

ISCKMC 2022**International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»****STUDY OF ATTENTION PROPERTIES OF YOUNGER
SCHOOLCHILDREN**

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Abstract

The study involved primary school students aged 8–10 years (23 people). The experiment was carried out at Lyceum No. 102 of Chelyabinsk from September to November 2020. The authors used the following set of methods and techniques in the: theoretical methods were presented by analysis and generalization of psychological and pedagogical literature on the problem, synthesis; the empirical methods were presented by observation, ascertaining experiment, testing according to the methods: "Landolt rings", "Correction task" by B. Bourdon; mathematical and statistical - the Mann-Whitney test. A map was developed for monitoring the activities of a teacher, the activities of a student, as well as the dynamics of the development of attention. The data was recorded at each stage of a lesson. Testing allowed obtaining data on the levels of development of individual attention properties, and observation showed individual differences in the manifestation of attention in the learning process. A third of students had a low level of development of concentration, stability and distribution of attention. This indicated the weakness of voluntary attention and its low stability. It was quite difficult for younger students to focus their attention on monotonous and uninteresting activities for a long time. Low indicators of the level of attention indicated the need for purposeful implementation of special correctional and developmental work, which would expand the zone of proximal development and, in general, optimize the learning process.

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Keywords: Attention, attention properties, cognitive activity, younger students



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1. Introduction

One of the priority tasks which the modern school faces today is the increase in the indicators of students' cognitive activity. This problem is most significant at the stages of primary education, since it is in the primary school system that the cognitive learning abilities of children are formed, the processes of cognition become voluntary and meaningful, and the cognitive spontaneity of educational activity is formed. The formation of the foundations of the ability to learn and the ability to organize one's activities involves: the ability to define and keep goals in focus, as well as achieve them in the educational process, plan, implement and control, evaluate the results of activities, cooperate with teachers and peers in the learning process (Gazizova & Lukin, 2018; Raskalinos, 2016). The formation of personal characteristics of a younger student, that is, the formation of a “portrait of a primary school graduate”, is a priority goal of the Second Generation Federal State Educational Standard (Gabeeva et al., 2017). The requirements of the Federal State Educational Standard of primary general education suggest that the educational process should move from traditional education to the formation of personality traits necessary for the development of a child in a modern mobile society. Thus, the priority goal of education in a modern school is the development of a personality, ready for proper interaction with the outside world, self-education and self-development.

There are several approaches to explain the phenomenon of attention. In accordance with them, attention is interpreted as:

- the result of emotion: attention is always associated with emotions and is caused by them (Ribot, 2016);
- the manifestation of the attitude: the attitude to be attentive to a certain object of reality (Abkovich, 2015);
- one of the fragments of the orienting and research activity of a person (Podolskiy, 2017).

National and international researchers in their works note that the level of development of attention properties affects the mechanisms of the flow and development of such cognitive processes as perception, thinking and memory (Akbasheva, 2020; Courage & Richards, 2020; Dunne & Opitz, 2020; Hannula, 2018; Song, 2019; Sandrya et al., 2020). Therefore, the success in mastering the primary school educational program will depend on how attentive the students are in the lessons. At primary school age, attention, like all other mental processes, undergoes significant changes. This is due to the fact that when children enter school, they are included in new types of activities and systems of interpersonal relations that require them to have new psychological qualities. The educational process makes demands on the voluntary character of children's attention in terms of the ability to control their actions, work without being distracted, compare the result with the goal and follow the instructions. It is because of low level of development of attention properties that younger students often experience difficulties in the learning process, which significantly reduces their cognitive activity and leads to academic failure (Isbella et al., 2018). Attention is a psychological phenomenon with respect to which there is still no consensus among researchers. In the psychological literature, the question of the existence of attention as an independent mental phenomenon is considered. Thus, some researchers believe that attention can not be considered as an independent phenomenon, since it is present to some extent in any other mental process (Brunner,

2016). Others, on the contrary, defend the independence of attention as a mental process (Vologirova & Anaev, 2017). Moreover, researchers do not come to unanimous decision on the attribution of attention to a certain class of mental phenomena. Some argue that attention is one of the cognitive mental processes. Others associate attention with the volition and activity of a person, arguing that any activity, including cognitive, is impossible without attention, and attention itself is impossible without the manifestation of certain volitional efforts (Fonarev & Fonareva, 2015). When it comes to the development of children attention, they mean the improvement of attention properties. The attention properties are the features of its manifestation. According to the analysis of psychological and pedagogical studies (Bartosh et al., 2018) devoted to the problem, we can conclude that human attention has five main properties: volume, concentration, distribution, switchability and stability. The age-related features of attention of younger schoolchildren are the relative weakness of voluntary attention and its slight stability. It is quite difficult for younger students to focus their attention on monotonous and uninteresting activities. However, younger students can already to some extent plan their own activities (Rossignoli-Palomequea et al., 2020). Thus the purpose of our study is to identify the level of development of the attention properties of younger schoolchildren.

