Teacher's Social Relations in the Context of Distance Education Modern Problems

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ABSTRACT

The article considers changes and problems in the educational process's organisation in the conditions of the digital educational environment's dynamic development, defining the teacher's role in implementing distance education. Based on the results of two surveys, which were attended by about 400 teachers of the Russian Federation, it was found that the main problem is filling the digital system with high-quality information and its development. Foreign studies confirm this trend. Based on the identified groups of distance education problems, the teacher's social relations system with other participants of the educational process is characterised.

Keywords: Digitalisation, Education, Distance education, Learning problems, Teacher, Social relations.

1. INTRODUCTION

Digital technologies should be recognised as a global phenomenon in the life of the entire world community. Permeating socio-economic, cultural, political, industrial, and other processes, digital technologies improve efficiency and qualitatively change their entire structure. Education is an area that, on the one hand, is a supplier of new technologies, and, on the other, an object of perception of new achievements. The 2020 pandemic revealed numerous difficulties in using remote technologies, and most of them fell on the teacher's shoulders. As a result, it is relevant to generalise the challenges the teacher faces in using distance technologies and establish the nature of social relations with participants in the educational process to overcome the identified problems.

The study of modern authors' problems of distance education allows us to distinguish two main groups of works in this area. The first group of works is devoted to the issues of developing technologies for education. From J.A. Khan, S.A. Khan, R. H. Al-Abaji point of view, the choice of distance learning technology depends on three factors: 1) access to resources for both teachers and students; 2) proper interaction between teachers and students, as well as between students themselves; 3) economic accessibility of distance learning technologies [1]. Therefore, according to the authors, these factors are the source of problems in developing educational institutions' distance technologies.

Back in 1983, the work of C.M. Chang, H.F.M. Crombag, van der Drift, J.F. Moonen was published. The authors identified their cost as the main problem of developing distance technologies for education [2]. C.M. Chang highlighted as key the difficulty of didactic content of computer programs and the mechanism for tracking training effectiveness. In 1994, Verdejo M., Cerri S.A. summarising the results of research by Spanish scientists and specialists in distance education, concluded that the most critical problem in developing distance education technologies is finding common ground for all participants implementing a joint dialogue between them [3]. These studies were conducted within the interdisciplinary NATO seminar, during which it was found that communication theories have moved

from their consideration as a linear transmission of messages from sender to the recipient to its consideration as a social paradigm, where people are participants in a network of interdependent relationships embedded in organisational and social structures. At that time, the model of distance education was considered as one in which the emphasis is on independent learning, supported by well-developed educational materials. The quality of collaboration as the basis for developing distance learning technologies in 2016 continued to be discussed by P. Zaphiris, A. Ioannou collected and summarised more than 20 authors' research on this topic [4].

The second group of works is devoted to studying the problems that arise when using remote technologies. Thus, for example, according to I. A. They can be divided into external and internal issues. External problems include those related to the introduction of technologies: the lack of readiness of teachers and parents, the lack of necessary skills in using computer systems for online learning, the inability to interact with teachers and teachers among themselves, the lack of a sufficient number of online scientific consultants [5]. Internal problems include limited resources, unevenly distributed marketing advantages, inadequate administrative structure, lack of innovative opportunities. A similar opinion is held by S.H. Iterates, O.L. Shepelyuk, I.N. Fardeeva [6]. Such a concept as "pedagogical ecology of distance learning technologies" is used by a group of authors N. Dabbagh, A. D. Benson, A. Denham, R. Joseph, M. Al-Freih, G. Zgheib, H. Fake, G. Zhetao [7]. In their opinion, the transformation and spread of information and communication technologies fundamentally change human activity and culture, human identity and predetermines the process of globalisation. This global environment offers unprecedented socio-economic opportunities and brings new risks and challenges, especially concerning distance learning technologies. That is why pedagogical ecology should be the basis for a competent transition to new educational technologies [7].

From our perspective, the teacher of an educational institution is a key figure in ensuring the effective implementation of the educational process in the new "digital" conditions. Therefore, the key is to build a high-quality teacher's social relations with other educational process participants. Under these conditions, it should be said that the teacher's functions are undergoing significant transformations, which are caused not only by changes in educational technologies but also by the characteristics of the students themselves. The speed of life, the peculiarities of the social environment, and other factors determine students' new requirements for knowledge and their acquisition format. Table 1 presents the individual authors' point of view on the modern teacher's essential functions.

The modern teacher is a specialist, consultant, tutor, supervisor, coordinator, expert, and psychologist in one person, which is forced to build a quality relationship with many participants and in different directions in the educational system's digital transformation. In this regard, this work's purpose was to determine the characteristics of the teacher's social relations with the participants of the educational process to overcome distance education problems.

2. RESEARCH METHODOLOGY

The study was conducted in several stages.

