Study of Educators' and Parents' Readiness to Implement Distance Learning Technologies in Preschool Education in Russia

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ABSTRACT

The urgency of this research is determined by the need to study the readiness of school community in preschool educational establishments of Russia to apply distance learning technologies. The purpose of the research is to study motivation and value-based, cognitive, operational (operational-activity), emotional-volitional, and information components of the readiness of preschool teachers and parents of preschool children to implement distance learning technologies in a major city and in rural areas. A sociological method has been chosen for this study, specifically, a questionnaire survey method. The diagnostic findings of preschool teachers' readiness to implement distance learning technologies have been analyzed; the awareness level of preschool children' parents of the content and means of implementing distance learning technologies and their readiness to embrace this type of educational technology have been studied. The results and conclusions obtained during the research can be useful for head masters of preschool educational establishments, as well as for regional and municipal educational authorities implementing distance learning technologies and e-learning.

Keywords: preschool education, distance learning, remote technologies, professional readiness, sociological diagnostics

INTRODUCTION

The global trend of 'life informatization' places new demands on the use of information and communication technologies, distance and e-learning technologies at all levels of the education system. Development of distance education is a resource for the formation of a single information and educational environment in the Russian Federation, the most complete satisfaction of the Russian citizens' demand for quality education, and it also helps to reveal the individual aptitude of each child. This challenge has been successfully addressed in certain education systems (for example, general, higher, extended education). Today, the system of preschool education in Russia is least ready to implement ICT.

In the world practice, information technology in preschool education is widely used for mastering some learning skills (Elofsson et al., 2016; Patchan & Puranik, 2016), as well as for working with children who have some health restraints and require special educational conditions (Yun et al., 2016; Bratitsis & Ziannas, 2015; Schafer et al., 2016).

There are a number of reasons, both objective and subjective, to prevent its use in preschool educational institutions (PEIs) of the Russian Federation:

- there is insufficient research and methodological substantiation, as well as support for the implementation of ICT in the preschool education system;
- conditions necessary for its use have not been created in full (regulatory, material-and-technical, financial, economic, etc.);

Contribution of this paper to the literature

- While elaborating a sociological research program, the authors accepted a classification of target consumers groups of educational services among preschool children's parents proposed by the authors as a basis for the questionnaire.
- This will allow for a more detailed study of the opinions of all the school community categories.
- In addition, during the survey among pedagogical workers, groups of teachers and administrative personnel of preschool educational establishments were enquired separately.
- This made it possible to identify problematic issues related to different levels of the educational process implementation: the individual readiness of teachers and the educational institution as a whole.

- there are no up-to-date and differentiated sanitary and hygienic requirements for its use;
- the school community do not have necessary competencies and range of tools to implement and use distance learning technologies (DET) (Andreyeva, 2015).

Obviously, to solve the above-mentioned problems is a realistic objective; its solution can and should be controlled, since it will not only allow one to include preschool education in the process of creating and developing a single information and educational environment in the Russian Federation, but will also increase the capacity of the system as a resource for the most complete satisfaction of the Russian Federation citizens' demand for preschool education (full or partial implementation of preschool education curricula 'in remote access mode' for certain categories of the youngest citizens of the Russian Federation), and will also help to reveal the individual aptitude of each child (individualization of education based on ICT).

One of the ways to solve the above problems is to use DET in the implementation of preschool education curricula.

Using this type of educational technology in preschool education in Russia is, on the one hand, a new practice that is not large-scale, and on the other hand, it makes certain requirements for the material, technical, organizational, and professional attainment level of a PEI. This dictates the need to study the condition of all the components listed above, as well as the readiness of the school community: teachers, dedicated specialists, administrative personnel of a PEI, and parents of preschool children, to implement DET in preschool education. This is what the goal of the research is, its results being described (reported) in this article. The research objectives were:

1. Studying the readiness of teachers in preschool institutions to implement distance learning technologies.
2. Studying the readiness of the administration in preschool institutions to introduce DET as one of the activity types in the PEI.
3. Studying the readiness of parents of preschool children (as direct consumers of educational services) to embrace DET in preschool education.

In carrying out the tasks assigned in the research, the survey among respondents in the urban and rural areas was considered and analyzed separately from each other. This is due to the fact that in Russian practice, urban and rural preschool educational institutions have different methodological, staffing, and technical support. A similar practice of studying preschool institutions has been also applied in foreign studies (Lupu & Laurentiu, 2015).

The problems of implementing information technologies are studied by scientists of different countries, and problems arising from the implementation of various ICT application technologies are analyzed (Chang et al., 2015).

LITERATURE REVIEW

Distance learning technologies are understood as 'technologies implemented primarily through information and telecommunication networks with indirect (at a distance) interaction between educatees and educators' (FZ-273, 2012).

There is no terminology consistency in the research field of distance learning technologies (DET); in the Russian scientific literature, the concepts of 'distance learning', 'distance education, 'distance learning technologies', 'information and communication technologies (ICT)' are often referred to as synonymous, whereby the characteristics of remote learning features with the use of current information technology are articulated.

In retrospect, the treatment of the 'distance learning technologies' concept has varied in the scientific literature of Russia.

Andreyev (1997) defines distance learning as 'a synthetic, integral humanistic method of instruction based on the use of a wide range of traditional and new information technologies and their technical means that are used for educational material delivery, self-studying it, a dialogue between a teacher and a learner, while learning process

in general is highly tolerant to their arrangement in space and time, as well as to the choice of an educational institution'.

Polat & Khutorskoy (2000) consider opportunities for distance learning as 'training by means of telecommunications, whereby subjects of education (students, teachers, tutors, etc.) separated by a spatial or temporal distance implement a general educational process aimed at developing external educational products and respective internal changes (increments) in the subjects of education'.

Marchuk (2013) defines distance learning as such instruction, whereby its subjects are separated in space and, presumably, in time; it is implemented taking into account communication and perception of information in a virtual environment, is ensured by a special system for organizing the educational process, a special methodology for developing training aids and teaching strategies, as well as by using electronic or other communication technologies.

In foreign practice, there are also different views on the treatment of distance technologies. Thus, Sampson (2003, p. 104) defines distance learning as '...a way of delivery (independent learning at a distance through means of individual textual study and disjoint communication)'. According to Holmberg (1989, p. 24), people prefer distance learning because of 'the convenience, flexibility, and adaptability of this learning method to individual needs of students'. In fact, distance learning appears in the education sector as a new technique due to the growing demand for these flexible and convenient aspects. Ohler (1991, p. 22) emphasizes two aspects of distance learning: 'how it can change our approach to learning, and how it can change us'.