2. Problem Statement

One of the priority tasks which the modern school faces today is the increase in the indicators of students' cognitive activity. This problem is most significant at the stages of primary education, since it is in the primary school system that the cognitive learning abilities of children are formed, the processes of cognition become voluntary and meaningful, and the cognitive spontaneity of educational activity is formed.

In this regard, it is necessary to purposefully study and take into account the individual level of development of child's mental processes, and especially the properties of his attention in terms of the ability to control his actions, work without being distracted, compare the result with the goal and follow the instructions.

3. Research Questions

The research questions are as follows:

- i. to identify the level of development of attention properties of younger students
- ii. to identify the level of concentration of attention in younger students
- iii. to identify the level of stability of attention in younger students
- iv. to identify the level of dynamics of attention in younger students

4. Purpose of the Study

The purpose of the study is to identify the level of psychologically safe communication skills among adolescents of the youth center.

5. Research Methods

The study involved students of the 3rd grade of Chelyabinsk Lyceum (23 people). The ascertaining experiment was carried out in the form of group diagnostics of the class, which allowed obtaining data on the level of development of individual attention properties of the class in a short period of time. Moreover, the test data was supplemented by the observations of the class teacher and the psychologist, who filled out the observation map developed by us. The sample consisted of younger schoolchildren aged 8–10 years old, brought up in families with an average income level. The families were complete and incomplete in, children were paid attention, they got care and concern.

According to the information that was obtained as a result of the analysis of psychological and pedagogical research on the problem of developing the attention properties in younger students, a selection of research methods and techniques was made. Primary school age imposed certain restrictions on the use of certain methods that required complex organization and cause rapid fatigue of children (Rodin et al., 2017; Sidorina et al., 2018;).

In the study of the level of development of attention properties of younger students, the following research methods were used:

1. Theoretical methods: analysis and generalization of psychological and pedagogical literature, synthesis.
2. Empirical methods: ascertaining experiment, testing according to the methods: “Landolt Rings”, “Correction Test” by B. Bourdon, observation (Ermolina, 2020; Sysoev, 2010).
3. Mathematical processing method: U - Mann-Whitney test (Sidorenko, 2003).

Для удобства проведения процедуры, а также для получения объемных данных о динамике внимания были указаны наблюдаемые параметры по каждому пункту. [For the convenience of the procedure, as well as to obtain voluminous data on the dynamics of attention, the observed parameters for each item were indicated.]

In order to perform the research, a program was developed that allowed obtaining data on the dynamics of the manifestation of individual attention properties of younger students during the lesson. Other studies were used as a basis for the development of the observation map (Dolgova, Kondratyeva et al., 2019; Dolgova, Rokitskaya et al., 2019; Khudaigulova, 2016). The observation scheme consisted of three key aspects: the activity of a teacher, the activity of a student, and the psychological characteristics of attention. The data was recorded at each stage of the lesson. As a matter of convenience, as well as to obtain voluminous data on the dynamics of attention, the observed parameters for each item were indicated.

6. Findings

The results according to the Landolt Ring method are shown in Figure 01.