At the first stage, a survey was conducted among teachers of 48 Health and safety training course and emergency risk management course in St. Petersburg colleges by sending questionnaires by email (the second half of March 2020). The questionnaire included questions about the introduction of the remote mode and how it affected their work. Respondents could indicate several problems. Responses were received from 35 teachers (57.1% – men, 42.9% – women), mainly aged 36 to 49 years (43%), with various experience in teaching (22.9% -5 years or less, 25.7% – from 6 to 15 years, 11.4% from 16 to 25 years, 14.3% – from 26 to

Table 1. Meaningful change in the functions of a modern teacher

Function Description	Author
The work of a teacher is divided into "work before work", "work on-the-job", and the implementation of managerial functions	Lee C.D., Chi-Kin J. [8]
Managing the emotional context of learning	Lee C.D. [9]
The promotion of discourse, promoting the involvement of students, the implementation of teaching in small groups	Gillies R.V., Ashman A.T. [10]
Combining the functions of a teacher and a psychologist	Kubantseva A.P., Kucegasheva P.P., Oreshkina N.V., Ponomareva E.A. [11]
Polyfunctionality of the teacher depending on the role performed by him and the chosen method of teaching	Titova I.Yu., Galizia E.G. [12]
A modern teacher implements a set of the following functions: pedagogical, project, organisational, informational, corrective, evaluation, control, social	Matokhina A.P. [13]
Educational function	Lobodin V.T. [14]

35 years, 2.9% – more than 35 years).

At the second stage, in May 2020, a survey of Russian schoolteachers was conducted on the MetoKab portal. 337 respondents took part in the survey. The purpose of the survey has not changed. Of the total number of respondents, 26% were teachers of Health and safety training course, 11% of the Russian language, 8% of literature, 7% of mathematics, 6% of English, etc. Almost 80% of respondents are women, whose experience ranges from 6 to 15 years (23.4% of respondents). The structure of teachers-respondents by age is as follows: 23.2% - younger than 35 years, 35.5% - 50 years and older.

Further, due to the generalisation of the problems the teacher faces during distance learning, characteristics of social relations with other participants in the educational process are formed.

3. THE RESULTS OF THE STUDY

3.1. Problems of distance education in colleges of St. Petersburg from the point of view of the teacher

It is established that problems with the technical support of distance learning are among the most acute problems. 82.3% of teachers surveyed indicated that they had experienced difficulties in this area. Problems with technical support are primarily since, during forced distance learning, teachers had to use the technical capabilities that are feasible within their families' budget. In addition to such problems as low Internet speed (37.1%), the need to share a computer with other family members (42.9%), numerous technical and software failures occurred during the training process (42.9%) since the software was not designed for such a sudden increase in the number of users.

Particular attention should be paid to the overall level of digital literacy. Although only 11.3% of teachers identified "insufficient computer and Internet skills", in the question of how their time is distributed, 88.6% of teachers noted that they spent some time learning how to work with software tools, 5.7% note they cannot find time for this. Only 5.7% of teachers do

not believe that they need it.

Teachers and students find themselves in a situation where both have to learn unfamiliar programs and new work methods under stress. This circumstance has a significant impact on other aspects of distance education, such as time spent on organisational issues, search and preparation of educational materials and tasks, communication with students, academic performance issues, development of practical skills and maintaining student motivation. Although 57.2% of teachers noted that their organisation has a centralised ECS, only 28.6% of teachers use them in their work. Each of them, at the same time, carries out communication with students additionally through other channels. On average, each teacher uses 4 different ways to communicate with students, which significantly affects the time spent on distributing materials and tasks, checking students' responses, and communicating with them.

According to the results of the study, teachers used mainly digital versions of traditional materials in their work (80.0% - text training materials, 80.0% - presentations, 65.7% - tests, 60.0% - tasks and materials from ordinary textbooks, 40.0% - video recordings of lectures). Only 22.9% of teachers surveyed zoom/skype video conferences with students, and only 2.9% used simulators in their work.

The analysis of teachers' answers about the difficulties they experienced during distance learning allowed us to form 4 main problem categories: technical challenges, difficulties with the preparation and development of digital educational content, difficulties with communication and a low level of comfort when using them (table 2).

3.2. Problems of distance education in Russian schools from the point of view of a teacher

During the survey, it was found that the main problems of teachers in schools are the low activity of students on remote tasks (54.0%), there are difficulties in mastering new material by the teacher (50.5%). There is also an organisational problem: students pass the task at different

Table 2. Problems faced by teachers when using digital technologies in distance learning, % of respondents

Problem groups	Percentage of respondents
Technical difficulties	82,3
Difficulties with the preparation and development of digital educational content	85,7
Communication difficulties	28,6
Low level of comfort	68,6

times (41.5%), making it difficult to collect all the tasks.

