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Cognitive Interest as a Key Factor in the Successful Learning Activities of Junior Schoolchildren

Summary

The article discusses the role of the cognitive interest of primary school students as an influential factor that ensures the successful course of educational activities. The article presents the results of an experimental study that revealed a wide range of manifestations of cognitive interests of pupils in grades 2–4 and their influence on learning activity and quality of knowledge. The author describes a diagnostic methodology for studying the breadth, depth, effectiveness, and stability of cognitive interests. The article provides recommendations on the use of integrated and active teaching methods, ensuring continuity between primary and secondary schools, and taking into account the interests of students in planning educational activities. The list of didactic principles, the observance of which ensures the sustainable development of cognitive interests as a driving force of educational activity, is determined. The conclusions show the need for systematic and purposeful formation of cognitive interests in the educational process of primary school.

Keywords: primary school, levels of development of cognitive interests, characteristics of cognitive interests

1. Introduction

Cognitive interest is a key factor in the successful learning activities of primary school students. The results of the study showed that the cognitive interests of junior schoolchildren have a significant impact on their learning activity and the quality of knowledge. The breadth and depth of students' interests demonstrate the need to create conditions for their comprehensive development.

Recommendations for improving the educational process include the use of integrated and active learning methods, ensuring continuity between primary and secondary schools, and taking into account students' interests in planning educational activities. It is also important to take into account the role of the socio-cultural environment and use modern technologies to support students' interests.

2. Research Methodology

The study of junior schoolchildren's cognitive interests was based on the analysis of psychological and

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pedagogical literature, as well as on an experiment. The main tasks were:

1. Determining the level of development of students' cognitive interests.
2. Identification of the main characteristics of cognitive interests.
3. Analyzing the influence of cognitive interests on the success of learning activities.

To diagnose cognitive interests, we used complex methods, including questionnaires, observations, conversations with students and teachers, as well as analysis of diagnostic tasks performed by students using projective work and unfinished sentences.

The study was conducted in the pre-war period based on several schools in Kyiv, Zhytomyr and Kyiv regions, involving 443 students in grades 2–4 and 16 teachers.

3. Results

Data from research on age psychology and primary education didactics show that the cognitive interests of younger students have a wide range of manifestations. Given that cognitive interests are not a stable and separate entity, they, along with other personal characteristics, are subject to transformation throughout life under the influence of internal and external factors in the holistic development of a student.

Scientists believe that the portrait of schoolchildren's interests changes every five years, so we cannot rely on the data recorded from scientific sources. This fact has led to the need to diagnose the cognitive interests of younger students to understand how influential they are for learning as a holistic process.

To solve the problem of studying the level of development of cognitive interests of junior schoolchildren, the task was set to highlight their manifestations. According to N. Bibik (Bibik, 2017), the following manifestations are indicators of the formation of cognitive interests of junior pupils:

- breadth (the range of interest in objects and objects of the surrounding world);
- depth (the availability of knowledge that reflects connections, relationships, and patterns in the surrounding reality);
- stability (the degree of independence of interest from external stimuli);
- effectiveness (the ability to apply knowledge variably in accordance with certain conditions).

These characteristics of cognitive interests are used in our study as a diagnostic. In accordance with them, special tasks were developed, the content and procedural aspects of which are related to students' project activities, which are the most integrated, cognitive, and creative. In a generalized form, the purpose of the tasks for studying the qualitative characteristics of junior pupils' cognitive interests during the experiment is presented in Table 1.

More details on the results of younger pupils' performance of diagnostic tasks by the latitude parameter.

Table 1. Methods of studying the cognitive interests of junior pupils

Characteristics of cognitive interests	Indicators	Diagnostic tasks (types)
Breadth	subject matter of interest	• the creative task "Lesson Schedule"; • study of readers' interests
	choice of activities	• "What do you like to do?" • formalized conversation with the teacher
Depth	establishing interdisciplinary connections	• logical tasks; • "Associative Web"; • composing questions based on the text
	identification of the problem area of activity	• project work "Lesson in my classroom"; • "Groning"; • student surveys;
Effectiveness And Stability	purposeful cognitive activity (work performance)	• teacher questionnaire; • the method of unfinished sentences; • drawing up an action plan
	independent search for ways to solve educational problems	• "Chain of Ideas"; • solving problematic situations; • restoring the logical sequence

The breadth of students' cognitive interests requires attention, as the child's range of interests plays a crucial role in activities where it is necessary to apply previously acquired knowledge and life experience to solve a specific problem. The state of development of this manifestation is evidenced by the results of the tasks performed, which involved the study of students' orientation in the subject content and their awareness of the personal significance of certain activities.

