

# THE RELATIONSHIP BETWEEN THE INTENSITY AND THE EFFECTIVENESS OF THE PRESCHOOL CHILDREN IN JOINT MENTAL ACTIVITY

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**Abstract.** This article describes a study of the preschool children's communication with their mates in joint mental activity, one of the results of our study was the establishment a correlation between the intensity and effectiveness of the communication.

**Keywords:** *Joint mental activity, Preschool children, Intensity and effectiveness of communication.*

## 1. INTRODUCTION

In modern Russian science the amount of research devoted to the problem of the preschool children's communication in joint activity increases. The urgency of this problem is evident, because numerous studies, as well as the observations of the psychologists of the educational institutions, show an increasing lack of the communication of modern preschoolers, adults and mates, which ultimately leads to a number of negative consequences: lower rates of language development, cognitive processes, difficulties in the formation of the communicative skills, abilities and, in general, communicative competence, etc. (Гаврилушкина О. П., Малова А. А., Панкратова М. В. (2012); Filippova E. V., Pivnenko T. V, 2010; Kuznetsova O.O., 2013). The studies cover different aspects of the defined problem. Thus, E. O. Smirnova studied personal and behavioral characteristics of preschool children having difficulties in relationships with mates (Smirnova E.O., 2011). O. O. Kuznetsova described the characteristics of preschoolers' dialogue in joint activities, denoting the role of dialogue in the development of joint activities of the preschool

children (Kuznetsova O.O., 2013).

The results of the study by A. A. Zarechnaya ascertain the activity peculiarities of the communicative interaction of the senior preschool children in cooperative play with mates. This author compares the features of the interaction of preschool children with normal and arrested development, being focused on the roles of the communication in difficult, low-level cooperation, reflection, and the arbitrariness of the latter (Zarechnaya A. A. (2009). E. V. Filippova and T. V. Pivnenko describe features of gaming activities, sociometric status and problems of the formation of psychological boundaries of «I» of preschool children with difficulties in communication (Filippova E. V., Pivnenko T. V, 2010). I. V. Hohlacheva and E. O. Smirnova identified the relationship between the characteristics of the parental relationship and the difficulties in communicating with mates' preschoolers (Hohlacheva I. V., Smirnova E.O, 2010).

## 2. MATERIALS AND METHOD

Earlier we were also studied some features of the communication in preschoolers' joint mental activity (including the causes of the difficulties in communication of the preschoolers). The result of the study was the description of the features of the dialogue, which was considered by us as a form of the communication (question, call to action, post-treatment as mates to each other, the theme of cycles or the referral to the task or relationship, etc.), and as a form of thinking (cognitive activity of preschool children, etc.) (Pavlova T. V., 2011). In this article, we consider the analysis of the intensity and effectiveness of communication of preschool children in joint mental activity with their mates. We organized an experiment with a complex goal - to study

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the development of joint mental activity of the preschoolers. One of the objects of this study was to analyze the communication of preschool children using objective characteristics of communication, which were the intensity of communication (communication intensity factor by A. K. Belousova - Kio) and saturation of communication (communicative intensity coefficient by Tsukanova E. V. - R).

However, in general the question of the intensity and effectiveness of communication has important characteristics of communication that do not have one-valued correlations, according to most researchers. E. V. Tsukanova as the main factors determines the characteristics of communication in terms of joint mental activity, at first - communication, consisting in the direction, content, intensity of communication, secondly - personality, consisting of temperament, personality traits, characteristics of emotional and volitional etc. One of the most important indicators of communication in terms of joint mental activity E. V. Tsukanova considered communicative degree of saturation. To calculate this indicator a communicative saturation coefficient was developed by the author (Tsukanova E.V., 1985):

$$R = \frac{N}{t}, \text{ wherein}$$

R - factor of the the communicative saturation,

N - total number of mutual speech comments,

t - total time of the group work.

The communicative saturation is an objective characteristic of a joint communication in mental activity, which in its turn is not an indicator of the effectiveness of group interaction, but determines the nature of the communication and partly indicates the presence or absence of the difficulties in the communication.

