

Developing Communication Skills in Students with Disabilities through Creation of a Multilingual Environment (the Udmurt and Russian languages)

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Abstract. This paper is dedicated to theoretical and empirical research of communication skills development in children with developmental delays. The conducted experiment on teaching primary school children shows that all children with developmental delays have difficulties with learning foreign languages, regardless of their nationality. However, according to the mean values, communication skills of the Russian children with disabilities are more developed than of the Udmurt primary school children.

Key words – inclusive education, students with disabilities, communication skills, children of different nationalities, multilingual environment*.

I. INTRODUCTION

Udmurt is a regional language of the Udmurt Republic of Russia and one of second languages studied alongside English, German and French in educational institutions. Students with disabilities master various subjects from the curriculum on an equal footing with everybody else. The main difficulties for such students are connected with insufficiently developed communication skills. This problem becomes especially apparent when children need to learn several other languages, including Udmurt, in addition to Russian. Having an opportunity to communicate in different languages has a beneficial impact on developing communication skills in children with disabilities.

The aim of this research is to analyze communication skills development in disabled students of different nationalities in a multilingual environment.

II. THEORETICAL BACKGROUND

Research of multifaceted nature of communication in a multilingual environment is based on studies of present-day personal communicative needs, skills, qualities, capabilities and communicative competences carried out by Bodalev, Zimniaya, Mudrik, Dubrovin [4].

One of possible ways to overcome communication difficulties is to ensure that primary school children with developmental delays get a chance to communicate in a multilingual environment. This problem was studied by Amonashvili, Asmolov, Elkoni [2].

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Developing communication skills in children with disabilities in a multilingual environment is based on the modern theory and methods of education. According to the universal learning activities conception [2], communication is defined as a meaningful aspect of interaction and social cooperation. Cooperation of people is impossible without communication, which implies exchanging information, as well as achieving common goals – making contacts, cooperating – and interpersonal perception, including understanding one's partners.

According to the dictionary by Bim-Bad, communicative universal learning activities ensure that students are able to:

- develop their social competence and consider opinions of other people, partners with whom they interact or cooperate;
- listen and engage in a dialogue;
- discuss problems in a group;
- integrate in a group of peers and build a productive cooperation and partnership with peers and adults.

According to the Federal state educational standard of primary general education for students with disabilities (hereinafter the Standard) [8], *communicative learning activities* comprise the following:

- planning academic cooperation with teachers and peers: defining goals, functions of participants, cooperation methods;
- formulating questions: active cooperation in searching and collecting information;
- resolving conflicts: identifying problems, assessing possible solutions, making and implementing a decision;
- managing partners' behavior: control, correction, assessment of partners' actions;
- being able to express ideas fully and precisely in accordance with goals and conditions of communication;
- having command of monological and dialogical speech, abiding by the norms of a native language [9].

Difficulties that students encounter in academic communication are described in works by Dubrovina and Kumarina [2]. One possible way to overcome difficulties in learning is to provide a multilingual communication environment for students with disabilities. According to the Standard, communicative universal learning activities can be divided into the following three groups:

- communication as interaction (communication with account for opinions of partners in a conversation or activities);
- communication as cooperation, partnership (coordination of efforts to reach common goals);
- communication as a condition for interiorization (communication for giving information and reflecting on results) [9].

The first group – communication with account for opinions of partners in a conversation or activities:

- understanding that people may have different opinions;
- respecting other opinions;
- understanding that opinions are relative;
- exchanging information, working towards mutual understanding;
- considering different opinions and substantiating one's own opinion.

The second group of communicative universal learning activities aimed at cooperation, partnership:

- coordinating efforts to reach common goals, organizing and engaging in teamwork;
- negotiating and coming to agreement;
- giving reasons, persuading and compromising;
- staying friendly to others in the case of conflict of interest;
- controlling and assisting partners in activities.

This group of communicative activities is focused on coordinated efforts, common goals and teamwork. Children start to learn coordinating their efforts while in kindergarten and develop that skill at school.

The third big group of communicative universal learning activities is represented by activities for giving information to other people:

- communicating to ensure easy assimilation of information;
- using utterances that can be easily understood by partners;
- using questions to get specific information from partners;
- using specific language to plan and regulate activities;
- reflecting on one's activities.

Children with disabilities should be taught to make easy-to-understand utterances considering what their partners do know and see and what they do not, and to ask questions in order to get necessary information from partners. At the age of 10-11, children should be able to identify the most important points of activities and use specific language to inform partners about them [10].

