

# Features of the Development of Communication Skills in Russian Secondary School Students in the Context of Distance Learning

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## Summary

The purpose of the study is to reveal the features of the development of communication skills among secondary school students in the course of distance learning. Through comparative analysis of Russian and foreign studies, the models of communication in a digital environment and the structural components of communication skills in the context of distance learning are identified. The study uses data from a survey of 222 secondary school students from the Komi Republic, Russia. Empirical results give insight into the most vulnerable areas of students' communicative activity during lessons conducted in the synchronous, asynchronous, and blended modes. The practical significance of the study consists in the possibility of using the data obtained to improve the process of distance learning.

## Keywords:

*secondary education, distance learning, communication models, communication skills, diagnostics of students' communication activity.*

## 1. Introduction

Due to the spread of COVID-19 and the difficult epidemiological situation in 2019-2021, distance learning has become universal all across the world. According to UNESCO, the COVID-19 pandemic has affected more than 1.5 billion students across the planet, as schools and universities were closed. These shutdowns had several reasons:

- 1) educational institutions were unprepared to organize distance learning due to technical reasons and the lack of information-communication competences among teachers;
- 2) students' families did not possess the required technical devices for distance learning [1].

The primary goal of distance learning is to provide every student with the opportunity to get an education despite the different life circumstances, health status, geographical distance from the institution, and the difference in time zones. In the course of the transition to distance learning, students needed to not only organize their learning activities on their own but also manage to effectively communicate with teachers and classmates.

## 2. Literature Review

At all times, interaction and communication between teachers and students and between students themselves have been essential in the organization of the learning process. In different eras of pedagogical science, researchers studied the problem of organization of communication, highlighted and substantiated the components of communication, and described and modeled the process of communication. Let us consider the most prominent models of the organization of communication.

In the most uncomplicated model of communication suggested by H. Lasswell H. [2], the elements of communication are provided in the order of answering the questions: *who* is communicating, *what* is communicated, which *channel* is used to communicate, *to whom* is it communicated, and what *effect* does the communication have.

The linear model developed by C. Shannon and W. Weaver [3] includes five elements of communication (information source, transmitter, transmission channel, receiver, and destination – a linear sequence of information transmission) along with three levels of the process of communication: the technical level, the semantics of messages, and the effectiveness of the receiver's understanding of the message [4]. This model assumes simplified one-way communication.

C.E. Osgood and W. Schramm [5] are the authors to the circular model of communication, which reflects the circular nature of the mass communication process: communication has no beginning or end but has a number of informational signs (facts, items, etc.), as well as emotions (latent meanings, "the silent language").

D. Berlo [6] asserts that communication takes place if the source and receiver of information are placed in a socio-cultural environment, which influences the content of the message through feedback. Berlo lists five possible communication channels: the visual, auditory, tactile, gustatory, and olfactory.

Today's digital technology "expands" reality, offering new ways to interact with the environment and peers and changing the conditions of communication by introducing virtual reality (VR), augmented reality (AR), and mixed

reality (XR) [7]. Social robots, voice assistants, and other similar technologies are changing communication patterns by acting as partners in communication. Such communication provides new opportunities and constraints for communicative interaction [8].

In this context, researchers distinguish different models of interaction between participants in distance learning, in which communication occurs not only between the teacher and learners but also between a person and a machine.

G. Gumpert and R. Cathcart [9] introduced the concept of interpersonal mediated communication, meaning interaction between people in which the environment is wedged between them to traverse space and time. In these mediators the authors include voicemail, videotapes, phone, letters, and emails.

A model developed by R. Fox et al. [10] considers the learning environment and consists of two categories:

- physical (buildings, classrooms, lecture rooms, laboratories, libraries, cafes, and other places where students study);
- virtual (online learning resources, learning management systems, online apps).

G. Riva and C. Galimberti [11] looked into computer communication, which builds upon the psychosocial root of the process by which interaction between users is constructed: the online reality, the virtual conversation, and the construction of identity.

M. Repetto's social presence model proceeds from the idea that "learning occurs through the interaction of three main components: the cognitive dimension, the social-organizational dimension, and the affective dimension". In this vein, interaction in virtual learning communities (VLCs) takes place by means of textual analysis of the content of messages shared in online groups among students or between students and teachers [12].