In foreign journals, the education informatization issues are also given much attention. In particular, Chang et al. (2015) provided a detailed overview of the learning environment features using ICT from the perspective of the participants. This paper presents a comparative analysis of various ICT application technologies, such as TSLEs, in the education of students of different ages, identifies features of these data technologies, each of them with its own advantages and disadvantages taking into account the baskets of factors proposed by the authoring team.

Lupu & Laurentiu (2015) conducted a research among 218 preschool teachers in Romania to identify and analyze educational operations in terms of pedagogical resources used in the learning process. In the course of the study, it was found that classical means (blackboard, chalk/marker) prevailed among the teaching aids used, while ICT was used to a lesser extent.

Development and introduction of new technologies in the education system of any level requires preliminary assessment of the readiness level in the school community to receive innovations. When it comes to the level of preschool education, first of all, it is necessary to study the readiness of preschool teachers and dedicated specialists working with children and their parents to implement distance learning technologies.

Slastenin & Podymova (1997) define the professional readiness of a teacher for activity as a set of professionally conditioned requirements for them, while highlighting three batteries: general civil qualities; qualities that determine the teaching profession specifics; specialized expertise, skills, and abilities in the subject (specialty).

Analyzing scientific and pedagogical literature, Tutarishcheva (2006) points out that in modern science, the phenomenon of readiness for professional activity is investigated at the following levels:

- personal, considering readiness as a display of individual personal qualities conditioned by the nature of future activity (Leontiev, 2002);
- functional, representing it as a temporary readiness and performance efficiency, pre-starting activation of mental functions, the ability to mobilize the necessary physical and mental resources to implement the activities (Ilyin, 2000);
- personality-activity, which defines readiness as a holistic manifestation of all the personality aspects giving an opportunity to effectively exercise their functions (Derkach, 2004; Dyachenko & Kandybovich, 2008).

Zeer et al. (2016) distinguish the following structural elements of professional readiness:

- motivational (responsibility for solving a task);
- orientational (knowledge and ideas about special aspects and conditions of an activity, its requirements for an individual);
- operational (grasp of methods and techniques of an activity, necessary expertise, skills, abilities, etc.);
- volitional (self-control, ability to manage actions, whereof the performance of duty is composed);
- evaluative (assessment of one's own preparedness and conformity of the process of solving professional problems to desirable patterns).

Readiness to implement distance technologies in this research is viewed (by the authors of this article) as an integrative individual quality, which includes motivational and value-based, cognitive and operational (operational-activity), emotional-volitional, and information components.

The motivational component of readiness includes a positive (value-based) attitude to learning and cognitive activity, an awareness of the personal and professional importance of the acquired expertise, knowledge, skills, and a persistent cognitive interest in meeting professional challenges.

The cognitive component implies the presence of psychological and pedagogical knowledge about an object (a subject) and a process of an activity, the ability to generalize, systematize, and apply it while discharging of professional functions.

The operational component includes professional abilities and professional thinking, skills, individual style of activity in addressing professional challenges.

The emotional-volitional component implies commitment, a strong will to overcome external and internal obstacles while solving pedagogical tasks, responsibility for achieving the educational objectives in view.

The information component is an educator's readiness for professional activity using the means of information and communication technologies (Markelova et al., 2006).

In addition to the readiness of teaching staff, it is also essential to assess the readiness of direct consumers of educational services in preschool educational establishments (PEIs), that is, parents. It is parents who form a social mandate for the content, quality, and type of educational services. Studying the attitude of preschool children' parents to the implementation of distance technologies in PEIs and their willingness to accept them as an alternative form of child education will allow for conclusions regarding the social order of this form of education. In addition, parents are better aware of the needs and personality characteristics of their children, therefore, they can become active consumers of distance learning technologies.

The foregoing testifies to the need to analyze the problems of material, technical, regulatory, research and methodological support for the implementation of distance learning technologies in preschool education.

MATERIALS AND METHODS

Theoretical and methodological analysis of approaches to the implementation of distance learning technologies in preschool education, analysis of the practical application of distance learning technologies in preschool education in Russia (Komarova et al., 2011) and foreign countries (Sampson, 2003; Ohler, 1991) have allowed the authors to single out the main target groups of the school community who are consumers of this type of educational services, that is, PEI teachers and families with preschool children having:

- children with health limitations (HLs) raised at home;
- children with HLs attending a PEI with no dedicated specialists (speech and language therapists, special education teachers, psychologists);
- homeschooled children;
- children under long-term treatment;
- children who wish to receive additional education and attend a PEI with no relevant teachers on the staff;
- children attending short-stay groups or family groups;
- children attending private preschool educational establishments.

It was this classification that was used in the process of sociological diagnostics (questioning) of the school community's readiness to implement distance learning technologies.

The structure of the questionnaire compiled (developed) by the authors corresponded to the theoretical definition of the structure of preschool teachers' professional readiness to implement distance learning technologies and contained questions aimed at elucidating the actual characteristics of these components as applied:

- motivational and value-based component, expressing the conscious attitude of teachers to the need and conditions of organizing the process of training and education for preschool children through remote technologies (the formedness of a teacher's motivation to use distance learning technologies, the readiness to improve their own professional activity) indicating the interest in 'distance' educational activity, their striving for professional success;

- cognitive component, integrating and solidifying the necessary knowledge about distance learning technologies and special aspects of teaching children of preschool age; pedagogical means ensuring the organization of a distance learning process;

- operational-activity component, based on a set of teachers' skills to implement the educational process through distance technologies; the ability to use computer equipment and application software; skills to work on the Internet, to carry out network cooperation;

Table 1. Age composition and length of service of the teachers participating in the study

Age	18-30	12.1%
	31-45	47.3%
	>45	40.7%
Length of service	up to 5 years	18.2%
	5 to 10 years	20.6%
	10 to 5 years	10.6%

Table 2. Age composition and managerial work record of the administration participating in the study

Age	18-30	3.7%
	31-45	51.9%
	>45	44.4%
Work record	up to 5 years	21.4%
	5 to 10 years	25.0%
	10 to 5 years	10.7%

Table 3. Gender and age composition of the parents participating in the study

Age	18-30	42.0%
	31-45	55.4%
	>45	2.6%
Gender	Male	14.75%
	Female	85.25%

– emotional-volitional component, typified by teachers analyzing their own qualification level, revealing deficiencies therein and determining ways to eliminate them, the desire for self-education and improving the level of professional preparedness to implement distance technologies in preschool education.