Describing the teaching tools, teachers almost agree that a paper textbook's tasks and materials remain a priority (66% of respondents). As for other tools, 77% of respondents identified presentations, 71% - tests, 59% - text training materials and the same percentage indicated video lectures. Zoom (Skype) sessions (47%) and simulators (33%) are slightly less popular. Classes on Uchi.ru, yaklass.ru, discord are the least attractive.

Assessing the sources of issuing and receiving tasks to students, teachers identified four main groups: through a group in a social network (55.2%); by email (43.9%); through messaging programs (50.1%); tasks are placed on cloud services for storing files (27.9%). The number of tools for issuing tasks allocated by teachers also includes the educational institution's learning management system, the educational institution's website, and the teacher's website. It is noteworthy that the electronic journal as a means of issuing tasks was one of the last places (0.9%).

As for the use of educational platforms by teachers, in more than 50% of cases, it is one or two platforms; 12% – more than 5 sites, 13% do not see the need for their use, and 5% are not aware of sites that contain information on their subject.

Assessing the time spent, we note that about 65% of teachers admitted that the time spent on preparing for classes had increased significantly. 70% of teachers indicate that they have begun to spend much more time communicating with students and parents. As part of the study of the structure of teachers' study time, it was found that most of the time is spent on testing knowledge (66.2%), creating their educational materials (58%), searching for high-quality educational materials (51%), communicating with students (51%), preparing assessment tasks (47%).
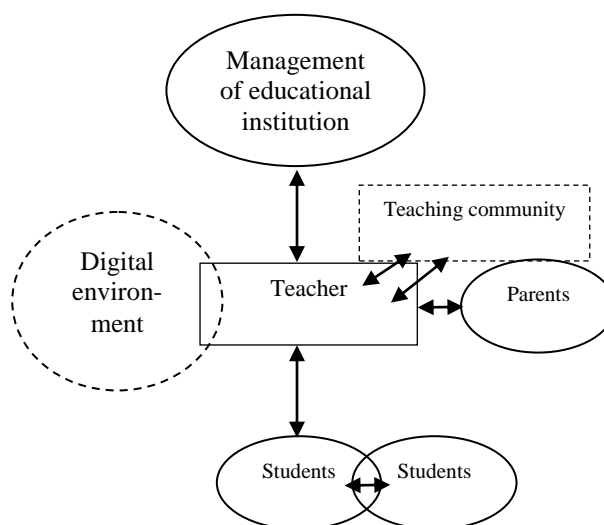
3.3. Characteristics of the teacher's social relations with other participants of the educational process

The study of the problems of distance education from the educational institution teacher's point of view a revealed several issues, the solution of which requires the establishment of high-quality social relations, the structure of which is shown in Figure 1.

The digital environment mediates the use of teaching methods, forms of educational technologies, and at the same time depends on the needs of participants in the educational process.

The teacher's interaction with the pedagogical community is carried out in organisational, methodological, technical, and psychological. However, the strength and content of this interaction are primarily determined by the teacher's personal characteristics.

Figure 1 The structure of social relations of the teacher

in the conditions of using distance technologies.

However, parents' relationship is most often mediated, directly determined by the student's educational problems.

The content of the identified problems of distance education from the teacher's perspective allows us to point out the most powerful, content-rich relationships with students of an educational institution. Moreover, these relationships are significantly different in individual communication with each student and group training.

From our point of view, in the conditions of distance education, the teacher functions are expanded by the following:

- ensuring information security of students;

- production of high-quality educational content that takes into account the specific features of the learning environment;

- moderation of content-clear and simple trajectory of obtaining information on the subject.

4. CONCLUSIONS

The digitalisation of the educational environment changes the structure of education, forms and technologies of training, and participants' functions in the educational environment. These changes are determined by both positive and negative aspects of this process. Distance education, which has received an unprecedented scale in 2020, has revealed many problems, which will improve the quality of online education and revise the content of relations between participants in the educational process. It is determined that the key figure in the conditions of active development of distance education is an educational institution's teacher. It is the teacher, acting in the digital

space, who is the figure who will form effective communications between him and the environment itself, as well as the management of the educational institution, the pedagogical community, students and their parents. In this regard, the teacher's functions are also changing from a specialist in a certain subject area to a generator of a high-quality digital product and a creator of a secure information environment.

AUTHOR'S CONTRIBUTION

Each author has made an equal contribution to the implementation of this work, which is as follows. Yu.A. Kuznetsova, M.A. Dugin carry out the generalisation of distance education problems in foreign and domestic scientists and specialists' works. Description of the survey results of teachers of Health and safety training course in colleges of St. Petersburg prepared by S.A. Bogolepov. A.E. Boikov proposed and proved the emergence of a new function for the teacher of an educational institution-ensuring students' information security. O.I. Ilyin summarises the results of a survey of schoolteachers which was conducted on the portal MetoKab. A group of authors formed a common position on the content of social relations of the teacher in the context of existing problems of distance education.

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