R. McEwen and M. Lui [8] indicate that communication is expressed through virtual and augmented settings and mediated through portable devices and through the prism of human-machine communication.

R. Hotte and S. Pierre [13] believe that a new type of interaction (learner/learner – digital learning environment) requires the involvement of mentors (to manage a group of students) and experts (to share knowledge, both theoretical and practical). The key objective of mentors and experts in this model is to support students' interest, satisfy their educational needs and demands, provide dynamic interaction between groups, and solve any possible conflicts. This position of foreign researchers is supported by Russian scholars M.E. Vaindorf-Sysoeva and E.V. Pankina [14].

The various models of interaction between participants in communication during distance learning are reflected in the pedagogical design of the lesson (classrooms). I. Matias and S.W. Nielsen [15, p. 555] explore the effects and advantages of conceptual pedagogical frameworks on the design of

classrooms during distance learning and believe that "hybrid blended learning environments seek to bridge the gap between physical and virtual learning spaces".

In Russian science, the concept of computer communication has not yet been solidified since there are such synonymous concepts as:

- "computer linguodidactics (communication)," V.A. Fandei [16];
- "virtual communication," V.V. Rizun [17];
- "interactive communication," M. Castells [18];
- "Internet communication," L.I. Galiullina [19];
- "'human-computer-human' interaction," A.N. Bogomolov [20].

Russian educational practice employs models that account for the share of electronic interaction, the specifics of the content of education, the ratio between classroom and independent work, and control over the learning process. On this basis, the following models are differentiated:

- *the substitution model*, which is distinguished by the extensive use of ICT and the combination of in-person and online learning. The face-to-face form of learning involves the use of interactive methods, while the electronic format relies on reproductive methods of independent work;
- *the supporting model*, which involves a synthesis of distance learning used as a complementary component and in-classroom learning, realized in practice with the use of active learning methods [16];
- *the electronic education center model* based on replacing traditional classroom lessons by face-to-face lessons in computer classrooms;
- *the hierarchical communication model*, which prioritizes direct communication, and the democratic hierarchy, which emphasizes feedback [21];
- *the model of interaction in an information and communication environment*, which includes specific components (users, rules of interaction, events, information objects) and types of interaction (human communication, mediated communication) [22].

The conducted analysis of communication models suggests that the most flexible and appropriate for the educational process in distance learning is the model of blended learning that uses a hybrid of synchronous and (or) asynchronous interaction between participants in communication with the use of a distance (virtual) environment [23].

In distance learning conditions, it is vital to address the development of students' communication skills, since otherwise the process of conversations, formulation of questions, and resolution of conflicts and various communicative tasks becomes more complicated. The limitations of the transmission of visual and verbal information and the lack of direct feedback in personal correspondence create the impression of a cold environment, in which people are unable to use the emotional components of interaction [22].

Our study focuses on the problem of the development of communication skills in secondary school students in the conditions of distance learning.

### 3. Methods

To discover the problems present in the development of communicative skills among secondary school students during distance learning, the following research objectives are defined:

1. To identify the components of students' communication skills in distance learning.
  2. To develop diagnostic materials.
  3. To administer a survey of students in a secondary school in the Komi Republic, Russia.
  4. To analyze and systematize the results of diagnostics.
- In identifying the components of secondary school students' communication skills in the distance mode, we relied on research conducted by A.G. Asmolov [24].

Asmolov considers communication skills to be a vital component in the development of universal learning actions, since communication is the leading activity in the adolescent age. At this age, of importance are the types of communication that would allow students to better understand the thoughts, feelings, and desires of other people. The level of communication skills affects social competence, which consists in the ability to consider the opinions and positions of partners in communication and the ability to listen and engage in dialogue and build cooperation with peers and adults. The scholar lists the following types of communicative acts:

- *communication and interaction* (the intellectual aspect of communication) – consideration of the position of the partner in conversation or activity;
- *communication as cooperation* – coordination of efforts to achieve a common goal and organize and perform collaborative action;
- *communication as a condition for interiorization* – communicative and verbal actions that serve as a means of transmitting information to others and developing reflexivity.

For the purpose of the study, each component of communicative acts is paired with a characteristic of students' communication skills (Table 1).

