

The Professional Competence of General Education Teachers in the Context of Digitalized Education

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Abstract. The instantaneous shift of the education system to distance education technologies and e-learning during the pandemic brought up to date the issue of teacher competence in the context of the digital transformation of the teaching process. One of the frequent problems related to the above-mentioned issue is the competence of teachers in the face of the sudden switch of the educational environment to digitalization.

This study aims to detect the trajectory of the digital transformation of the teacher's professional competence in the context of digitalization of society and to attract the attention of relevant authorities and organizations to the need to improve the digital aspect of the teacher's professional competence. Updates are made to the content of the professional competence of general education teachers in terms of development of digital ways to fulfil professional needs.

Research methods. The paper analyzes data provided by educational authorities, research studies on the digital transformation of the education system's components and instructional and legal documents published by competent authorities in the field of education.

Research results. The main digitalization-related professional challenges requiring legal intervention are defined, and consideration is given to problematic pedagogical situations resulting from teachers' insufficient preparedness for work in the current context. A systemic relationship between the digital and professional competence of general education teachers is brought into focus.

Conclusion. The digital transformation of teacher competence concerns most aspects of teachers' professional activities and requires the attention of researchers and teachers to the development of the digital component of teaching competence.

Keywords: professional competence, digital component of professional competence, general education teacher, professional challenges.

Introduction. The rapid evolution of society and, subsequently, legislation creates a need for the ongoing update of general education content. An analysis of the current FSES (Federal State Education Standards) and exemplary

educational programs in relation to federal initiatives omitted from general education curricula led to the following conclusions:

a conceptual discrepancy has emerged between regulatory documents, the FSES, and exemplary programs, as the outcome does not

provide school children with the unity of training and education;

the content of schoolchildren's legal and anti-corruption knowledge needs to be updated in terms of current legal innovations, to be included in the general education curriculum;

the composition of the school staff is to be updated with a view to defining clear lines of responsibility between the school staff and parents, and inside the school, for ensuring the learner's correct behavior;

there is a lack of reference to and general guidance on the use, as part of the general education curriculum, of regional legislative specificities and the municipal and local acts of organizations (similarly to cultural, historical and linguistic specificities).

The researchers point out that the implementation of the FSES is an objective social and public requirement associated with the need to develop the schoolchild's personality meeting the demands of the information society, the innovative economy and the evolving democratic civil society based on tolerance and intercultural dialog [1-3;6;12;18].

Problem statement. In today's world, digital technologies cover all major areas of society and their impact on them is steadily growing. Human society has long entered the age of information, as frequently observed by researchers and institutional policies [3; 5]. The ongoing rapid IT and computer development of society proposes various solutions to existing issues and creates new problems, and digital technologies transform the well-established public and social institutions [4; 16]. Education is a

social institution whose development is, at times, of avalanche-like rather than fundamental/evolutionary nature, which is not always determined by the natural course of social development. During the propagation of the ongoing COVID-19 pandemic, education – just like many other areas – has been tested for readiness to respond to the challenge. Priorities relating to the increased use of e-learning in educational activities, which had previously been only mentioned in educational programs and official public documents, were reconsidered and implemented in real terms. Currently, the impact of the technological or, more specifically, digital factor on education is evident, and digital technologies continue transforming education-related public and social institutions. As pointed out by researchers, new technologies impose greater demands on teachers' quality of work, professional competence and methodological qualifications [1; 2]. A rapid shift by teachers and educators to digital education tools, e-learning and distance education technologies (henceforth referred to as DET) has called into question the very essence and content of teaching personnel's professional competence, given that, in today's world, familiarity with digital technologies and devices is already part of must-have, rather than specialized, skills [10].

Literature review. The impact of digital technologies on teaching competence is examined in works by contemporary Russian researchers such as V. A. Adolf, G. A. Baklanova, E. A. Barakhsanova, G. U. Soldatova, I. Yu. Stepanova and E. M. Shpagina. Another area of research is represented by works investigating the digital

component of teaching competence as part of activities taking place in the digital educational environment [7; 9; 11; 13]. International scholars also conduct research on the use of digital tools in teaching, high-quality teaching competence in the digital educational environment and the impact of the above-mentioned tools [20-22]. What follows is an attempt to define specific transformations of the teacher's professional competence in relation to the legal regulation of educational relationships.