The readiness of the listed members in the school community was studied by researchers of the Lipetsk State Pedagogical P. Semenov-Tyan-Shansky University in the framework of fulfilling the assignment of the Ministry of Education and Science of Russia on the subject of 'Research and methodological substantiation of the mechanism for implementing distance learning technologies in the implementation of curricula for preschool education' in May-June 2017 in the Lipetsk region. The Lipetsk region was chosen as a model, since it represents a typical Russian region demonstrating progressive social and economic development and a sufficiently high quality of educational activity (FIAQE, 2014-2016).

As a basic sociological research technique to study the readiness to implement distance learning, a written survey (questionnaire) in PEIs was chosen. A sociological survey is a method of obtaining information about objective and (or) subjective (opinion, sentiment, etc.) facts from the accounts of interviewees. The survey is supposed to be conducted in the form of a questionnaire. Parents of preschool children in Lipetsk and the Lipetsk region, and employees of preschool educational establishments in Lipetsk and the Lipetsk region serve as general study population for this research. The practice of developing preschool education in Russia shows that PEIs located in major cities and regional capitals are in more favorable conditions with regard to material, technical, staffing, and methodological support compared to PEIs located in rural settlements. The research of the teachers' and parents' readiness and analyzing the results separately for the city of Lipetsk and the Lipetsk region allow the authors to take into account these aspects when drawing conclusions.

The sampled population was: parents – 407 people (202 people in Lipetsk and 205 people in the Lipetsk region), preschool teachers – 187 people (102 people in Lipetsk and 85 people in the Lipetsk region), PEI administrative staff – 28 people (10 people in Lipetsk and 18 people in the Lipetsk region). The calculation of sampled population is supported by the homogeneity (uniformity) and organized nature of the groups of respondents.

The characteristics of the study subjects are presented in **Tables 1-3**.

Among the teachers participating in the study, 26 people work with children with HLs (see **Table 3**).

In the course of the research, the parents themselves determined which DET model suited them, answering the question 'Which model of distance learning is right for you?' This was a multiple choice question. Based on the distribution of answers to this question, one can evaluate the composition of parents by target groups. The results are presented in **Table 4**.

Table 4. The structure of respondent parents participating in the study by target groups

| Parent category according to a target group of children	Share of respondents, by category
Parents of children who want to get additional education and attend a PEI with no relevant teachers on the staff	32.7%
Parents of children under long-term treatment	31.4%
Parents of homeschooled children	23.6%
Parents of children with HLs raised at home	20.6%
Parents of children with HLs attending a PEI with no dedicated specialists (speech and language therapists, special education teachers, psychologists)	17.9%
Parents of children attending short-stay groups or family groups	2.9%
Parents of children attending private preschool educational establishments	2.0%
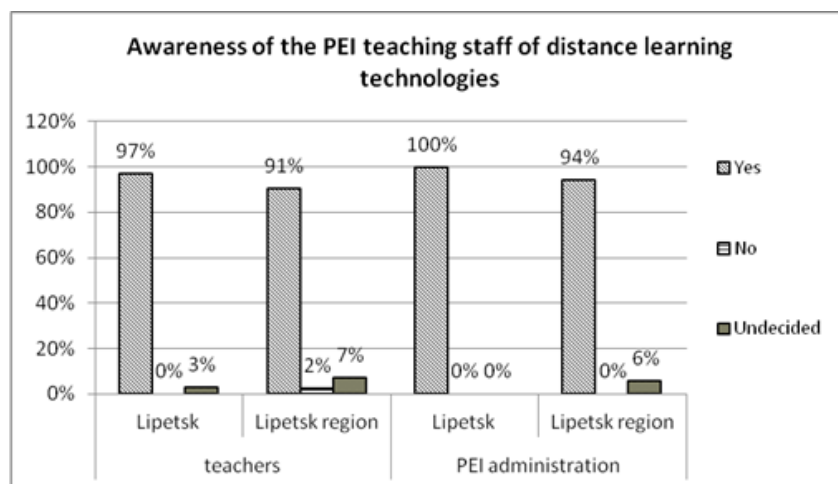
Figure 1. Awareness of the PEI teaching staff of distance learning technologies

In the study, a two-echelon model of the sampled population was taken up. At the first stage, the method of a regionalized sample was used: the city of Lipetsk and, by mechanical sampling, three districts of the Lipetsk region – Dobrinsky, Gryazinsky, and Usman, were selected. At the second stage, in Lipetsk and the above-mentioned districts, in accordance with the representativeness requirements, the most typical PEIs with the maximum number of target group representatives of distance learning service recipients were selected. In the selected PEIs, there was blanket canvassing of the head masters (deputies), teachers, and parents. In addition, parents of children attending family groups and parents of children not attending PEIs selected by stratified sampling were interviewed.

The study was voluntary and anonymous. Respondents were not required to indicate their name, employer or address. All data are presented in the aggregate and eliminate the possibility of identifying the personality of a respondent.

Two types of questionnaires were prepared to study the PEI employees' readiness to implement DET: for teachers and for administrative personnel of kindergartens (heads, deputy heads). The survey of administrative staff allowed the analysts to draw conclusions about the readiness of children's preschool institutions to implement DET in terms of their technical equipment and to identify the most pressing problems of implementing distance learning technologies.

RESULTS

Evaluating **the motivational and value-based component** of preschool teachers' readiness to implement distance learning technologies, it can be argued that over 90% of the teachers and administrative staff of the PEIs replied in the affirmative to the question 'Do you have an idea of distance learning technologies?'; hardly anyone chose the answer 'No', and the percentage of those undecided (**Figure 1**) is also very low.

Assessing the need to apply distance technologies in preschool education, 50% of the administrative staff in the urban PEIs replied 'rather necessary', 20% answered this question in the negative, and none of the interviewed chose the 'necessary' option. Another 30% of the principals remained undecided.