Table 1. Components of communicative acts and characteristics of students' communication skills in distance learning

Component of communicative acts	Characteristics of communication skills in the distance mode
Communication as interaction in distance learning	Orientation on the position of other people different from one's own expressed in writing or spoken speech (text, audio, video chats) in distance learning
	Understanding of the possibility of varying positions and points of view on a certain topic or

	issue expressed both in written and spoken speech (text, audio, video chats) in distance learning
	The ability to ability to argue and prove one's opinion in writing and speech (text, audio, video chats) in distance learning
Communication as cooperation in distance learning	The ability to negotiate and find a shared solution to a practical problem even in ambiguous and controversial circumstances (conflict of interest) in writing and speech (text, audio, video chats) in distance learning
	The ability to take on initiative in organizing concerted action in distance learning, as well as to provide mutual control and assistance while performing the task, as reflected in both written and spoken speech (text, audio, video chats)
Communication as a condition for interiorization in distance learning	The ability to make clear statements that account for what the interlocutor does or does not know and see expressed in writing and speech (text, audio, video chats) in distance learning
	The ability to ask questions in writing and speech (text, audio, video chats) in distance learning
	The ability to identify and express in speech the essential guidelines of the action, as well as convey them to a partner and capture them in written and spoken speech (text, audio, video chats) in distance learning

Addressing the second objective of the study, we have developed diagnostic materials to assess the level of development of the components of communication skills in the conditions of distance learning. The diagnostic toolkit relies on students' reflective self-assessment based on the personal action of self-assessment of the components of communicative actions, as well as adequate understanding of the reasons for success or failure.

The study utilizes the survey method. The components of the diagnostic material include a questionnaire for secondary school students with regard to the format of distance learning. The questionnaire consists of 31 open and closed questions.

The questions were divided into three blocks:

- general information about the survey respondents (age, gender);
- organization of distance learning (the forms of organization of distance learning and interaction with students, the services and portals used);
- self-analysis of students; communicative activity in the period of distance learning.

The answer options provided for the survey questions were "always," "often," "sometimes," and "never." If the student answered "always," it meant that they had been performing the action systematically. If the answer was "often," it meant that the learner did perform the action non-systematically. If the answer was "sometimes," it was

assumed that the student had been performing the action situationally, and if the response provided was “never,” it meant that the action had not been performed.

### 4. Results

Diagnostics of the level of development of the components of students’ communication skills under the conditions of distance learning were carried out in September 2021 and May 2022.

The survey covers 222 secondary school students from the Komi Republic, Russia, of three age groups: 10-12 years old – 8.11%; 13-15 years old – 74.77%; 16-18 years old – 17.12%. In terms of gender composition, the survey sample is comprised by 148 female (66.67%) and 74 male students (33.33%).

The survey indicates that in 59.9% of the cases, distance learning was organized in the asynchronous form (the teacher and students communicating with a delay in time via email, an electronic grade book, educational resource), while synchronous learning (the teacher and students interacting in real time using video conferencing services) was employed in 40.1% of the cases.

Data on the services and platforms used to organize communication as part of distance learning in the synchronous and asynchronous modes are presented below (Table 2).

Table 2. Distribution of students’ responses to the question about the services and platforms used in distance learning

Services, platforms	always	often	someti mes	never
<i>Service/platform for synchronous learning</i>				
Mirapolis Human Capital Management (mirapolis.ru)	1 0.45%	0 0%	2 0.9%	219 98.65%
Webinar (webinar.ru)	0 0%	0 0%	3 1.35%	219 98.65%
Discord (discord.com)	16 7.3%	24 10.81%	25 11.26%	157 70.72%
Google Meet (meet.google.com)	4 1.8%	2 0.9%	2 0.9%	214 96.4%
Skype (skype.com)	5 2.25%	5 2.25%	7 3.15%	205 92.35%
Cisco Webex (webex.com)	0 0%	1 0.45%	5 2.25%	216 97.3%
Zoom (zoom.us)	38 17.12%	19 8.56%	27 12.16%	138 62.16%
Telegram Web (web.telegram.org)	48 21.62%	29 13.06%	12 5.41%	133 59.91%
<i>Service/platform for asynchronous learning</i>				
e-mail	18 8.11%	13 5.86%	15 6.76%	176 79.27%
<i>Service/platform for blended learning</i>				
WhatsApp (whatsapp.com)	27 12.16%	20 9.01%	18 8.11%	157 70.72%
Viber (viber.com)	8 3.6%	8 3.6%	10 4.51%	196 88.29%
VKontakte (vk.com)	143	31	12 5.41%	36