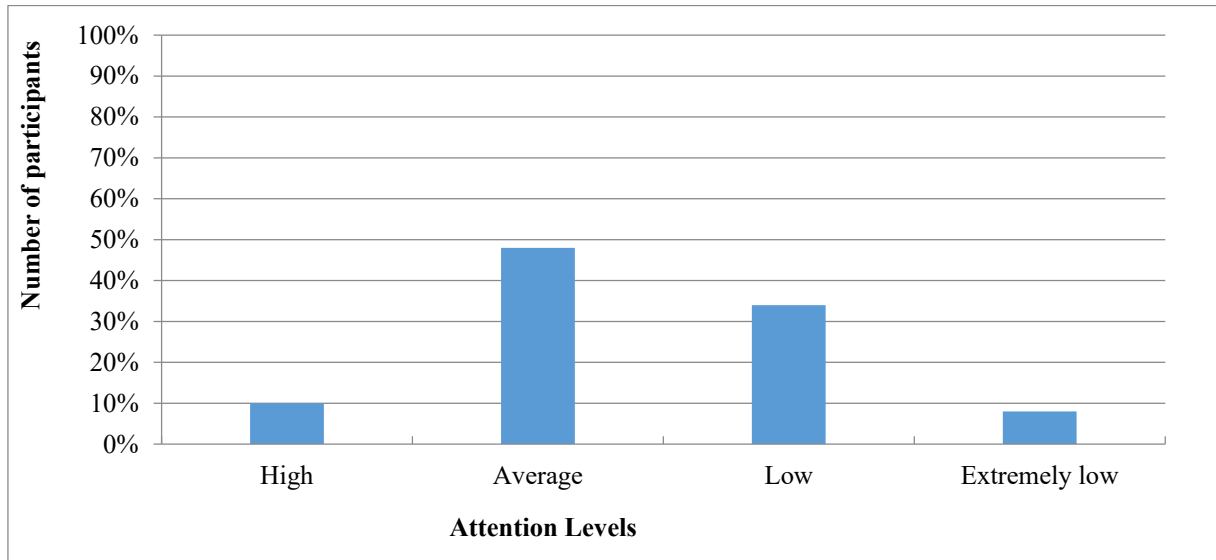


Figure 1. The distribution of the results of diagnosing the concentration of attention in younger schoolchildren according to the method of "Landolt Rings"

After the analysis of the results of diagnosing the concentration of attention using the Landolt Ring method, we saw that 10 % of the subjects had a high level of concentration of attention. In the process of completing the task, the student made a minimum number of mistakes, did not experience difficulties and did not need help from the experimenter. The average level of attention concentration was shown by 48 % of the subjects. These results indicated that the development of attention span in children corresponded to their age level. During the diagnostics, the children were well oriented in the task and made a small number of errors. 34 % of the subjects showed a low level of concentration. Students experienced difficulties in completing the task, often made mistakes, got distracted and needed to repeat the instructions. A very low level was found in 8 % of the subjects. Children began to make mistakes from the very first lines, crossed out other rings, skipped lines or jumped from one to another without completing the task on the previous line. It was necessary to point to the desired line with a sign in order to keep the attention of students.

The results according to the "Correction task" method are shown in Figure 02.

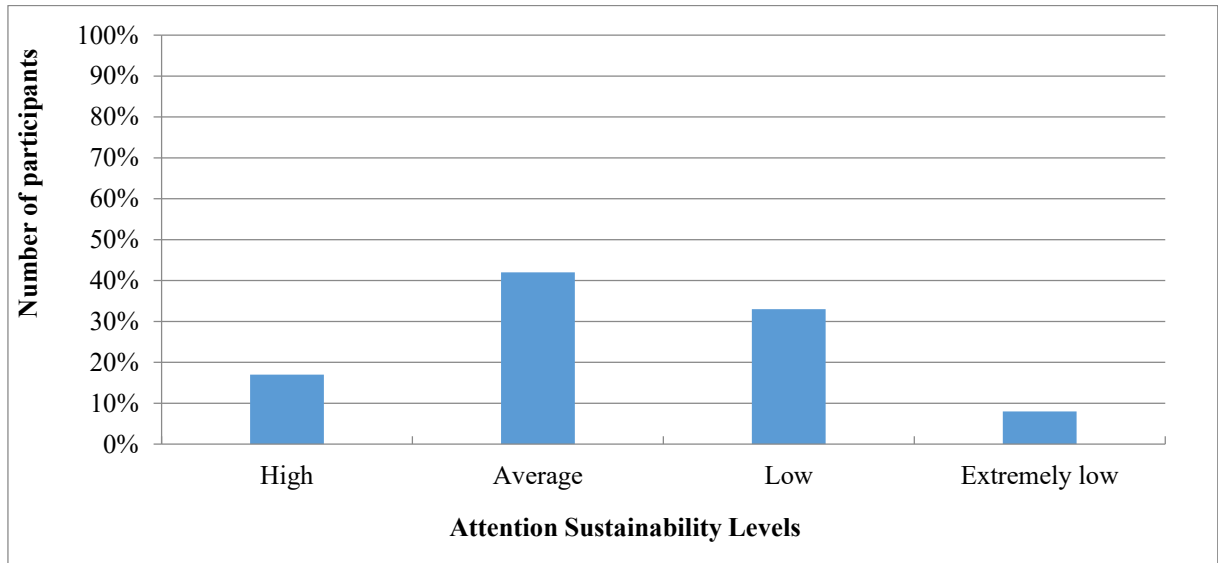


Figure 2. The distribution of the results of diagnosing the stability of attention in younger schoolchildren according to the method of "Correction task" by B. Bourdon

