

# Use of Information and Communication Technologies and Remote Forms of Speech Therapy Work in the Practice of a Logopedist

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## ABSTRACT

The use of information and communication technologies and remote forms of speech therapy in the practical activities of a logopedist (speech therapist) makes it possible to provide an individual approach to children with severe speech disorders, to organize the continuity of the correctional and developmental process in the conditions of forced absence of students in the classroom in the traditional offline form. The article analyzes the practical experience of logopedists in the use of digital technologies and remote speech therapy classes with preschool children. During the study 100 questionnaires of logopedists were collected and analyzed. The advantages and disadvantages of remote forms of work with children, difficulties in preparing and conducting webinars with preschoolers with speech disorders are revealed. The most significant aspects that need to be taken into account by specialists when using information and communication technologies and remote forms of speech therapy work with preschool children are highlighted.

**Keywords:** *information and communication technology, remote forms of speech therapy, preschool children with severe speech disorders, speech therapy classes*

## 1. INTRODUCTION

A specialist of any profile must have competencies in the field of information and communication technologies that enable collecting, storing, processing, transmitting information, conducting an interactive dialogue, managing objects or models of objects, phenomena, processes, visualizing information, and monitoring the results of activities, including educational ones [4, 10].

For a modern teacher, rational, competent use of digital technologies and remote forms of work in their work is an important professional competency that allows them to respond to changes in the structure of the labor market and educational needs of society dynamically [12].

The use of information and communication technologies (ICTs) in the work of special teachers opens up new prospects for teaching children with disabilities, including those with severe speech disorders. This is due to several benefits of ICTs: rapid search functionality and information transmission, activation of cognitive activity and motivation due to attractive video and audio lessons, multimedia presentations and educational computer games, multiple repetition of the necessary exercises or viewing materials, etc. (M. V. Akimenko, N. P. Astrametskaya, E. N. Soroko, E. S. Chuprova and others.) [1, 2, 5, 8, 9, 11].

In working with preschoolers who have severe speech disorders, the use of ICTs, in addition to the above positive aspects, makes it possible to visualize the work of the

speech apparatus, develop coordination of motor, visual and auditory analyzers effectively when performing tasks on a computer, include game elements in the process of correcting speech disorders, make it brighter, more understandable and interesting [6, 8].

Digital technologies enable logopedists to optimize the correction and speech therapy process in general and individualize speech therapy work, taking into account the structure of speech disorders, in particular.

Computer technologies allow teachers to create and use multimedia presentations, game exercises and tasks in the classroom independently, while taking into account the age, individual characteristics and educational needs of each child individually and the entire group of children.

The existing computer programs used by speech therapists, such as "SpeechViewer", "Uchimsya govorit' pravilno" "Igry dlya Tigry", "Delfa", "Uroki mudroy sovy", etc. can solve the following tasks of speech therapy effectively: to correct speech breathing disorders; to correct the lack of voice power; to work on eliminating defects in sound pronunciation; to differentiate paired voiceless and voiced consonants, hard and soft consonants; to form the sound-syllabic structure of the word; to eliminate shortcomings and develop the lexical and grammatical system; to form coherent speech (O. V. Larina) [6].

When working with children of preschool age using ICTs, it is necessary to take into account the requirements of SanPiN (sanitary regulations) 2.4.1.2660-10. according to which educational activities using computers for children aged 5 - 7 should be carried out no more than once a day

and no more than three times a week on the days of the highest performance: on Tuesday, Wednesday and Thursday.

The continuous duration of working with a computer in the form of educational games for 5-year-old children should not exceed 10 minutes and for children aged 6-7 - 15 minutes [13].

Teachers need to alternate tasks and exercises with different visual load, this will improve the performance of children in the classroom and the productivity of their activities. After working with the computer, children are given eye exercises [7].

Specialists who use ICTs should keep in mind that not all the visual material offered to children during the lesson will be adequately perceived on an electronic medium. It is better to work with texts and offer students tasks for recognizing superimposed images in the traditional form (paper version) [3].

