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Development of Professional Integration of Digital Competences In The Czech Republic Legal Sector: A Qualitative Research

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Abstract

This study examines the development of digital competences among legal professionals, specifically attorneys and judges, in the Czech Republic. Drawing on a qualitative methodology, semi-structured interviews with 32 respondents are used to analyse how selected legal professionals perceive and develop digital competences, with the results indicating that attorneys are more active in the field of digitalization, particularly due to the direct impact of technologies on their practice and competitiveness, while judges, by contrast, display a more reserved approach, influenced in part by the structure of the judicial system. The research points to the need for systematic professional education in digital technologies and the importance of strategic support for developing digital competences in the legal environment. These findings correspond with international trends that emphasize the necessity of reflective and practice-oriented education. The development of digital competences should be understood not only as a technical innovation but also as part of the professional identity of attorneys and judges in the era of Industry 5.0.

Keywords: digital competences, legal professionals, lifelong learning, professional education

Introduction

Modern technologies, their development, and their use are essential preconditions for the success of a state, not only in international competition but also within international cooperation. If successfully implemented, the process of digital transformation can lead to increased competitiveness and economic growth. The Czech Republic is aware of this, and to this end, the Office of the Government of the Czech Republic (2025) has prepared the Strategic Plan for the Digitalization of the Czech Republic by 2030, which affirms the principles of a digital state. One of the pillars on which the concept of Digital Czechia rests is the development of digital competences among citizens and residents of the Czech Republic as a necessary precondition for realizing the full potential of digital transformation.

In practice, digital transformation consists of the implementation of digitalization measures on the part of the state (in particular, the possibility of electronic communication, the digitalization of state agendas, and their remote accessibility) while simultaneously creating the conditions for the emergence of a digital economy and society. These society-wide changes can be supported through appropriate education and information strategies. The ongoing technological advancement further leads – in line with the principles of Industry 5.0 – to fostering human creativity and enabling individuals to devote their abilities to productive activities, rather than routine tasks that can be effectively handled by robotic or automation technologies (Adel, 2022; European Union, 2025).

This study examines the penetration of digitalization into the judiciary and the provision of legal services, and its effects on the Czech legal environment. Through the lens of digital competences, we focus on their development among judges and attorneys, who represent the numerically most significant groups of legal professionals

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involved in the functioning of the judiciary and the provision of legal services in the Czech Republic. The activities of legal professionals are often cited as being among those that may be affected by the rise of artificial intelligence, machine learning, e-discovery techniques, big data processing, and tools for automating routine tasks (Liu et al., 2020). This development may be addressed through an appropriately designed system of professional education.

Theoretical Background

The 2018 Recommendation of the Council of the European Union describes competences as a combination of knowledge, skills, and attitudes, and digital competences constitute one of the components that form the general concept of competence. Knowledge of digital competences supports the use of new forms of communication, the development of creativity, and the willingness to adopt current technological innovations, and simultaneously provides information about the risks and threats associated with modern technologies. The European Union (Vuorikari et al., 2022) approaches digital competences through the European Digital Competence Framework for Citizens, which, in its current version 2.2 from March 2022, is also referred to as "DigComp".

For legal professionals, digital competences, together with other competences (specialized legal knowledge, legal professional skills, and soft skills), form the basis of what are commonly referred to as "legal competences" (Cooper, 1991). The development of digital competences is beneficial for both attorneys and judges, although from somewhat different perspectives that relate to their distinct professional roles. To provide context, digital competences are already a relatively common part of curricula at faculties of law, thus creating favourable conditions for further development in the future (Martzoukou et al., 2021).

Attorneys apply digital competences in practice by searching for, analysing, and processing digital information, communicating remotely not only with clients but also with public authorities, and by fulfilling obligations to protect information (personal data protection, attorney–client privilege). This means that attorneys not only need to know the technologies but also how to operate them and make practical use of their strengths. Digital competences can be systematized in the form of a professional competence model, which for attorneys in the United States has been developed by Parsons et al. (2024). Aloisi et al. (2025) likewise regard digital competences as an integral component of attorneys' professional competences and present research findings from Spain. Since attorneys operate in a market-based and competitive environment, reluctance to adapt to technological progress may weaken their position in the provision of legal services.

Judges, by contrast, make use of digital competences in working with judicial information systems, databases, and computing technology. Such competences in the narrower sense involve effective, secure, and properly executed use of computing tools. In relation to judicial decision-making, however, there is a need for education in modern technologies understood more broadly, particularly with regard to their trends, risks, characteristics, and applications. For this reason, the American Bar Association has introduced a requirement into the professional code that judges pursue professional education in the field of technology (Hall, 2024). As in the legal profession, competence models can also be found within judicial systems.