A. K. Belousova developed the communication intensity factor, which is a measure of the effectiveness of communication in collaborative mental activity, in contrast to the saturation communicative factor by E. V. Tsukanova (A. K. Belousova, 2002). The basis of the intensity factor of the communication is quantitative indicators of the functions that are performed by participants choosing a role in solving the problem of thinking.

$$K_{uo} = \frac{T_p}{T_u}, \text{ wherein}$$

Kio - factor of intensity of the communication,

Tp - the sum of numerical values of the functions of each role in the dyad,

Ti - evaluation of single participants' performed all the roles and functions.

To solve a particular problem - studying the intensity and the effectiveness of the communication – the preschoolers of the older groups of the preschool educational institutions of the city of Rostov-on-Don were asked to choose a mate to solve puzzle jointly. Solving process was recorded on the tape, conducted a detailed observation of the interaction of preschoolers. The protocols, executed due to the tape records, were subjected to detailed analysis, including for calculating the abovementioned coefficient. Total 58 dyads were analyzed.

### 3. RESULT

Analysis of the data allowed to calculate the coefficient of the communicative saturation for each dyad and identified 4 groups of dyads in the expression of the communicative intensity coefficient (R): Group 1 - the lowest possible R; Group 2 - Low R; Group 3 - average R; Group 4 - High R. Analysis of the dyads showed the existence of differences in the expression of the essential characteristics of communication. So in groups with the highest coefficient of communicative saturation of questions and impulses to act far exceeds the number of those in the other groups. In groups with a low coefficient the cycles are more pronounced «message - response to it»; cycles with the subject theme of the communication, related tasks. It is significant that in the groups with the lowest possible coefficient of the communicative saturation to a greater extent than in other cycles are presented with a personal theme of the communication unrelated to the task and the process of its solutions, and aimed at the relationship. Thus it was found that dyads with a different coefficient of the communicative saturation there are various intensity characteristics of the communication. However, this factor does not allow us to talk about effective communication of preschool children in joint activities with mates.

We analyze the dyads for effective communication. There were allocated 5 groups with different intensity factor of the communication (Kio) that is an indicator of the effectiveness of the communication: group 1 - with the lowest possible Kio; group 2 - low Kio; 3 - with an average Kio; 4 - high Kio; 5 - with the highest Kio. It was found that in the dyads with different intensity factor of the communication the different types of relationships of the preschoolers are established (cooperation, rivalry, fight, etc.). For example in the type of relationship dyads «rivalry - struggle» the highest level of the intensity of the communication was observed. This can be explained by the fact that these types of dyadic relationships partners of communication due to no equilibrium or often conflict situation had to be more proactive in defending their interests and the desire to act in accordance with their own ideas of solving the puzzle.

The obtained results of the research will inevitably raise the question of the dependence of the intensity of the communication and effective communication in a joint intellectual activity of preschool children with their mates. To test the hypotheses about the relationship between the communication saturation coefficients, that is an indication of the effectiveness of the communication, and communication intensity factor correlation we carry out the analysis using Spearman correlation coefficient  $r_{xy}$ . Correlation analysis showed a positive correlation ( $r_{xy} = 0.467$ , at  $p = 0.0$ ). In this case we can say that the intensity of the communication related to the efficiency of the communication of the preschool children in mental activity together with their mates, i.e. with increasing intensity of preschoolers' communication in order to solve the problem with a mate the communication efficiency will also increase. This can be explained by the fact that the basis of the intensity factor of the communication are quantitative indicators functions that are performed by choosing a role in dealing with mental problems, and based on the coefficient of saturation - the total number of mutual speech comments and the work group. i.e. the more preschoolers' speech comments per unit of time, the more functions will be realized in the structure of the joint mental activity of the preschoolers.

#### 4. CONCLUSION

Thus characterizing the communication features of the preschool children with their

mates in a situation of joint intellectual activity it can be noted that the dyads with different coefficients of the communicative saturation and intensity of the communicative expression of various different communication characteristics (character issues, cycles, the communication topics, etc.) and the nature of the relationship are established. It was also discovered that the intensity and saturation communication ratios positively correlated. This means that an increase in the effectiveness of the preschoolers' communication, defined by the number of statements that demonstrate the preschooler's implementation of a particular function (or taking on a role in solving the problem) from the total number of statements entails an increase in the intensity of the communication, such as the ratio of total preschoolers' comments to unit of time, and vice versa. With this approach to the determination of the intensity and effectiveness of preschoolers' communication we can confirm (when checking the output on a statistical level) about their dependence in a situation of the preschoolers' joint mental activity with mates.

#### Conflict of interests

Author declares no conflict of interest.

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