Modern reality sets another important task for teachers, including those working with children with disabilities: the need to organize classes, including speech therapy, in the conditions of forced absence of the student. This may be due to quarantine measures, the employment of parents who cannot ensure the presence of their child in offline classes, the lack of specialists in sparsely populated and remote cities and towns, etc. Therefore, many teachers, in addition to traditional forms of interaction with children with speech disabilities, conduct speech therapy classes in the video conference mode.

Questions arise as to how widely these classes are included in the practical activities of logopedists; what the positive and negative aspects are when conducting remote classes with preschoolers who have speech disorders; what difficulties specialists have when preparing and conducting speech therapy classes in videoconferencing mode.

## 2. METHODOLOGY

The object of study is information and communication technology and remote forms of speech therapy with preschool children.

The subject of the study is logopedists from educational organizations in Yekaterinburg that work with preschool children.

The purpose of the study is to analyze the practical experience of using ICTs and remote forms of speech therapy with preschool children.

The tasks:

- 1) identification of priority forms of ICT in the practice of logopedists;
- 2) analysis of advantages and disadvantages of remote forms of speech therapy with preschool children;
- 3) identification of difficulties in preparing and conducting remote speech therapy classes with preschool children.

The study period is October 2020.

Methods - questionnaire method, descriptive statistics method.

The result and its novelty:

- data on the practical application of information and communication technologies and remote forms of speech therapy with preschool children in the professional activities of logopedists were studied; the advantages and disadvantages of remote forms of work with children were analyzed; difficulties were identified when using remote forms of speech therapy with preschool children with severe speech disorders.

The total number of questionnaires received for analysis is 100.

11 questions of closed and open types were used in the questionnaire questions.

1. Your age: 20-30; 31-40; 41-50; 51-60; 61 and older.

2. Work experience as a speech therapist: 1-5 years; 6-10; 11-15; 16-20; 21-25; more than 25 years.

3. What information and communication technologies do you use in speech therapy: classes in the video conferencing system (webinars); multimedia presentations; computer games; video fragments; audio fragments; ready-made video sessions; others.

4. Have you had any experience of conducting speech therapy classes remotely: yes, no.

5. What kind of video conferencing systems did you use: Zoom; Skype; WhatsApp; Mirapolis; BigBlueButton; others.

6. How long did the video session with a preschool child last: 10-15 minutes, 15-20 minutes, 20-30 minutes, more than 30 minutes.

7. During speech therapy classes in the remote form, did the children need the help of parents or other adults: yes, no, partially.

8. What are the advantages of remote forms of speech therapy in your opinion: the possibility of organizing online training at a convenient time; the possibility of organizing training in small groups; ensuring a continuous correctional and educational process in the conditions of forced absence of the student; the possibility of providing speech therapy assistance on the periphery - where there are not enough highly qualified teaching staff to work with children with severe speech disorders; more active involvement of parents in working with children; other.

9. What do you think are the disadvantages of remote forms of speech therapy work: less training in oral speech of students; time restrictions in working on a computer for children (SanPiN standards); significant time spent in making presentations and multi-level tasks; not all exercises, techniques of speech therapy can be implemented remotely; difficulties in keeping the child's attention; other.

10. What difficulties did you have in the process of preparing and conducting speech therapy classes in a remote form: large time spent on preparing remote classes; difficulties with connecting to the Internet; delay in transmitting an audio signal; sound lagging; other.

11. Will you use remote forms of speech therapy in the future: yes, no, can't answer.

### 3. RESULTS

Logopedists of the following age groups took part in the survey: 20-30 years old - 23%, 31-40 - 37%, 41-50 - 36%, the rest of the survey participants (4%) were older than 51. Work experience as a speech therapist in the respondents: from 1 to 5 years - 41%, from 6-10 years -18%; from 11 to 15 years - 14.4%, from 16 to 20 years -14 %; more than 21 years -13% .

During speech therapy classes, 77% of the logopedists actively use multimedia presentations, 52% of the respondents use computer games in their work, 46% include audio fragments, and 44% offer children to watch video fragments. Some teachers (21%) use video recordings of ready-made speech therapy classes in their work.

Thus, we see a fairly large arsenal of information and communication technologies that speech therapists use in their practice.

