we can say that LawTech services may be regarded as a part of the LegalTech market, while SupTech solutions are present in every segment of the RegTech market. Some types of solutions (for example, systems for automating reporting, compliance and regulatory control) can be simultaneously attributed to several markets. Although in the legal sense these concepts (web-based technologies) are quite close in meaning, they are fundamentally different in a number of parameters, namely, in terms of the type of target audience (consumers) and the tasks for which a particular technology can be applied. As for the target audience, the consumers or end-users of these web-based technologies (WBT) can be divided into three groups: 1) ordinary users, clients of lawyers, lawyers themselves (B2C); 2) professional lawyers, attorneys, notaries, in-house lawyers, entrepreneurs, businessmen, business companies, etc. (B2B); 3) courts, government organizations, ministries, departments, agencies, etc. (B2G) [10; 20; 21].

The division of Legal technologies into segments and directions according to the type of tasks, for which the solutions of this or that part of them are used, will allow students to better understand the essence of technologies and services and simplify their work with them. For these purposes we have carried out classification of tools and services of Legal technologies on the basis of the type of solved tasks. We have identified 6 groups of technologies according to the type of tasks: 1) provision of legal

services (legal reference systems; legal services marketplaces; digital lawyer service, legal advice; dispute resolution; intellectual property management, etc.); 2) document and contract management (document and reporting automation; contract management; data extraction, conversion of documents into digital data; document and contract constructors, etc.); 3) management of legal organization or department (expert analytical systems; legal search and data analysis platforms; legal practice management, etc.); 4) risk assessment and prevention of violations (customer and counterparty verification; activity and transaction tracking; risk management; fraud detection and prevention, etc.); 5) regulation and compliance (control of compliance with regulatory requirements; automation of legislation (legislation as code); data protection, etc.); 6) work with the statistical data and calculators (automated data analysis; online calculators for various calculations and data analysis, etc.) [10].

#### 5 CONCLUSION AND RECOMMENDATIONS

In the course of our study we came to conclusion that all the presented technologies that may be incorporated in the curricula of universities and training programs for future lawyers as the practice-oriented learning tools, applications, services and platforms are all based on the Web and, therefore, available on the Internet. Provided that these technologies can be conditionally divided into user and professional ones, it will still be useful for lawyers to develop digital competencies by studies of all the functionality and innovative solutions offered by leaders in the field of digital solutions. The global Web (Internet), in this regard, becomes a meaning-forming learning environment, a source of unlimited services and materials, a means of social connections, and a consultant, incentive and learning tool.

Practice-oriented tasks using the presented author's classification of technologies from the Legal line and examples of their application via the Internet can equally be used in mastering of any legal disciplines at university. They include various tasks that allow, for example, to study the functions of certain technologies and services, evaluate them according to various parameters (e.g., the scope of functions, access conditions, quality of services, etc.), conduct an online consultation with clients, etc. [10]. There are natural requirements for such learning assignments: a comfortable educational environment of university has been created; students have direct access to the Internet; they have already studied the basic legal disciplines; they are imbued with the idea of their professional identity and are aimed at lifelong learning. Also, importantly, students have already achieved a basic level of digital literacy and know how to work with documents, data, search engines, and analyze professional information in a web-based format [10].

In conclusion, it should be noted that all the objectives of the study have been achieved. The processes of digital transformation of society, higher education and the legal profession have been studied, analyzed, and defined; the widespread application of information technology tools, means and resources and emergence of a new driving force of the digital age in the form of today's Generation Z students were stated and confirmed. Psychological and pedagogical conditions of practice-oriented educational environment of universities have been established and evaluated in terms of successful assimilation of information, knowledge and necessary competencies by students; supplements to teaching/ learning methodology and technology have been proposed that improve learning outcomes and contribute to the initial professionalization of future lawyers. The classification of web technologies for lawyers developed by the authors depending on the tasks and technological solutions can be recommended as a component of curricula and training programs for undergraduate law students.

### **ACKNOWLEDGMENTS**

This work has been supported by the Kazan (Volga Region) Federal University Strategic Academic Leadership Program "Priority 2030".