Students with developmental delays need an extra support when getting primary education, especially in developing communication skills. A developmental delay refers to any significant retardation in a child's development. The term highlights the “temporary character of a delay, i.e. psychophysical development level may not correspond to a child's age” [1].

Initial retardation results in difficulties in communication and socialization [1]. Primary school children with normal

development “can make easy-to-understand utterances, ask questions in order to get necessary information, and have a fairly good command of planning and regulatory speech functions by the moment they start school” [7]. They actively develop their communicative universal learning activities. Sufficient development of communicative activities ensures communicative competence and recognition of opinions of other people, their partners in interaction or activities; ability to listen, engage in a dialogue and discuss problems in a group; ability to integrate in a group of peers and efficiently cooperate with peers and adults [1].

Primary school children with developmental delays fall behind in developing communicative universal learning activities. Interiorization (an activity gradually becoming an internal part of one's life through speech) becomes the most important element that facilitates development of communicative universal learning activities. The more possibilities children have to practice learning activities in class, the more “effective interiorization is for them, i.e. incorporation of those activities in their life. Regulating speech is of utmost importance in this process (meaningful expression as a voluntary decision)” [7].

That is why it is necessary to develop the following communicative activities in children with developmental delays:

1. planning academic cooperation with teachers and peers: defining goals, functions of participants, cooperation methods;
2. formulating questions: active cooperation in searching and collecting information;
3. resolving conflicts: identifying problems, assessing possible solutions, making and implementing a decision;
4. managing partners' behavior: control, correction, assessment of partners' actions;
5. being able to express ideas fully and precisely in accordance with objectives and conditions of communication; having command of monological and dialogical speech, abiding by the norms of a native language [1].

The Standard specifies what primary school children with developmental delays should be able to do as a result:

1. communicate and use best practices of social interaction;
2. cooperate with adults and peers in various social situations;
3. use meaningful utterances according to the objectives of communication and produce oral and written texts;
4. be ready to listen to partners, engage in and maintain a conversation; be ready to acknowledge different opinions and respect other people's right to have one; state one's opinion;
5. negotiate functions and roles in teamwork; control partners in teamwork, adequately assess one's own activities and activities of other people;
6. be ready to resolve conflicts taking into consideration different parties' interests and engaging in cooperation [9].

According to the universal learning activities conception, communication is regarded as a meaningful aspect of interaction and socializing, with the following basic elements: a child's need to communicate with adults and peers; command of verbal means of communication and body language; positive attitude to cooperation; focus on partners; ability to listen to partners.

Primary school children tend to have the following communication skills: rhetoric skills, skills of dialogical speech, ability to listen, hear and argue; ability to see a situation from other people's perspective; ability to work together for a common goal.

Primary school is a good time for developing communicative universal learning activities [8]. This is when a child's individual achievements acquire social value for the first time. Thus, one of the main objectives of primary education is to create favorable conditions to ensure development of communicative competences, motivation to achieve results, to boost initiative and independence of students with developmental delays.

In fact, research of primary school children with developmental delays suggests that communicative competence of 80% of children leaves much to be desired.

III. METHOD

The following parameters are used to assess development of communication skills in students with disabilities through creation of a multilingual environment:

- cognitive – ability to understand one's own communication problems;
- behavioral – ability to control one's behavior;
- emotional – ability to control one's emotions.

Development of communication skills on each individual parameter is assessed with account for the following criteria:

Cognitive parameter: ability to show interest in communication; help and support classmates, listen to their advice; critically assess results of communication, adequately assess classmates' remarks; understand a certain situation of communication; express oneself through different creative activities in learning.

Behavioral parameter: ability to win classmates' favor; make jokes, smile in the process of communication; make decisions independently; strive for success; express one's attitude to a situation using words or body language; understand one's behavior in a group; abide by the rules of conduct.

Emotional parameter: ability to remain calm and confident; manage one's emotions; control one's voice and speech tempo with account for a situation of communication; control one's temper in a conflict situation [7].

The criteria given above were used to assess communication skills development levels. A *high* level of development is characterized by a situation when students have developed all communication skills: they show interest in interaction with peers, are active and independent when communicating in the process of learning; use various

intonation patterns and body language; are strict to themselves and others, are reliable, help others and listen to their advice; critically assess results of communication, adequately assess teachers' remarks; control their emotions; try to abide by the school rules of conduct [3].

Students with an *average* level of communicative competence show interest in communication but they experience some problems. They are not able to correctly understand a situation of communication, do not critically assess results of communication, misinterpret classmates' remarks, fail to use body language or control their emotions.