The availability of a computer and the Internet makes it possible to organize speech therapy work remotely. Such online lessons are called "webinars". Issues related to the use of remote forms of work with preschoolers with severe speech disorders remain insufficiently studied. The survey of 100 logopedists showed that 59% of them had the practice of conducting speech therapy classes in the form of webinars with preschool children, and the teachers aged 30 and older most actively practiced working remotely. Most of the respondents used Zoom, Skype, and WhatsApp video conferencing systems.

The duration of video sessions with preschool children according to the results of a survey of logopedists did not exceed 15-20 minutes (68% of the respondents), 20% of the teachers noted that the lesson with the child lasted from 20 to 30 minutes, 5% - more than 30 minutes.

In the course of remote classes, 51% of the logopedists noted that preschoolers with speech disorders during webinars needed the help of parents or other adults, 40% of the respondents wrote that children did not always need help from their immediate environment, and only 9% of the surveyed speech therapists believe that preschoolers coped with tasks during video sessions independently.

Among the main advantages of remote forms of speech therapy, teachers named the possibility of ensuring a continuous correctional and educational process in the conditions of forced absence of the student (73% of the respondents) or in the conditions of lack of highly qualified teaching staff to work with children with severe speech disorders (49%). The ability to organize online training at a convenient time is noted as an advantage of video sessions by 47% of the logopedists, and 40% see the advantages of remote forms of speech therapy in more active involvement in the correctional process of parents or other adults from the immediate environment of a child with severe speech disorders.

Among the disadvantages of speech therapy classes conducted via video conferencing, 74% of the surveyed specialists noted that not all exercises and techniques of speech therapy can be implemented remotely. This mainly concerned the techniques of sound production.

30% of the teachers attributed significant time spent on making presentations and tasks used during video sessions and difficulties in keeping the child's attention during the lesson to the disadvantages of remote forms of speech therapy.

Time restrictions on working on a computer for preschool children are considered disadvantages of webinars held by 23% of the logopedists, 15% of the respondents note that children's oral speech is less trained in online classes.

Difficulties in preparing speech therapy classes in the form of webinars that arise for speech therapists were associated with a large time spent on preparing this type of classes for 65% of the logopedists.

During video sessions, many teachers experienced delays in transmitting the audio signal - 45%, lagging sound - 34%, difficulties connecting to the Internet -28% of the respondents.

The last question of the questionnaire about the use of remote forms of speech therapy in their future professional activities was answered in the affirmative by 31% of the teachers, 54% of the respondents found it difficult to answer this question, and only 15% of the speech therapists answered in the negative.

### 4. DISCUSSION

1. Logopedists in their practice use a variety of information and communication technologies, among which the most common are multimedia presentations, computer "speech therapy" games, audio and video fragments.

2. More than half of the surveyed specialists practice remote forms of speech therapy. They highlight both the advantages and disadvantages of speech therapy classes conducted in the form of video conferencing.

3. Among the advantages of these classes, the teachers note the possibility to organize systematic correctional and developmental work, in the absence of the child in the classroom in the traditional offline form.

4. Among the disadvantages of speech therapy classes in the form of webinars, the logopedists identified the inability to conduct certain exercises and specific techniques of speech therapy, as well as difficulties in keeping the child's attention during the webinar and significant time spent on preparing speech therapy classes in the form of video conferencing.

5. 15% of the respondents expressed a negative attitude to speech therapy classes in the form of video communication, they do not plan to use remote classes in their professional activities, while 31% of the teachers will continue the practice of conducting remote speech therapy classes with children along with traditional ones.

### 5. CONCLUSION

1. Information and communication technologies and remote forms of speech therapy work with preschool

children using video conferencing have become quite firmly established in the practical activities of logopedists.

2. The use of specific forms of information and communication technologies, the feasibility of speech therapy classes in the form of webinars depend on the age, individual characteristics, preferences, health status of each child, goals and objectives of speech therapy.

3. Speech therapy classes using video conferencing require a logopedist to do more preparatory work: making presentations for joint demonstration on a computer

screen, pre-mailing tasks that are printed out in advance, selecting computer speech therapy games, etc.

4. In speech therapy classes held remotely, it is necessary to perform a set of dynamic exercises and eye gymnastics with the child.

5. Conducting speech therapy classes with preschool children in a remote form requires the presence of parents or other adults from the child's immediate environment, which also has advantages: more effective inclusion of the family in the correctional and developmental process.

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