The data obtained by the "Correction task" method showed that 2 students, or 17 % of the subjects, had a high level of attention stability. In the considered part of the diagnostic form, the children did not make mistakes, having crossed out all the required letters. The average level of attention stability was shown by 42 % of the subjects. During the task, the students did not need the help of the experimenter, they were well oriented in the task, and made a small number of errors. Also, 33 % of the subjects had a low level of attention stability. This group of children needed a second explanation of the task. In their work, a large number of wrongly marked or omitted letters were observed. A very low level of attention was found in 8 % of the subjects. During the task, students were often distracted, made many mistakes and skipped lines. In this regard, it can be argued that the average level of stability of attention and working capacity prevails among younger schoolchildren. The data obtained during the analysis of the results of observing students during the lesson is presented in Figure 03.

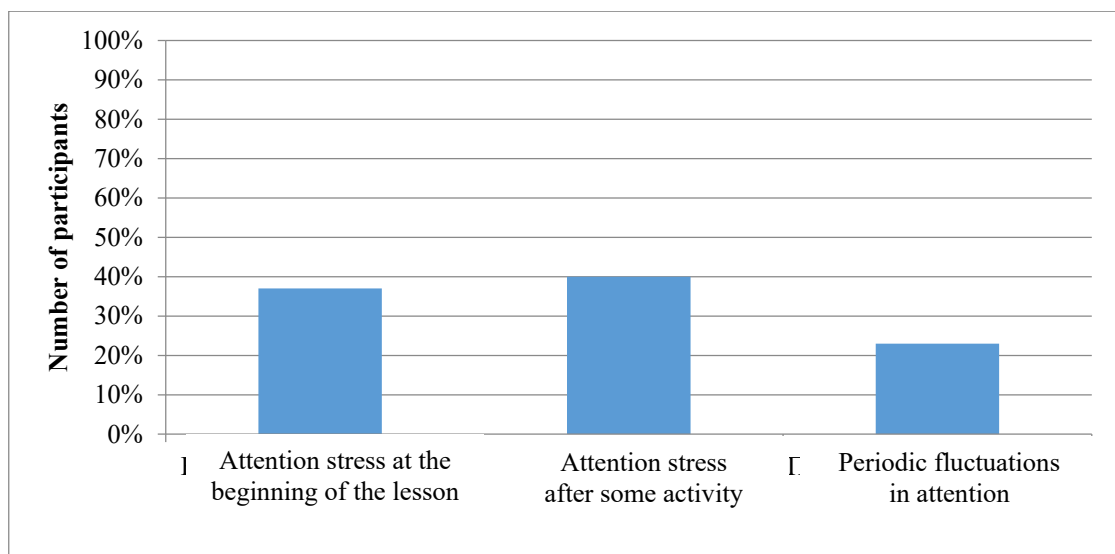


Figure 3. Dynamics of attention of younger students during the lesson

The observation data during classes showed that the instability of students' attention was characterized by individual forms of manifestation. Thus, in 37 % of the subjects, the peak of attention stress and working capacity was traced at the beginning of the lesson while checking homework, and decreased as work continued on a new topic. The students were distracted by extraneous objects and conversations among themselves. In 40% of the subjects, the maximum stress of attention came after a certain period of activity. If during the check of homework they hesitated, and it was possible to trace the difficulty with which they were given concentration on tasks, then after a while they actively participated in the answers. A third group of younger schoolchildren (23 %) had periodic fluctuations in attention and uneven performance throughout the lesson. They were characterized by frequent distractions, rapid satiety with the course of completing tasks in the lesson and fatigue.

The mathematical processing by the U-test by Mann-Whitney was used to assess the differences between two samples in terms of the level of attention development. As samples, the data from a study using the Correction Task method, as well as data from other studies were used (Belova & Mongush, 2020).

As a result of mathematical processing of diagnostic results, we reject the null hypothesis and accept the alternative one. Therefore, we can conclude that there are differences between the results of the ascertaining and formative experiments in the levels of formation of attention properties.

7. Conclusion

The results of the study on the level of development of attention properties of younger schoolchildren allow formulating the following conclusions: attention is an important mental process, on which the success of any type of activity of primary school children depends. The main directions in the work of a teacher-psychologist on the psychological and pedagogical support of the development of attention in younger students can be the following: the development of concentration and stability of attention, increasing the amount of attention, developing the ability of younger students to distribute and switch attention. Psychological and pedagogical support for the development of attention properties of younger students should be based on the individual and age characteristics of students.

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