In rural areas, a total of 88.9% of the surveyed PEI administrative employees were in favor of the need for distance learning technologies in preschool education, while 11.1% were undecided. None of the administration chose the option matching the irrelevance of these technologies to PEIs (**Figure 2**).
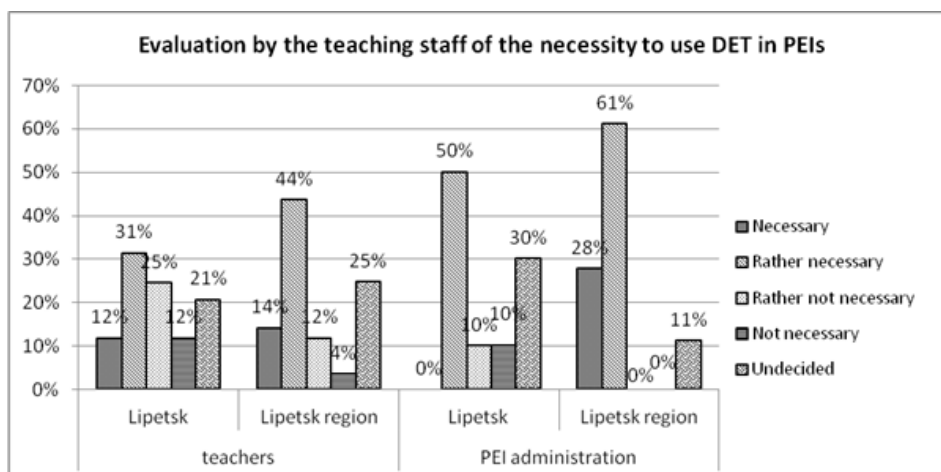
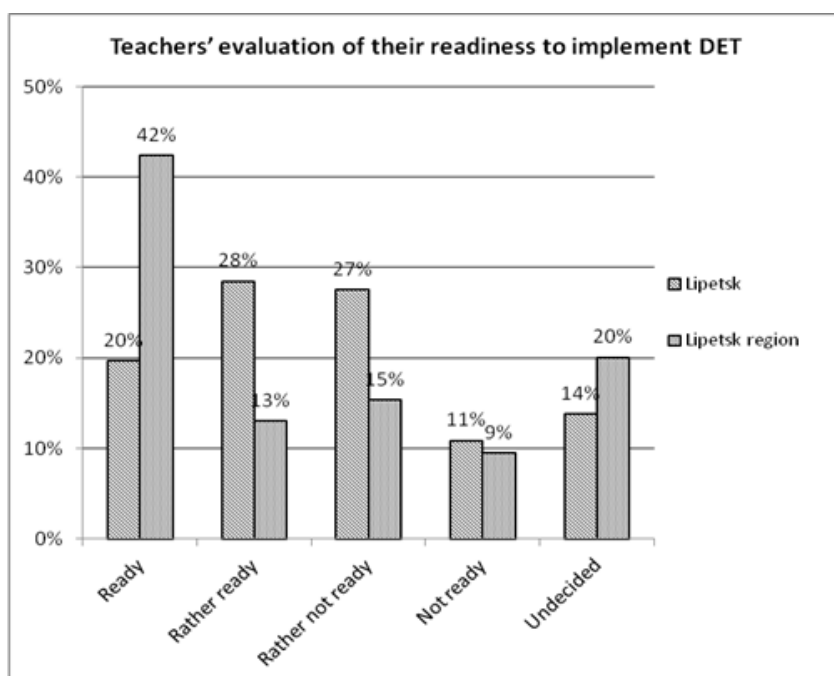**Figure 2.** Evaluation by the teaching staff of the necessity to use DET in PEIs

Figure 3. Teachers' evaluation of their readiness to implement DET

Answering this question, 43% of urban teachers indicated this as necessary or rather necessary. In rural areas, this percentage is much higher, amounting to 58%. This question was answered in the negative by over twice as many teachers in the city than in rural areas (37% in Lipetsk versus 16% in the Lipetsk region). It can be observed that the teachers and the administration of rural PEIs value the need for DET in preschool education much higher than their counterparts in the city. It is worth noting that, when replying to this question, a rather large percentage of respondents were undecided (30% of the administration in Lipetsk city PEIs, 25% of teachers in the Lipetsk region, 21% of teachers in Lipetsk and 11% of the PEI head masters in the Lipetsk region). This fact may indicate that, despite the high percentage of positive responses to the first question, the educators and the administration of kindergartens do not have a clear picture of the key point, techniques, and forms of DET, which makes it difficult to objectively assess the need for their application in PEIs.

The motivational component also characterizes the following question in the questionnaire for teachers and dedicated specialists: 'Are you ready to implement DET?' (**Figure 3**).

Readiness for implementation was expressed by 48% of the city teachers and 55% of the teachers in rural areas. Also, when answering this question, many respondents chose the option 'Undecided'.

When evaluating the cognitive component, the authors were primarily interested in the question 'Who, in your opinion, is the most likely target audience for the implementation of distance learning in PEIs?'
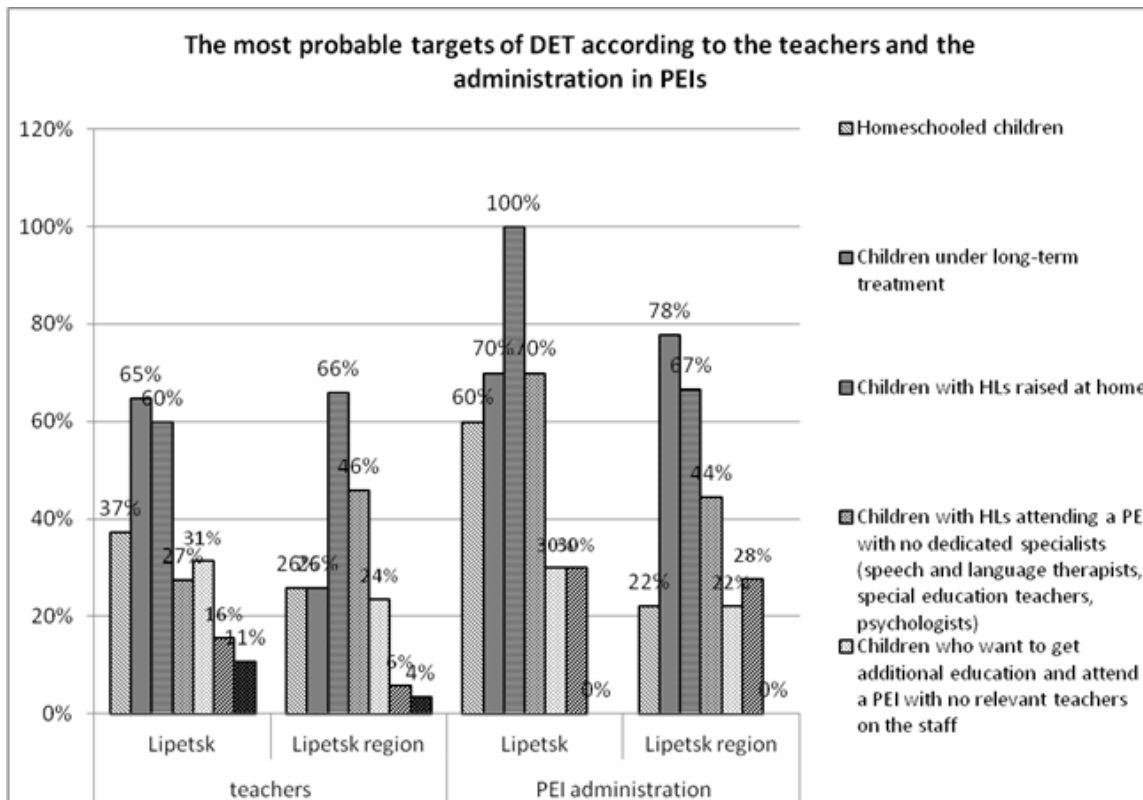
Figure 4. The most probable targets of DET according to the teachers and the administration in PEIs