For example, the Spanish Ministry of Justice has developed a competence model for judicial personnel aimed at developing digital competences (Centro de Estudios Jurídicos, 2023). In judicial decision-making, technological knowledge may be particularly relevant in the field of social media and its functioning (for instance, in cases of cybercrime), artificial intelligence and robotics (questions of liability for harm caused by AI, copyright aspects, but also the use of AI within the judiciary), cybersecurity, software and hardware development (understanding technological architecture), blockchain (cryptocurrencies, digital contracts), and electronic evidence (emails, metadata, logs, deepfakes).

Judges in the Czech Republic are preparing for the arrival of artificial intelligence, among other things, through the establishment of the Centre for Digitalization and Artificial Intelligence in the Judiciary (CENDAI), which is intended to function as a competence centre actively involved in introducing modern technologies into the judiciary and in promoting their ethical use. To complete the picture, however, it should be noted that the professional education of attorneys and judges during their careers is not subject to formal oversight and remains a matter of individual responsibility, as follows from the relevant legislation.

Methodology

The research is multiprofessional in its focus and has been underway since 2023, proceeding in several phases (the first phase involved attorneys, and the second phase, currently in progress, involves judges). To clarify the research problem, which concerns uncovering and analysing the ways in which digital competences develop among selected groups of legal professionals, a qualitative methodology was chosen, making it possible to capture respondents' individual relationships with digital competences and to obtain data with a high degree of depth.

Within the research design, the following main research question was formulated:

• What role do digital competences play in the performance of your profession?

A total of 15 attorneys and 17 judges were invited to participate in in-depth semi-structured interviews, with the sample featuring variations in age, geographical location, and gender. The interview recordings were transcribed, coded, and subsequently analysed (Strauss & Corbin, 1998). Since the respondents were not acquainted with the andragogical (educational) concept of digital competences, the categorization under this concept was carried out during the data analysis, so respondents were not required to know the definition or specific meaning of the term "digital competence".

Findings

Attorneys are open to the development of digital technologies in the sense that they are in closer contact with contemporary technologies, including artificial intelligence. It is now common for law firms to use internal information systems for case management (for example, SingleCase), to search for information (Beck Online, ASPI), and to process, sign, and send documents electronically (data mailboxes, electronic signatures). When clients express interest, attorneys are prepared to communicate electronically and conduct meetings online; indeed, in some respects, electronic procedures may also be more cost-effective for clients, which is a factor that attorneys generally take into account.

Attorneys did not report extensive use of artificial intelligence, although they view its potential as considerable. One respondent (R1) noted that the use of an electronic data management system increased productivity and raised billable hours in the law firm by an average of 5 to 7 per cent.

It can be stated that attorneys respond more actively to the development of digital competences because these have a direct impact on their income-generating activities. At the same time, there is a correlation between an attorney's age and their willingness to learn and develop in the field of digital technologies. Respondents mention examples of conservative attorneys (typically from older generations) who reject technology and rely on administrative staff for these activities. Digital competences also tend to be of greater interest in the major economic centres of the Czech Republic (Prague, Brno) than in the regions. Respondents expressed somewhat critical views of the Czech Bar Association, noting that it does not sufficiently inform attorneys about technological trends and their implications for legal practice; however, they also acknowledge that digital competences can be learned quickly and flexibly, which is advantageous given their dynamic development.

Digital competences play a somewhat different role for judges. Beyond basic technological literacy, judges in the Czech Republic do not exhibit significant activity in acquiring digital competences within their profession, partly due to the nature of judicial work, which depends on the equipment, software, and IT infrastructure provided by the employer. There is a lack of interoperability among judicial information systems, and the introduction of new technologies is slow and rigid; therefore, judges have limited opportunities to implement their own technological tools that could influence their work. The consequence is a stronger orientation toward legal knowledge and skills rather than digital competences. Judges are digitally literate and work in an electronic environment (for example, the ISAS software system), although many supportive tasks are carried out by judicial personnel.

Judges are therefore not in a position where they must necessarily operate all available digitalization tools, which allows them to focus on their primary activity, namely resolving legal disputes. Certain judges, particularly those in criminal law, pursue education in digital competences and modern technologies because it is relevant to the responsible exercising of their role. Judges are aware that the Judicial Academy of the Czech Republic offers training in digital competences, but this area is not central to their interests.