	64.41 %	13.96 %		16.22 %
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The aforementioned services and platforms can be differentiated by their technical parameters into three groups:

1. *Service/platform for synchronous learning* (direct participation in communication). The respondents’ answers suggest that the service most actively used for synchronous distance learning is Zoom (17.12%). Video conferencing services used less frequently are Skype (2.25%), Google Meet (1.8%), Mirapolis (0.45%), Cisco Webex Meetings (0.45%), and Webinar (1.35%).

2. *Service/platform for asynchronous learning* (mediated participation in communication). Only 8.11% of the students report email being systematically used for communication. Meanwhile, 79.27% of the respondents have not been using email at all.

3. *Service/platform for blended learning* (direct and mediated participation in communication). The survey reveals that 64.14% of the surveyed students systematically use the VKontakte social networking site, 21.62% actively communicate via Telegram Web, and 12.16% use WhatsApp.

Thus, the survey results demonstrate that during the period of distance learning, the more actively used are blended learning services/platforms, which provide a combination of direct and mediated communication.

Considering the services and platforms from the point of opportunities to organize various forms of communication in distance learning, all of them enable both individual and group work and include text, video, and audio chats.

Let us now consider students’ answers about the organization of individual and group work as part of distance learning as a condition for the development of their communication skills (Table 3).

Table 3. Distribution of students’ responses to the questions about the organization of individual and group work in distance learning

Survey item	always	often	sometime s	never
<i>Group work</i>				
Have group text chats been organized during distance learning?	59 26.58 %	70 31.53 %	49 22.07 %	44 19.82 %
Have group audio chats been organized during distance learning?	46 20.72 %	46 20.72 %	36 16.22 %	94 42.34 %
Have group video chats been organized during distance learning?	50 22.52 %	54 24.32 %	42 18.92 %	76 34.24 %
<i>Individual work</i>				
Were individual text messages provided during distance learning?	44 19.82 %	72 32.43 %	67 30.18 %	39 17.57 %

Were individual audio chats provided during distance learning?	23 10.36 %	43 19.37 %	55 24.77 %	101 45.50 %
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The obtained data show that in the course of distance learning, teachers created chats (text, audio, and video) for both individual and group work. The use of group text chats is confirmed by 26.58% of the respondents, the use of group audio chats – by 20.72%, and the use of video chats – by 22.52%. Notably, group work being conducted by the teacher without the use of text chats is reported by 19.82%, without audio chats – by 42.34%, and without video chats – by 34.24 %.

The systematic organization of individual work as part of distance learning via text messages is reported in 19.82% of the cases, via audio chats – in 10.36% of the responses. The lack of use of individual text messages in distance learning is pointed out by 17.57% of the students, while audio chats are never used in 45.50% of the cases. Thus, it can be concluded that in the period of distance learning, students’ group work was non-systematically conducted using text, audio, and video chats, while individual work was most commonly organized using text messages.

Now, let us more closely examine the results by each component of communication skills among secondary school students in the conditions of distance learning. Communication as interaction in distance learning assumes the student’s orientation on the position of other people that differs from their own (respect for different opinions) as expressed in written and spoken speech (text, audio, and video chats) (Table 4).

Table 4. Distribution of students’ responses to the questions on the level of orientation on the position of others different from their own

Survey item	always	often	someti mes	never
<i>Have you been determining the purpose and meaning of communication during distance learning?</i>	37 16.67 %	61 27.47 %	63 28.38 %	61 27.48 %
<i>Have you been listening to the opinions of other group members during distance learning?</i>	53 23.87 %	84 37.84 %	48 21.62 %	37 16.67 %
<i>Have you been listening carefully to the teacher and your classmates during distance learning?</i>	102 45.95 %	80 36.03 %	20 9.01 %	20 9.01 %
<i>Have you been asking the teacher and other students questions during distance learning?</i>	70 31.53 %	66 29.73 %	50 22.52 %	36 16.22 %
<i>Have you been answering questions from the teacher and</i>	84 37.84 %	79 35.59 %	37 16.67 %	22 9.90 %

<i>other students during distance learning?</i>				
<i>Do you always clearly see the end goal of group work?</i>	33 16.46 %	73 27.48 %	58 26.12 %	58 26.12 %

In order for interaction in distance learning to be effective, it is vital to understand whether students recognize the goal and meaning of communication from the educational point of view. The study reveals that 27.48% of the survey respondents have no understanding of the goal and meaning of communication in distance lessons, 28.38% of the students understand it sometimes, 27.48% see it often, and only 16.66% are always aware of the objective and purpose of communication during lessons.