It can be seen from the diagram that almost the majority of the respondents indicated 'children with HLs raised at home' and 'children with HLs who attend PEIs with no dedicated specialists (speech and language therapists, special education teachers, psychologists)' as the most likely recipients. It should be noted that such a group of children as 'children attending short-stay groups' both in the city and in the region ranks second last (15.7% in the city and 5.9% in rural areas), although they spend most of the time out of kindergarten and may be potential consumers of remote educational services (**Figure 4**).

In addition to the probable targets of distance learning in kindergarten, the question of what means to implement distance technologies are known to the participants is also of interest. Responding to it, the teachers in both the urban and rural areas mostly opted for the same means, such as: 'Audio and video informative teaching materials (Lipetsk – 70.6%, the region – 58.8%); 'Computer training systems in the standard and multimedia versions' (the city – 66.7%, rural areas – 48.2%); 'Electronic versions of educational resources' (the city – 60.8%, rural areas – 44.7%). Among the administrative staff, 100% of the surveyed administration employees of the urban PEIs mentioned 'Electronic versions of educational resources, teaching aids, reference books, etc.', 'Web-based teaching aids', 'Audio and video informative teaching materials'. 80% of the respondents indicated the option 'Computer teaching systems in the standard and multimedia versions', while 70% mentioned 'Knowledge and database with remote access; electronic libraries with remote access'. In rural areas, the PEI heads more often referred to 'Computer teaching systems in the standard and multimedia versions' – 77.8%, 'Electronic versions of educational resources, teaching aids, reference books, etc.' – 72.2%, 'Audio and video informative teaching materials' – 72.2%. 33.3% of the respondents in rural areas chose the option 'Web-based teaching aids' against 100% in the city (**Figure 5**).

In particular, the operational and activity component was assessed by the question: 'What kind of software can you use?' It was asked only to teachers, and the most common response in both the urban and rural areas was 'Working with e-mail' (66.7% – urban and 81.2% – rural), while the teachers indicated 'Working with the Skype software' and 'Working with MS Office' as the second and the third common ones.
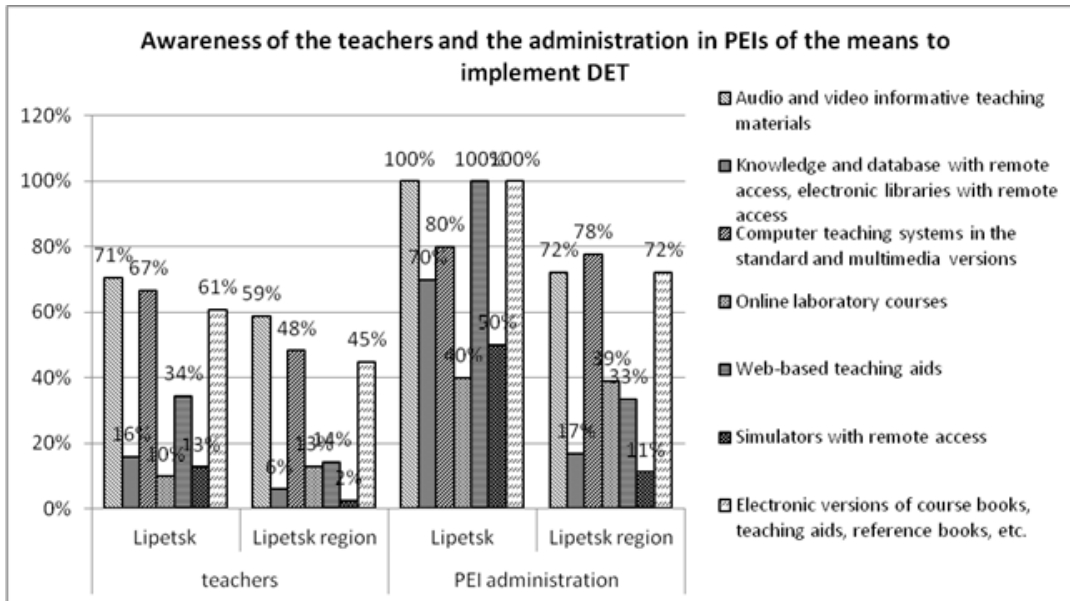
Figure 5. Awareness of the teachers and the administration in PEIs of the means to implement DET
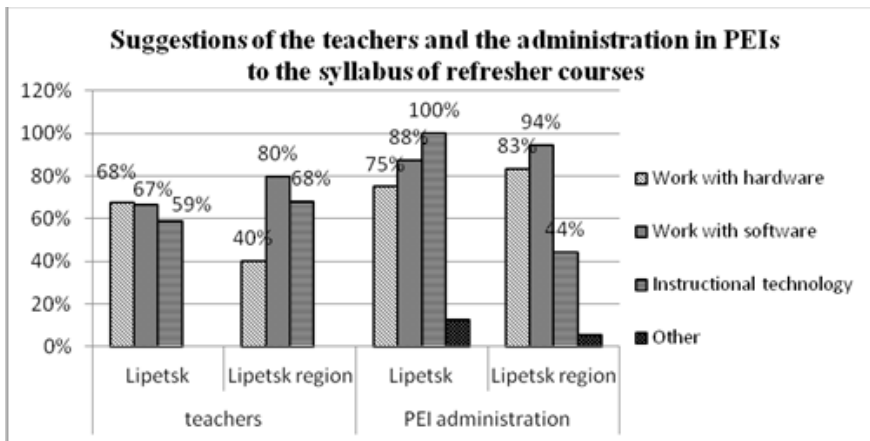