A *low* level of communicative competence is characterized by low interest in communication as a process of interpersonal interaction. Students do not strive for success, fail to control their behavior in a group or abide by the rules of conduct; are not able to freely interact with others; feel lost in a conflict situation.

To sum up, communicative universal learning activities are regarded as a meaningful aspect of interaction and socializing. They are divided into communicative activities aimed at considering partners' opinions (communication as interaction), coordinating efforts to achieve common goals (communication as cooperation) and activities to give information (communication as interiorization).

In 2015-2019, we assessed students of Secondary school 16, Glazov, Russia, native speakers of Russian and Udmurt. Totally, 300 primary school children took part in our experiment: 183 Russians, 102 Udmurts and 15 students of other nationalities.

The aim of the experiment was to prove the hypothesis that students with disabilities, native speakers of Russian learning English as a foreign language and Udmurt as a language of interaction on a mundane level, develop their communicative skills uniformly, regardless of their nationality.

The following methods were used.

Pattern dictation (by Zuckerman et al.) [4].

Communication skills assessed: ability to identify the most important points of activities and highlight them in speech, as well as inform partners about them; planning and regulatory functions of speech.

Age range: primary school children (6 and a half-7 years old).

Form (situation of assessment): doing a task in class in pairs.

Method of assessment: observing children working together and analyzing results.

Task description: two children sit at a desk opposite each other, with a partition in between. One child is given a card with a pattern, the other – playing pieces to make this pattern with. The first child dictates the pattern, the second follows the instructions. He/she is allowed to ask any questions but not look at the pattern. When the task is finished the children switch roles and work with a new pattern of the same difficulty level. In the beginning, children are allowed to get acquainted with the materials used and practice a couple of patterns as a warm-up.

Materials: a set of three white and three colored square playing pieces (of one size), four cards with patterns, a partition.

Assessment criteria:

- teamwork productivity is assessed according to how much children's patterns match the models;
- ability to make utterances that are easy to understand for a partner and that are based on what he/she knows and sees; in this case it is enough to give a full succession of actions for making a pattern;
- ability to ask questions in order to get necessary information from a partner;
- mutual control and assistance throughout the task;
- affective tone throughout the teamwork: positive (work with pleasure and interest), neutral (necessary cooperation), negative (ignore each other, quarrel, etc.).

Task execution levels:

1. Low level – patterns are not made or do not match the model; instructions are not informative or clear enough; questions asked are not to the point or unclear for a partner.
2. Average level – patterns match the model at least partially; instructions partially include necessary information to fulfil the task; questions and answers help get additional information; partial understanding between partners.
3. High level – patterns match the model; active engagement in a dialogue ensures that children understand each other and exchange information necessary to fulfil the task; they follow the rules and work towards the results with good nature.

Mittens (by Zuckerman, G.A.).

Communication skills assessed: communicative activities for coordinating efforts in teamwork (cooperation).

Age range: primary school children (6 and a half-7 years old).

Form (situation of assessment): doing a task in class in pairs.

Method of assessment: observing children working together and analyzing results.

Task description: children sitting together are each given a picture of a mitten and asked to decorate them so that they make a pair, i.e. they should be identical.

Assessment criteria:

- teamwork productivity is assessed according to how much patterns on the two mittens match;
- ability to negotiate, compromise, persuade, argue, etc.;
- mutual control throughout the task: whether children notice any deviations from the original plan in their partner's pattern and how they react to that;
- mutual assistance throughout the task;
- affective tone throughout the teamwork: positive (work with pleasure and interest), neutral (necessary cooperation), negative (ignore each other, quarrel, etc.).

Task execution levels:

1. Low level – patterns have obvious differences or do not match at all; children do not try to negotiate or are

unable to come to agreement and insist on having things done their way.

2. Average level – partial match: some characteristics (color or shape of details) are similar but there are obvious differences in patterns.
3. High level – mittens are identical or very similar; children actively discuss possible decorations and come to agreement; they compare each other's patterns and coordinate their partner's actions; control the implementation of the agreed pattern.

Who is right? (modified by Zuckerman, G.A.).

Communication skills assessed: activities aimed at considering a partner's point of view.

Age range: primary school children (7-8 years old).

Form (situation of assessment): individual assessment of a child.

Method of assessment: discussion.

Task description: a child sitting in front of an adult, who is making the assessment, is given three texts, one at a time, and asked questions.

Materials: three cards with tasks.