Regardless of the distance format of lessons (synchronous or asynchronous), it is important that the students not only understand the goal and meaning of communication but also consider the opinions of other participants in it. From among the surveyed students, 23.87% report listening to the opinions of others systematically, 37.84% do so often, 21.62% – sometimes, and 16.61% note never being interested in other positions.

When asked whether they have been carefully listening to the teacher and classmates in distance learning, the majority of the surveyed students, 45.95%, answer “always”, and 36.03% pick “often”. In our view, this suggests that the majority of the students were mostly attentive during distance lessons and listened to the teacher. Nevertheless, there are still some students who have been inattentive (9.01%).

Communicative activity and the presence of feedback in distance learning are assessed through two questions: “Have you been asking the teacher and other students questions during distance learning?” and “Have you been answering questions from the teacher and other students during distance learning?”

Most of the respondents report they have been systematically taking part in dialogues, asking questions and answering them (37.84 and 31.53%, respectively). Non-systematic involvement in communication is noted by 35.59 and 29.37% of the students (with respect to asking and answering, respectively). Relatively decent activity in communication in distance learning is demonstrated by half of the students. However, there are some students who never asked or answered questions in class (16.22 and 9.90%, respectively).

In conclusion of this section of the study, we set ourselves the task of establishing the relationship between the goal of group work and the meaning of communication during distance lessons. The results demonstrate a direct link between the two: the students who are aware of the goal of communication all the time (16.46%) tend to also understand its meaning (14.86%), while those who do not see the meaning of communication in distance lessons

(27.48%) are also unaware of the end goal of the work (26.12%).

Thus, the study of communication as interaction between participants in the educational process during distance learning shows that more than half of the surveyed students confirm in the self-assessment of their activity that the interaction was organized and conducted fairly successfully, i.e. that they have been aware of the goal of communication, listened to their interlocutors carefully, asked and answered questions, and listened to other people's opinions. These facts indicate that the ability to focus on the position of others that differs from one's own was fully developed as part of distance learning by only half of the students.

Students' understanding of the possibility of varying positions and viewpoints on some subjects or issues in the course of distance learning as expressed in writing and in speech (in text, audio, and video chats) is assessed by questions that concern attitudes to collaborative work with classmates, interest in the end result of group work, and assistance to other students in solving the problems faced in distance lessons (Table 5).

Table 5. Distribution of students' responses to the questions on the level of understanding of the possibility of different positions on any given issue

Survey item	always	often	someti mes	never
<i>Did others enjoy working with you in a team during distance learning?</i>	45 20.27 %	83 37.39 %	48 21.63 %	46 20.72 %
<i>Have you always been invested in the final result of your team's work during distance learning?</i>	48 21.62 %	78 35.14 %	45 20.27 %	51 22.97 %
<i>How often did you assist other team members in their studies during distance learning?</i>	32 14.42 %	68 30.63 %	72 32.43 %	50 22.52 %

When asked whether other students enjoyed working with them in a team during distance learning, 20.27% of the students respond "always", 37.39% say "often", and 20.71% give the negative answer.

Responses to the question on the students' interest in the end result of their team in distance lessons show the following pattern: if a student believes that their teammates enjoy working with them ("always" – 20.27%, "often" – 37.39%), they show interest in the final result of the group's work ("always" – 21.62%, "often" – 35.14%). In turn, if a student deems that others do not like working with them, their interest in the result of collaborative work is low ("sometimes" – 20.27%) or altogether absent ("never" – 22.97 %). Thus, there appears to be a relationship between the result of a team and how much its members enjoy working together.