Figure 6. Suggestions of the teachers and the administration in PEIs to the syllabus of refresher courses

Evaluating the volitional component, questions were asked to assess the need for any upgrade training for teachers and the administration to implement distance learning in PEIs. The majority of the respondents (over 70%) supported the organization of such courses, while 100% of the rural PEI administration interviewees replied in the positive. When outlining a syllabus for such courses, teachers did not have any difficulties answering, as none opted for it. Out of the options offered, both teachers and the administration predominantly mentioned working with software, but quite a high percentage indicated working with hardware and instructional technology. Inference should be drawn that these blocks should be included in the syllabus of refresher courses, and the hours allocated to each of them should be approximately the same (**Figure 6**).

Estimating the readiness of their PEI to implement DET, 50% of the administrative staff of the urban PEIs answered this question in the affirmative, while 72% of the regional PEI administrations replied so. The study has shown that most of the PEIs involved in the survey have a personal computer, a projection device, a projection screen; about 60% have an interactive whiteboard. However, the Internet connection was indicated as available by 55% of the rural PEIs and 40% of the urban PEIs surveyed. The lack of a quality and stable connection to the Internet is a serious obstacle to successful DET implementation. In this questionnaire, the PEI administrations were asked to rank, in order of importance, the problems of implementing distance learning technologies in a specific PEI (where 1 is the most significant and 4 is the least significant problem). The results were processed by the sum of rankings method. The problem scoring the least number of points was the most significant. According to the survey results, 'Financial and economic support (the possibility to procure appropriate equipment, technical facilities, remuneration for specialists)' came in top place. As can be seen from the above analysis of respondents' answers, the teachers' readiness to implement new technologies in preschool education is quite high, but some adjustment

training for personnel and settlement of the problems with financial and technical support for this process are indispensable.

Analyzing the answers of preschool children's parents, one may note that in the urban and rural areas, 73% of the parents interviewed reported they had an idea of distance technologies, and less than 30% would like their child to be trained via DET. Here as well, a rather large percentage of respondents remained undecided (30% in the city and 40% in rural areas), which also points to the fact that parents do not have a clear idea of the content and capabilities of DET in preschool education.

Answering the question 'For whom, in your opinion, will distance learning technologies in PEIs be the most useful?', respondents in both urban and rural areas indicated children under long-term treatment first (66.0% and 41.0% respectively), children with HLs raised at home were the second (58.0% in the city, 36.6% in rural areas), while homeschooled children and children with HLs attending a PEI with no dedicated specialists (speech and language therapists, special education teachers, psychologists) were in the third and fourth place, according to the results of the survey. In other words, parents see potential consumers among those who do not attend kindergarten at all or attend irregularly or do not get specialist services they require. The respondents view remote educational technologies as a means of eliminating problems with access to the necessary scope of educational services and improving the quality of education.

When defining a distance learning model for themselves, the largest percentage of parents indicated 'Distance learning for children who want to get additional education and attend a PEI with no relevant teachers on the staff' (the city – 35.5%, rural areas – 30.2%). Further opinions of the parents in the city and in the region divided. The second place in the city with a difference of only 1% was 'Distance learning for children under long-term treatment' – 34.5%, the third was 'Distance learning for homeschooled children' – 26.5%. In rural areas, the second place was 'Distance learning for children with HLs attending a PEI with no dedicated specialists (speech and language therapists, special education teachers, psychologists)' – 28.8%, the third was 'Distance learning for children with HLs raised at home' and 'Distance learning for children under long-term treatment' – 21.0% each. It can be assumed that these models will be most in demand among parents of preschool children. It should be noted that a rather high percentage of parents in the region who identified themselves with a model turned out to opt for 'Distance learning for children with HLs attending a PEI with no dedicated specialists (speech and language therapists, special education teachers, psychologists)'. This suggests that there is insufficient number of such specialists in regional PEIs as speech and language therapists, special education teachers, and psychologists. In this situation, distance learning technologies would provide opportunities to seek professional advice, recommendations, and sessions for children from these specialists regardless of the location of a child and the PEI they attend.

Upon answer to the question 'What are the means of implementing distance learning technologies you know?', the same set of options lies in the first four places: Skype, YouTube, e-mail, electronic version of educational resources, teaching aids, reference books, etc.

Skype was mentioned by 72.5% of the urban respondents (which is the first place) and 66.8% of the respondents in rural areas (the second place). In rural areas, e-mail came in top place (70.2%), while in the city it scored 69.0% (this is the second most popular answer). Analyzing the answers, one can say that the means referred to as familiar were those used by the majority of the population in everyday life for communication.

Answering the question 'What means of implementing distance learning technologies would you like to use?', the largest number of respondents were in favor of the option 'Computer teaching systems in the standard and multimedia versions' – 21.0% in the city and 32.7% in rural areas. The answers were distributed as follows:

- in the city: 'Electronic version of educational resources, teaching aids, reference books, etc.' and 'Audio and video informative teaching materials' – 19.5%, Skype – 19%;
- in rural areas: Skype – 30.2%, 'Audio and video informative teaching materials' – 29.3%, 'Electronic version of educational resources, teaching aids, handbooks, etc.' – 25.4 %.

Analyzing the answers obtained, one may note that the rating of means to implement remote educational technologies in the answers 'Aware' and 'Would like to use' almost entirely coincides. This is quite explicable, since only few indicated they would like to use unknown means (**Figure 7**, **Figure 8**).

It is noteworthy that the percentage of the 'Would like to use' answers is almost twice as low as of the 'Aware' answers in the region and over three times as low in the city.