Discussion

The research findings indicate that legal professionals in the Czech Republic have an ambivalent attitude toward digital competences. Attorneys operating in the private sector align more closely with the ideals of Digital Czechia than representatives of the judiciary, which can be attributed to the greater flexibility of the private sector, although public administration should take more active steps toward achieving the goals set out in its own strategic documents. At the same time, it is necessary to recognize that the level of digital competences among legal professionals will undoubtedly rise over time as technologies become more widely embedded in practice. At present, however, it remains possible to work in the legal field while fully or partially resisting digital competences.

The use of modern technologies and the associated digital competences is undoubtedly a timely topic. Equally important, however, is their ethical application. The legal environment is particularly sensitive to the introduction of new technologies, as these may challenge professional principles such as judicial independence and impartiality, confidentiality obligations, attorney–client privilege, and the protection of personal data.

The research has certain limitations that must be acknowledged, including, for example, the size of the research sample and the phased structure of the study, which complicates temporal comparisons. Time-related factors are further reflected in technological developments that may have altered the scope of digital competences, and each country's legal environment is unique, which limits the transferability of the findings internationally. Based on these limitations, future research may involve expanding the study with a quantitative design and including additional, albeit proportionally smaller, groups of legal professionals (such as prosecutors and notaries). A longitudinal approach could also be considered to enable the comparison of changes over time, and replicating the research in individual foreign jurisdictions would make it possible to compare the level of digital competences in legal environments internationally.

Frazier's (2024) study draws attention to a significant gap in judges' technological literacy that threatens the quality and legitimacy of judicial decision-making in the digital age. The author argues that judges increasingly encounter evidence, arguments, and technologies (such as algorithmic decision-making systems, AI-generated evidence, or blockchain transactions) whose principles they do not fully understand. Current educational programmes, which rely predominantly on the traditional transfer of knowledge and legal interpretation, are thus losing relevance. Frazier (2024) proposes a new model of judicial education built on three elements:

1. interdisciplinarity, linking law with technology, ethics, and data science;
2. practical orientation, incorporating simulations and case studies involving real technologies;
3. continuous professional learning, regularly updating knowledge in rapidly developing domains.

The author concludes that without the systematic integration of technological competence into judicial education, the judiciary risks falling behind the dynamics of digital society, which may weaken public trust in the courts and hinder the protection of fundamental rights in a data- and algorithm-driven environment.

Murphy et al. (2021) analyse the motivations, barriers, and effects of lifelong learning among judges and show that judges engage in education out of professional responsibility, the need for personal development, and the desire to keep pace with technological and social change. The main barriers include a lack of time, limited institutional support, and formalized approaches to teaching. The authors conclude that an effective system of continuing judicial education strengthens professional competences, ethics, and judicial identity when it is based on reflective and practice-oriented learning.

Parsons et al. (2024) present the first systematic framework of technological competence for legal professionals, known as the "Georgia State Legal Technology Competency Model". The authors respond to increasing pressure from the legal market and professional bodies, which are beginning to include technological literacy as part of the required professional qualification. The model distinguishes four areas of competence (practical technologies, data and analytics, automation and efficiency, and emerging technologies) and links them to a three-stage development system: Know – Integrate – Create. A key finding is that technological competence is not merely a technical skill but a component of the professional identity of lawyers and of their capacity to enhance ethical responsibility, effectiveness, and the accessibility of legal services. The study also shows that the teaching of these competences must be contextual, reflective, and integrated with practice, rather than isolated in IT courses, which has implications for broader frameworks of professional education and workforce development in other sectors as well. Co-teaching and microlearning have proven particularly effective for highly qualified professionals in continuing education (Kursch et al., 2024).

Conclusion

Current research confirms that the effective development of digital competences among legal professionals must be based on practice-oriented, interactive, and reflective learning. As Oranburg (2024) demonstrates, innovative approaches such as backward design and modular learning increase participant engagement and support the genuine transfer of knowledge into practice.

The scope and importance of digital competences will continue to increase over time, and not only among legal professionals. Although digital competences will likely remain a supplementary component for attorneys and judges (with core legal knowledge and skills remaining primary), the state's orientation toward the principles of Industry 5.0 will require technologies to be used systematically, securely, and in ways that support the professional qualities of the individual.

For this purpose, providers of professional education must develop curricula that are sufficiently substantive and practical to motivate legal professionals to participate. It is beyond doubt that technological change can make legal work more efficient and less burdensome, rather than diminishing it.

The challenge for the future is to institutionalize digital competences within lifelong learning frameworks and to anchor them within systems of professional qualification. As suggested by Frazier (2024) and Murphy et al. (2021), sustained support for, and strategic coordination of, education are crucial for maintaining ethical standards, the quality of judicial and legal decision-making, and public trust in legal institutions. The objective should therefore be not only the acquisition of technologies, but the cultivation of a legally competent profession that is digitally proficient and grounded in professional values.

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