### **REFERENCES**

- [1] S. Crawford, "The Origin and Development of a Concept: The Information Society," *Bulletin of the Medical Library Association [Bull Med Libr Assoc.]*, no. 71, Issue 4, pp. 380–385, 1983.
- [2] M. Castells, *The rise of the network society. The information age: economy, society and culture.* [2nd ed.], Vol.1, 656 p., Malden, MA: Wiley-Blackwell, 2010.
- [3] D. Bell, "The Social Framework of the Information Society" in *The Computer Age: A 20 Year View* (M. L. Dertouzos and J. Moses, eds.), 632 p. pp. 500-549, Cambridge: MIT Press, 1979.
- [4] R. Antonijević, "Characteristics of the Information Society: Implications for Education System," *Open*

- Journal for Information Technology, no. 1, Issue 2, pp. 43-50, 2018.
- [5] T. D. Atkins, "#ForTheCulture: Generation Z and the Future of Legal Education," *The Michigan Journal of Race & Law*, vol. 26.1, pp. 115–170, 2021.
- [6] K. Gabrielova, & A.A. Buchko, "Here comes Generation Z: Millennials as managers," *Business Horizons*, no. 64, Issue 4, pp. 489–499, 2021.
- [7] O.I. Morozova, & A.V. Semenikhin, "Problems of personnel shortages in the digital economy," *International Scientific Research Journal*, no. 6–4, Issue 96, pp. 93–97, 2020.
- [8] T.C. Grella, Lessons in Leadership: Essential Skills for Lawyers, 249 p., ABA Publ. [American Bar Association Publishing], 2014.
- [9] S. Kontra, Essential Legal Skills: A Guide for First Year Law Students, 316 p., Pyrmont, N.S.W., Australia: Thomson Reuters, 2022.
- [10] K.A. Ainoutdinova, & I.N. Ainoutdinova, "Specifics of training future lawyers at university in the context of the digital transformation of society," in *The International Forum "Kazan Digital Week 2023"* (R.Sh. Akhmadieva and R.N. Minnikhanov, eds.), vol.1, 1324 p. pp. 688–696, Kazan: Scientific Center for Life Safety, 2023.
- [11] E. Kuznetcova, A. Gafurov, D. Loshchakov, & A. Klueva, "Basic digital skills of a newcomer lawyer," Laplage em Revista, no. 7, pp. 416–422, 2021.
- [12] C. Kivunja, "Teaching students to learn and to work well with 21st century skills: Unpacking the career and life skills domain of the new learning paradigm," *International Journal of Higher Education*, no. 4, Issue 1, pp. 1–11, 2014.
- [13] M. Bratko, & L. Khoruzha, "The research on educational environment of institution of higher education involving experts: results and analysis," in *ICHTML 2020 SHS Web of Conferences*, 75, 02003, pp. 1–6, 2020.
- [14] K. Sitnikova, & N. Buldakova, "Essential characteristics of the practice-oriented training of future lawyers," *Modern Problems of Science and Education*, no. 6, pp. 1–9, 2020.
- [15] D.A. Cook, "Web-based learning: pros, cons and controversies," *Clinical Medicine (London, England)*, no. 7, Issue 1, pp. 37–42, 2007.
- [16] M. Warschauer, "The Paradoxical Future of Digital Learning," *Learning Inquiry*, no.1, Issue 1, pp. 41–49, 2007.
- [17] R. Shakirzyanova, G. Gali, R. Zakirova, A. Khakimzyanova, & L. Grigorieva, "The use of digital technologies in English classes" in *EDULEARN24 Proceedings, Palma, Spain*, pp. 828–831, 2024.
- [18] F. G. Ayuda, "Algorithms, sociology of law and justice," *Journal of Digital Technologies and Law*, no. 2, Issue 1, pp. 34–45, 2024.
- [19] R. Koulu, "Crafting Digital Transparency: Implementing Legal Values into Algorithmic Design," *Critical Analysis of Law*, no. 8, Issue 1, pp. 81–100, 2021.
- [20] A. Završnik, "Algorithmic justice: Algorithms and big data in criminal justice settings," *European Journal of Criminology*, no. 18, Issue 5, pp. 623–642, 2019.
- [21] M.A. Rozhkova, "On the legal aspects of the use of technology: LegalTech and LawTech," *Economics and Law*, no. 3, pp. 3–11, 2020.
- [22] J. McCarthy, "The regulation of RegTech and SupTech in finance: ensuring consistency in principle and in practice," *Journal of Financial Regulation & Compliance*, vol. 31, Issue 2, pp. 186–199, 2022.
- [23] C. Jansen, & P. Van der Merwe, "Teaching Practice in the 21st Century: Emerging Trends, Challenges and Opportunities," *Horizon Research Publishing: Universal Journal of Educational Research*, vol. 3, no. 3, pp. 190–199, 2015.
- [24] Y. Gaivoronskaya, & Y. Karimova, "Digitalization of the legal profession: on the risks and threats of digitalization of the labor market," *Advances in Law Studies*, vol. 8, Special Issue 5, pp. 55–63, 2020.
- [25] J. O. McGinnis, & R. G. Pearce, "The Great Disruption: How machine intelligence will transform the role of lawyers in the delivery of legal services," *Actual Problems of Economics and Law*, vol.13, no. 2, pp. 1230–1250, 2019.