Moving further, the question "How often did you assist other team members in their studies during distance learning?" uncovers students' interest in group interaction in distance lessons. Per the survey results, 14.42% of the

students have been assisting their teammates systematically, 30.63% did so non-systematically, 32.43% – rarely, and 22.52% offered no help to their peers.

Students' ability to argue and prove their opinion in writing and in speech (text, audio, video chats) in distance learning is examined through several questions (Table 6).

Table 6. Distribution of students' responses to the questions assessing the ability to argue and prove one's opinion in writing and in speech.

Survey item	always	often	someti mes	never
<i>Have you been arguing your point of view when it did not coincide with the opinion of your classmates during distance learning (in written chats or via email)?</i>	62 27.93 %	61 27.48 %	56 25.23 %	43 19.37 %
<i>Have you been arguing your point of view when it did not coincide with the opinion of your classmates during distance learning (in audio chats)?</i>	63 28.38 %	65 29.28 %	49 22.07 %	45 20.27 %

The question "Have you been arguing your point of view when it did not coincide with the opinion of your classmates?" reveals the following results:

- always expressing their opinion in text chats and via email were 27.93% of the students, 27.48% have been arguing their viewpoint through these channels often, 25.23% did so sometimes, and 19.37% never expressed their position;
- the students who report they have always been expressing their opinion verbally via digital technology are 28.38%, 29.28% have been doing so often, and 20.27% did not communicate in this way at all during distance lessons. Thus, we can conclude that only a third of the respondents systematically argued their opinions via digital technology in writing and in speech.

The next component is communication as cooperation, which consists of the ability to negotiate and find a common solution to a practical problem (to reach a compromise solution) even in ambiguous and controversial circumstances, the ability to take on initiative in organizing concerted action, and the ability to exercise mutual control and assistance when performing a task.

Below we present the respondents' answers demonstrating their self-assessment of their abilities to negotiate and find a shared solution to an applied problem even in uncertain and controversial circumstances (Table 7).

Table 7. Distribution of students' responses to the questions assessing the ability to negotiate and find a shared solution to a practical problem

Survey item	always	often	someti mes	never
<i>In the course of distance learning lessons, did you discuss the ways of</i>	82 36.94 %	22 9.90 %	57 25.68 %	61 27.48 %

<i>organizing interaction in the team/group with your classmates?</i>				
<i>Did you set the rules for interaction in distance lessons with the teacher and classmates?</i>	69 31.08 %	56 25.23 %	39 17.57 %	58 26.12 %
<i>Did you participate in dialogues and discussions and constructively resolve the arising controversies during distance learning?</i>	66 29.88 %	58 26.12 %	42 18.92 %	56 25.23 %

The results obtained reveal a connection between the development of several skills: discussing with classmates the ways to organize communication in the team/group (36.94%); establishing the rules of interaction with the teacher and classmates (31.08%); establishing dialogue, discussion, and constructive resolution of controversies arising in distance learning (29.38%). In the meantime, almost a third of the students are found to lack these skills. Students' self-assessment of their abilities to take on initiative for organizing concerted action and provide mutual control and assistance while performing a task is expressed in answers to four survey questions (Table 8).

Table 8. Distribution of students' responses to the questions assessing the ability to take on initiative in organizing concerted action

Survey item	always	often	someti mes	never
<i>Did you make team presentations with your team members during distance learning?</i>	21 9.46 %	18 8.1 %	34 15.32 %	149 67.12 %
<i>Did you review the results of your personal and group work in distance lessons?</i>	19 8.56 %	21 9.46 %	47 21.17 %	135 60.81 %
<i>Did you evaluate collaborative group work during distance learning?</i>	16 7.21 %	29 13.06 %	55 24.77 %	122 54.96 %
<i>Did you feel responsible for the team's overall result in distance lessons?</i>	25 11.26 %	52 23.42 %	53 23.87 %	92 41.45 %

Analysis of the collected data shows that during the period of distance learning, the majority of the surveyed students (67.12%) did not make collaborative presentations with the members of their team/group. Thus, teachers did not always use collaborative presentations to organize group work ("sometimes" – 15.23 %, "often" – 8.1%).

Comparing the survey results for the questions "Have you been determining the purpose and meaning of communication during distance learning?" and "Did you review the results of your personal and group work in distance lessons?", we find that if the teacher does not work enough on defining the goal of communication in distance lessons, students turn out to be unable to reflect on their

individual and group work. Thus, students find it challenging to review their collaborative work ("never" answered by 60.81% of the students) and evaluate their work in a team ("never" answered by 54.96% of the students).