Materials and methods. The competence-based and system approaches constitute the methodological framework of the present study. To achieve the objectives set, the authors used data provided by educational authorities; compiled and presented a theoretical conceptualization of works by researchers on digital transformations occurring in the educational system's components; analyzed, specified and classified pedagogical activities contained in instructional and legal documents and situated at the intersection of digital and legal fields.

In April and May 2020, when strongest pandemic measures were in place in the Russian educational system, Krasnoyarsk Krai's Ministry of Education provided a hotline for discussion of uses of distance education in general education schools. Any local resident was welcomed to call the hotline and obtain professional advice. The accelerated setup of distance education in Krasnoyarsk Krai revealed a number of issues, including legal ones, faced by a wide range of people involved in the educational sphere.

A total of 371 calls was received from

parents of schoolchildren and education workers throughout the time the hotline was available. Residents of the Krasnoyarsk agglomeration made over 200 calls (that is, more than 50% of calls), and a third came from the city of Norilsk. Overall, city dwellers and rural residents made 75% and just under 25% of the calls respectively. Among the most frequent questions asked by parents calling the hotline were those related to the organization of distance education in public schools, more specifically, feedback from teachers, absence of video lessons, advice on school subjects and a high volume of homework.

Some 22% of calls were made by education workers employed in public schools, mostly school heads (or their substitutes) and schoolteachers. In total, teachers called the hotline 71 times:

A relative majority of calls (31) dealt with regulatory and organizational issues relating to the teaching of general curriculum subjects by means of DES;

Just under a third of calls (20) had to do with evaluation procedures when using DES and modifications made to school subject lesson plans resulting from the revision of educational curricula;

Almost every sixth message (12) concerned rules on teachers' working and rest time under restrictive measures and when using DES during the teaching process.

Eight calls were related to social safeguards provided to teachers and learners and other issues.

Among the most frequent questions were the following: "What documents regulate distance education?", "How does the maintenance of the e-

journal change when joining topics of a school subject?”, “In what way are modifications to be made to subject lessons plans and academic year schedules in the context of distance education?”, “How should continuous and midterm assessment be carried out in the context of distance education and how do local school regulations control it?”, and “In which cases does parental consent is necessary to process a learner’s personal data?”.

The time-scale distribution of hotline calls and the curve’s location reveal that all categories of callers were most active during the hotline’s first month of service. The second half of the period shows a sharp drop in the frequency of calls, and the latter are less concerned with distance learning per se. The available data can be explained both by the ramped-modal ending of the 2019/2020 school year and by the successful adaptation of participants in educational relationships to the new educational framework.

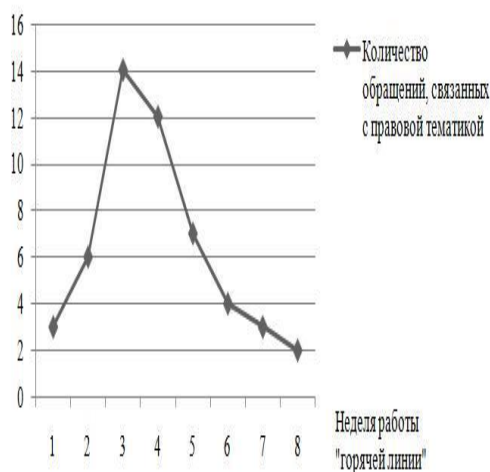


Fig. 1. Changes in hotline calls made by public school teachers

Number of calls relating to legal issues

Week of the hotline’s operation

An analysis of the above data reveals that the forced shift to DES, on one hand, testified to

the readiness and willingness of most education workers to deal with modern technologies and, on the other, detected issues associated with such a shift, including legal ones. Some teachers had difficulty in managing the regulation of e-learning, DES and personal data.

Research results. Our analysis revealed that, with the development and transformation of the information and educational environment, it is highly important for teachers to be prepared for changes and, correspondingly, to be ready to combine and alternate new roles in the information society [5; 9]. Mastering digital technologies is closely related to readiness to adopt new roles and the personality component. Researchers give different definitions of key skills underpinning the modern teacher’s readiness and ability to deal with large amounts of information, be confident users of digital tools, adapt themselves to and creatively transform the digital educational environment. An analysis of various definitions of the essence and content of teacher competence and the teacher’s involvement in digital educational environments [11, 13] points out that expertise in using digital educational resources, DES and e-services are examined in conjunction with information and communication competencies and manifest themselves in information and communication (ICT) [15], information [7] and digital competencies [8]. Many researchers classify teacher competence in the field of information and communication technologies as a basic one, as well as scientific, socio-economic, civil law, specialized or general professional one [12]. The new context of educational work, in its turn, brings about changes

to the structure of the teacher's professional competence, as evidenced by the following:

Competition and contribution redistributed between competencies and competences in the general framework of teacher competence making up the teacher's professionalism and pedagogical excellence, in favor of information-digital ones;

Infiltration of information and digital competence into all other elements of professional competence and the systemic complication of relationships between them.