Comparing the results of the urban and rural areas, one can note that in the latter, the percentage of those who expressed desire to use certain means to implement distance technologies is much higher than in the city. Another point in the answers to the question 'Would like to use' calls attention to itself: a low percentage of respondents both in the region and in the city opted for working with the website or the portal, 8.0% and 10.2% respectively. This is strangely enough because at the moment, each PEI has its own official website where it publishes all the required and relevant information. It can be assumed that to date, for most parents, these websites do not play the role they are designed for, and parents do not perceive them as a possible means of distance learning technologies.
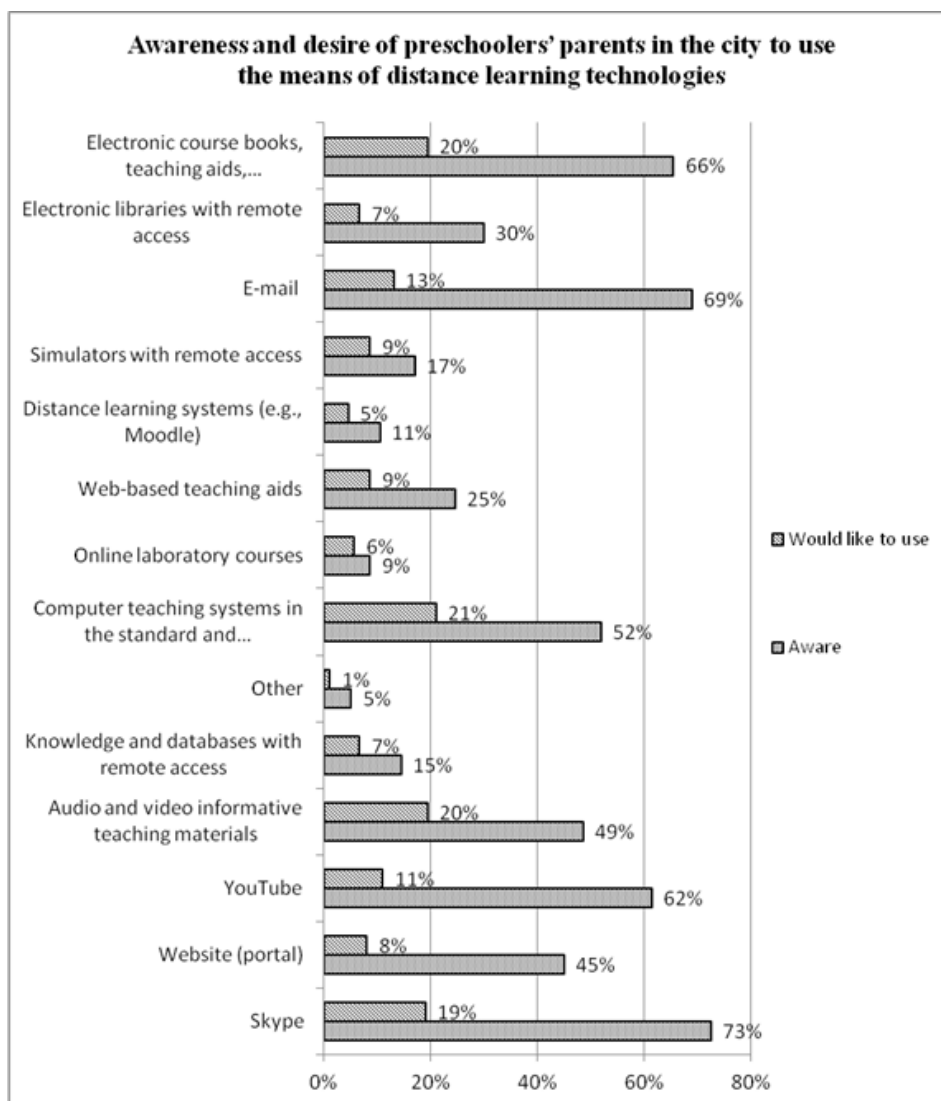
Figure 7. Awareness and desire of preschoolers' parents in the city to use the means of distance learning technologies

When answering the question 'What means of communication is the most acceptable for you within distance learning?' both in the urban and in rural areas, the majority of respondents indicated 'Individual on-line sessions with a teacher/a specialist' – 65.0% in the city and 57.6 % in rural areas. This option is significantly ahead of all the others. In the city, it is followed by 'On-line broadcast lessons for children in the kindergarten group' and 'Video classes without a direct interaction with the teacher' – 25% each. In rural areas, 'Video classes without a direct interaction with a teacher' ranks second – 21.5%, while the third popular is 'Group on-line classes with a teacher/a specialist' – 19.5%.

The smallest percentage in the urban and in rural areas was scored by the option 'Off-line consultations with teachers/dedicated specialists in the absence of children' – 13.0% in the city and 6.8% in rural areas. The option 'On-line consultation with teachers/dedicated specialists in the absence of children' scored a little more (7.3%) in the region, although in determining an interaction model for themselves, parents gave 28.8% (the second popular answer) to the model 'Children with HLs attending PEIs with no dedicated specialists (speech and language therapists, special education teachers, psychologists)'.

When choosing the most convenient time for distance learning in the city, 38.0% of the respondents indicated the time before noon, and 34.0% preferred the evening time. In rural areas, 48.3% of the parents interviewed referred to the evening time as convenient.