When asked if they have been feeling responsible for the common results of the team/group in distance lessons, 11.26% of the students answer "always", 23.42% report they have been feeling this way often, and 23.87% respond with "sometimes". Quite a large number of the students felt no responsibility for the common result of collaborative work (41.45 %).

Thus, a certain pattern can be seen – if a student "always" evaluated their group's work and reviewed it, they "always" felt responsible for the result of teamwork in distance lessons. Conversely, the students who experienced no responsibility for the results did not summarize and evaluate individual and collaborative work.

The component of "communication as a condition for interiorization" is explored through students' ability to create understandable statements and ask questions in writing and in speech (Table 9).

Table 9. Distribution of students' responses to the questions assessing the skills of making clear statements and asking questions in writing and in speech

Survey item	always	often	someti mes	never
<i>How often have you been presenting the results of the whole group's work in distance lessons?</i>	16 7.21 %	38 17.12 %	59 26.58 %	109 49.09 %
<i>Did you ask questions in the group's text chats in distance lessons?</i>	37 16.67 %	61 27.48 %	69 31.08 %	55 24.77 %
<i>Did you ask questions to the teacher and other students "on live" in distance lessons?</i>	36 16.21 %	60 27.03 %	58 26.13 %	68 30.63 %

The findings demonstrate that a very small number of students (7.21%) always presented the results of their team's work in distance lessons, 26.58% did so sometimes, and 17.12% defended their team's work rarely. Half of the surveyed students report having never presented the defense of their group work in a distance lesson.

An insignificant portion of the surveyed students report systematically asking questions in text group chats (16.67%) and "on live" (16.21%) during distance lessons. The collected data suggest that a certain share of the respondents did ask questions non-systematically and situationally, be it "on live" or in text chats. One-third of the students note they have never taken part in such interaction.

## 5. Conclusion

The conducted study suggests the following conditions of the organization of distance learning:

- in 59.9% of the cases, learning was organized in the asynchronous mode (the teacher and students communicating “with a delay” in time), and in 40.1%, students were trained synchronously (the teacher and students interacting simultaneously in real time);
- the tools most commonly used in the organization of learning are services and platforms for blended learning (VKontakte, Telegram Web, WhatsApp), Zoom is the service most often used for synchronous interaction, while email is utilized extremely rarely.
- students were non-systematically engaged in group work in text, audio, and video chats, and the organization of individual work most often involved the use of text messages.

The results of our research reveal problems in the development of communication skills among secondary school students in the conditions of distance learning by the components of communication as interaction, communication as cooperation, and communication as a condition for interiorization.

1. *Communication as interaction in distance learning.* More than half of the surveyed students agree that interaction during the distance lessons was organized and conducted quite successfully, that is, that they did understand the goal of communication, listen to others attentively, ask and answer questions, and listen to others' opinions. A connection is discovered between the results of teamwork and the degree to which students enjoy working together. Only one-third of the students systematically substantiated their opinion in writing and verbally during distance lessons using digital technology.

2. *Communication as cooperation in distance learning.* In the period of distance learning, most students did not make team presentations together with the members of their group/team. It is also quite difficult for students to summarize the results of collaborative work and assess their work in a team if the teacher does not put enough effort into defining the goal of communication during the distance lesson. A major part of students did not feel responsible for the common result of collaborative work and did not show their ability to take on initiative for organizing collaboration or to exercise mutual control and mutual assistance in completing tasks during distance lessons.

3. *Communication as a condition for interiorization.* Half of the surveyed school students have never defended the results of their team's work in distance lessons. A minor part of the students did systematically ask questions in text group chats and “live” during distance lessons. One-third of the respondents have never participated in this distance interaction.

The results of the conducted study can serve as a prominent foundation for further research into the organization of distance learning with secondary school students, as well as the development of methodological guidelines for teachers. What we deem to be the most promising continuation of our study are surveys of students from other regions of Russia with the use of quantitative data analysis methods.

The materials of the study can be useful for heads, methodologists, and teachers of secondary education institutions in developing methodological recommendations for students on the development of their communication skills.

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