Assessment criteria:

- understanding possible different points of view (overcoming egocentrism), focus on other people's opinions that are different from one's own;
- understanding different grounds for assessing one and the same object, understanding the relativity of assessment and approaches chosen;
- considering different opinions and ability to substantiate one's own;
- considering different needs and interests.

Task execution levels:

Low level – a child does not consider a possibility of different grounds for assessment of one and the same object (for example, a person shown in the picture and quality of the picture in task 1) or choice (task 2 and task 3), as a result he/she rules out a possibility of different points of view: a child takes sides with one person and considers other opinions absolutely wrong.

Average level – a partially correct answer: a child understands a possibility of different approaches to assessing an object or situation and concedes that different opinions may be justified or wrong but he/she cannot substantiate one's point of view.

High level – a child understands the relativity of assessment and approaches to making opinions, considers different opinions of people and is able to give and substantiate his/her point of view.

Having studied publications on pedagogy and observed practices in class, we can distinguish the following levels of development of universal learning activities (high, average, low).

Low level – poor communication skills: a child cannot debate, substantiate his/her point of view, present results, or express ideas. He/she demonstrates an inadequate reaction to their success or failure, and has problems in searching and collecting information.

Average level – partial development of communication skills. A child does not use a full range of linguistic means for different communicative situations. He/she is not always successful in planning their actions and acting according to the plan, as well as controlling and assessing their actions. A teacher needs to observe activities and give support, when necessary.

High level – good development of communication skills. A child is good at creative and research activities, is able to listen to other people's ideas and consider them when making a decision. He/she controls and assists partners throughout tasks and, when working in a small team, creates an end-product and successfully presents it.

IV. RESULTS AND DISCUSSION

According to the indicators mentioned above, we determined the communication skills development levels: low, average, high. A rise of a child taking part in our experiment to an upper level is the most important indicator of efficiency of the model used and adequacy of conditions selected.

The results of our ascertaining experiment show a low level of communication skills development. We assessed children with disabilities, of different nationalities (Russians, Udmurts, and others). Table 1 and Table 2 show the descriptive statistics of the subjects.

TABLE 1. DESCRIPTIVE STATISTICS

	Number	Mean value	Root-mean-square error	Min	Max
Method 1	300	2.11	.845	1	3
Method 2	300	2.12	.844	1	3
Method 3	300	2.11	.845	1	3
VAR 00004	300	1.4400	.58954	1.00	3.00

TABLE 2. DESCRIPTIVE STATISTICS OF EACH GROUP OF SUBJECTS

	Group	Number	Mean rank	Mean value	SD
Method 1	Russian	183	185.58	2.46	0.761
	Udmurt	102	95.67	1.54	0.623
	Other	15	95.37	1.53	0.755
	Total	300			
Method 2	Russian	183	184.98	2.46	0.761
	Udmurt	102	96.84	1.56	0.637
	Other	15	94.73	1.53	0.755
	Total	300			
Method 3	Russian	183	185.58	2.46	0.761
	Udmurt	102	95.67	1.54	0.623
	Other	15	95.37	1.53	0.755
	Total	300			

The analysis was based on the asymptotic significance. With using all the three methods, we can see that the asymptotic significance is less than 0.05. This means that there is a substantial variance between the groups of subjects.

Totally, 183 Russian, 102 Udmurt and 15 children of other nationalities took part in research. To analyze variances in communication skills, we used the Kruskal-Wallis H test since there were more than two samples in our research. The results are given in Table 3.

TABLE 3. RESULTS OF ANALYSIS OF COMMUNICATION SKILLS VARIANCES IN SAMPLES

Statistical criteria ^{a, b}

	Pattern dictation	Mittens	Who is right?
Chi-square	87.429	84.546	87.429
df	2	2	2
Asymptotic significance	.000	.000	.000

a. Kruskal-Wallis H test

b. Grouping variable: nationality

We can make a conclusion that all children with developmental delays have difficulties with learning languages, regardless of their nationality, however, according to the mean values, communication skills of the Russian children are more developed. This fact should be considered when developing educational programs.

IV. CONCLUSIONS

While conducting the experiment, we considered all parameters for this type of research. The results for the experiment and control groups define the problem of research and prove the original hypothesis. Russian primary school children with disabilities learn English and Udmurt as foreign languages that are used for international cooperation, whereas Udmurt children have more difficulties learning foreign languages since their communication skills in Udmurt are in demand in modern Russian schools.

ACKNOWLEDGMENT

We would like to express our appreciation to the teachers and children of Secondary school 16, and the children's parents, for their assistance in this research.

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