Thus, the most numerous group of consumers of educational services using remote technology is ready to engage in it after work, in the evening. This needs to be taken into account when planning the work hours of teachers and specialists, since the majority of the respondents spoke in favor of 'individual on-line sessions with a teacher/a specialist' as the most acceptable way of interaction.
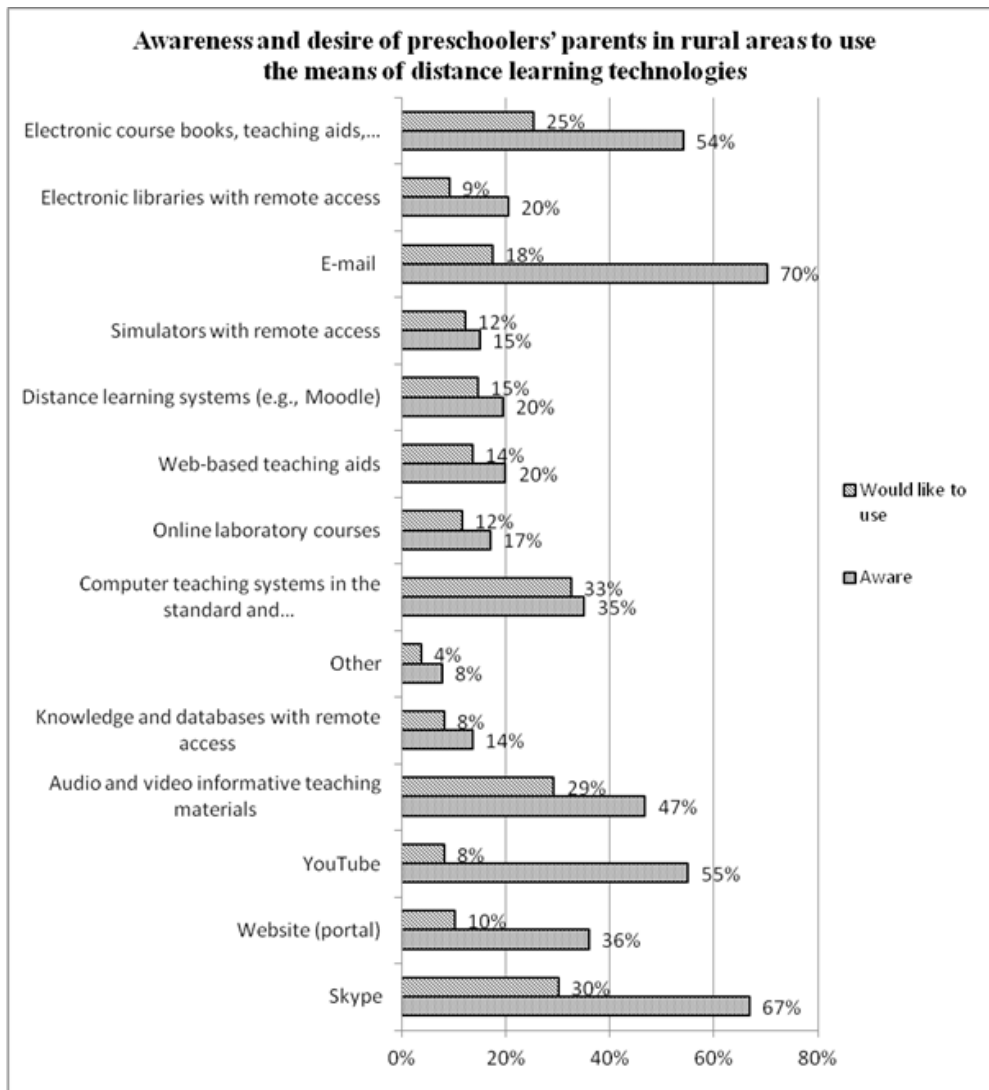
Awareness and desire of preschoolers' parents in rural areas to use the means of distance learning technologies

Figure 8. Awareness and desire of preschoolers' parents in rural areas to use the means of distance learning technologies

DISCUSSION

Summarizing the above, it is to be noted that in this survey, parents in both urban and rural areas display poor awareness of the key point of distance learning technologies in preschool education, their means and methods. This is evidenced by a high percentage of 'Undecided' answers the respondents chose. Also, this is indirectly confirmed by some inconsistencies in the answers to various questions. For example, the abovementioned low percentage of respondents in rural areas who chose the option 'On-line consultation with teachers/dedicated specialists in the absence of children' as the most acceptable form of interaction with a high percentage of answers about the interaction model chosen for themselves 'Children with HLs attending PEIs with no dedicated specialists (speech and language therapists, special education teachers, psychologists)'. Or, when answering the first question, the majority indicated they had an idea of remote technologies, while later on, a large percentage finds it difficult to answer the question whether they would like to use it. There is a need to raise awareness and familiarity of parents to provide a more thorough understanding of the key point of distance learning technologies and their capabilities.

The research touches upon the understudied issue of applying distance learning technologies in PEIs in the context of Russian teaching practice. The assessment of readiness to implement DET specifically in preschool education has not been considered in so much detail in earlier studies. Most of them concerned formal and vocational education, studying the readiness of teachers and professors, school children and students. A sociological research that would study in detail the readiness of preschool education to introduce distance learning technologies from the point of view of all the school community has not been carried out to this day. In 2015,

Andreyeva conducted a research to study the readiness of preschool teachers to use ICT in PEIs in Belgorod. In the course of this study, it turned out that the computers were used to write lesson plans; 33.4% used ICT only to write lesson plans; 16.6% did not use ICT in their work at all. After summarizing the survey findings, 'ICT Readiness Test' (proprietary methodology) was administered, whereby it was found that 33% of teachers had a high level of readiness to use ICT, 50% of teachers had a medium level, while 17% of teachers had a low level. Thus, the author ascertained that ICT was not used systematically in the organization and delivery of training process.

CONCLUSION

The study of teachers' and specialists' readiness to implement distance learning technologies in PEIs on the basis of the current research has shown that the majority of respondents have an idea of DET and many believe its application in PEIs is necessary. However, only half of the interviewed teachers and specialists view themselves as ready to implement these technologies. Teachers and specialists are quite well informed about the means of DET implementation. Nevertheless, most of them deem it necessary to organize refresher courses, with their syllabus including work with hardware and software equipment, as well as instructional technology.

The study of readiness to introduce DET as one of PEI activities through a survey among PEI administration has shown that 50% of the administrative staff in urban PEIs and 72% of those in regional PEIs consider their educational institutions ready to implement DET. However, they recognize a number of problems related to the introduction of DET in preschool education, and the most important one of them was referred to as 'Financial and economic support (the possibility to procure appropriate equipment, technical facilities, remuneration for specialists)'. Administrative staff, as well as teachers and specialists, consider it necessary to organize refresher courses for teachers who are expected to implement DET.

Studying the readiness of preschool children's parents as direct consumers of educational services to embrace DET in preschool education has revealed that both in the urban and rural areas, 73% of the parents interviewed say they have an idea of distance technologies, while less than 30% would like their child to be trained with DET. However, a rather high percentage (30% of the respondents in the city and 40% of the respondents in the region) find it difficult to answer, which gives evidence of the lack of a comprehensive view of the DET key point. Out of the range of means proposed to implement DET, parents preferred Skype, YouTube, e-mail, electronic version of educational resources, teaching aids, reference books. Comparing the results of the urban and rural areas, one can note that in the region, the percentage of those who has expressed desire to use certain means of implementing distance technologies is much higher than in the city. It has been also shown that a rather low percentage of the parents interviewed mentioned work with the PEI website. This may indicate that to date, the websites have not been used by parents as a source of educational information. 'Individual on-line sessions with a teacher/a specialist' has become the most popular way of interaction within distance learning both in the city and in the region.

In general, it may be deduced that the introduction of distance learning technologies in preschool education requires a large amount of preparatory work both with teachers and specialists and with the parents of preschool children, as well as addressing a number of administrative challenges in the financial, technical, and organizational support of remote educational process.

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