In any case, the teacher's digital competence has to be based on knowledge and skills in terms of data processing, the professional selection of information sources and information analysis and classification. This point also concerns communication skills and competencies given that working in the digital educational environment also requires excellent communication skills and the effective use of pedagogic communication means in this or that educational situation and in applying this or that teaching method. Command of certain digital tools and pedagogical communication techniques does not, however, suffice to make a teacher altogether competent, since this pedagogical process requires complementary knowledge in the field of legislation.

No longer supporting or interim, digital competence has become an element necessary for professional growth and the solution of professional tasks on an everyday basis. Previously, researchers examined the private aspects of the issue, including specialists' compliance with social and legal behavioral patterns in situations related to the use of digital

educational resources, copyright law and related rights [6] as well as learners' legal protection in the digital environment [17]. The regulation of the educational process involving DES, e-learning and digital educational resources is not limited only to the above examples: its regulatory framework is much broader and concerns private, corporate and public law [23].

After analyzing the lists of professional tasks [3], the authors propose the following group of the teacher's digital professional, meaningful actions and skills relating to social relations regulated by the legislature:

The teacher's collection, storage, processing and use of learners' photographs and videos with them as part of the educational and instructional processes;

The teacher's search, selection, storage and use of educational content as part of the educational process;

Storage and processing of personal data used in the educational process;

The teacher's uses of e-learning and pedagogical activities on educational platforms;

The teacher's interaction with learners by using DES, including the teacher's communication with learners and their parents/legal representatives through social networks and messaging applications;

Protection of learners' interests, their honor and dignity on the web and the digital security rights of all those involved in educational relationships.

Generalizing the above-mentioned professionally significant skills, the authors divided them into three groups of fundamental

meta competencies that are of high professional significance to teachers:

Group of competencies in the field of anti-corruption legislation;

Group of competencies in the application of civil law and privacy legislation;

Group of competencies in the field of education law in using DES and e-learning;

Group of competencies in the field of criminal and administrative law ensuring the digital protection of minors.

Discussion of results. To sum up, the evolving digitalization of education also concerns a wide range of issues relating to the professional competence of public schoolteachers. Furthermore, the following should be pointed out:

Not limited to the acquisition of information, communication and digital techniques and actions, the digital transformation of teacher competence affects most components of professional competence, including the legal and anti-corruption ones;

The digital competence of public schoolteachers comprises systemic connections passing through the 'kernel' of professional competence and resulting in a complex, integrated formation;

Despite the availability of continuing education programs and high professional self-learning skills, public schoolteachers need a completely new approach to the development of their digital competency and the related professional one;

Major profession-related digital tasks fulfilled by teachers on an everyday basis require digital and legal support. The lack thereof could

lead to real-life pedagogical conflict situations between participants in educational relationships resulting, among others, from the teacher's insufficient training.

In addition to the above, there are different ways to improve the teacher's competence in the context of the digital transformation of education. Given the current context, one of them is to digitize the education system from the top-down by transferring educational organizations into digital mode and implementing educational activities while continuously improving the teacher's competence with information and communication technologies [14]. On the other hand, any major undertaking in the education system, related to professional competence, is difficult unless the pedagogical community itself realizes its importance and the need to develop appropriate ways to tackle professional tasks.

Conclusion. In today's world, familiarity with digital technologies and devices is already part of must-have, rather than specialized, skills, just like learners' online behavior and issues relating to legal regulation. As pointed out by researchers, the implementation of the FSES is an objective social and public requirement associated with the need to develop the schoolchild's personality meeting the demands of the information society, the innovative economy and the evolving democratic civil society based on tolerance and intercultural dialog. Issues concerning communication, content and safety are also on the agenda, given the apparent domination of distance education technologies and the

electronic educational environment throughout 2020.

Research for this paper was financed by the Ministry of Education of the Russian Federation.

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