For example, the creative task "Make your own lesson schedule" allowed us to determine the subject matter of the research participants' interests. Students were offered to create their own class schedule, in which they could enter subjects and the number of lessons of their choice. The described methodology made it possible to determine the priority in the choice of academic subjects and types of educational activities. The analysis of the completed works showed that the following subjects prevail in terms of the number of choices: foreign language (chosen by 90% of participants), Ukrainian language (88%), physical education (100%), mathematics (90%), "I Explore the World" (83%); reading (87.8%); design and technology (70.8%). This data demonstrates not only the interest of students in these subjects, but also their awareness of the importance of studying them.

An interesting fact noted in the pupils' works is the inclusion of subjects studied in secondary school in the schedule (almost 80% of pupils). Thus, the children showed a special interest in learning foreign languages, history, biology, chemistry, and physics. This is due to the tendency of younger students to search for and study the essence of phenomena and processes, as well as their desire to realize themselves as adults. This situation demonstrates the need to supplement the content of primary school education with elements of content from various fields of knowledge, which will not only meet the needs of younger students, but will also allow, first, to enrich learning with new activities, and second, to ensure continuity during the transition to secondary school. It is also worth noting the students' willingness to take classes that are not included in their curriculum, such as theatre, choreography, creativity development, thinking, politeness, defense of the homeland, earth science, home life, etc. Some students have scheduled time for excursions in their schedules.

Based on the above, we came to the conclusion that it is necessary to expand the field of activity of students in grades 2–4. For this purpose, it is advisable to use active and productive forms and methods of teaching.

The reading preferences of students are evidence of the subject matter of their interests. To determine the range of readers' interests, a questionnaire with multiple-choice questions was developed. The analysis of this task revealed that most students prefer adventure literature (68.5%), comics (57.5%), heroic works (50%), and works about nature (50%). A smaller number of choices were made for popular science (35%) and historical (33%) literature. The least popular are stories about children (22.4%) and poetry (almost 31%). It should be noted that second and third graders are more interested in fairy tales than fourth graders (61.5% and 31%, respectively).

Analyzing the quantitative indicators of pupils' choice of genre themes, it was found that four or more items were chosen by 54.5% of fourth graders and 65.4% of second and third graders. This indicates a decline in interest in reading at the end of primary school.

Students' reading interests are also reflected in the choice of children's magazines. For example, when analyzing the answers to the question "What children's magazines do you read?", it was found that students who chose popular science, historical and heroic literature read educational magazines more often than others. In addition, these students showed a broad cognitive focus on various objects of the world around them, which was reflected in six or more choices of literary genres. Students who are only interested in comics and adventure literature read mostly entertainment magazines. 22% of girls read teen and women's magazines. There were 29% of students who did not read magazines.

The findings about the breadth of cognitive interests were supplemented by data from a survey of students about their favorite types of work. For example, children were asked to choose the most interesting things to do from a list of activities. The topics included different areas of activity: applied ("Saving books – saving trees", "Helping birds in winter", etc.); research and search ("Why is snow white?", "Why do people speak different languages?", etc.); informational and introductory ("What was taught in ancient

schools?", "Ukrainian words in foreign languages", etc.); game (creation of a fairy tale play "In the Land of Unlearned Rules", festival of fairy tale characters, etc.); creative ("Holiday of Reading Pleasures", environmental advertising, etc.). The results of the survey showed that 55% of students expressed a desire to participate in applied activities; 39.2% – in research or search activities; 38.4% – in informational and familiarization activities; about 34% – in game activities; and 11.5% – in creative activities.

The quantitative analysis of the presented results showed a greater interest of students in research and search, information and awareness, and applied activities, and a somewhat lower interest in game activities. The lowest level of interest was in creative activities. Given the transition of students in grades 3–4 to young adolescence, which is characterized by an interest in creativity, we believe it is necessary to expand the field of children's activities in this area. Creative methods and forms of education can help develop creative abilities.

To study the range of children's interests, a formalized conversation was conducted, the results of which showed that 38.8% of students showed a correlation between abilities and interests, activity in extracurricular activities; 37% of students showed a frequent change of hobbies; 24.2% of students had no long-term hobbies. Readiness to perceive material that goes beyond the usual elementary school environment, as well as a desire to participate in various activities, was demonstrated by 42% of students. This indicates a broad cognitive focus of children on various objects in the world around them. Almost 40% of pupils have a selective attitude to the objects of knowledge. According to teachers, these students' interests are manifested in a specific learning situation. A subject focus limited to individual experience was found in 18.2% of students. Such students have a tendency to focus on a narrow range of subjects: either mathematics, aesthetics, or sports. They also showed some inertia in choosing activities and uncertainty in their decisions.

The study of students' cognitive interests was also conducted according to other parameters. Here is a summary of their results. The study of interests by their depth convinces us of the need to involve younger students in solving interesting problems that go beyond the content of primary education. The majority of students, realizing their own capabilities, demonstrated their readiness to independently identify the problem area of activity, as well as to self-evaluate their work. At the same time, special attention should be paid to developing skills in planning activities, working with information, and presenting work results. The study of cognitive interests by the parameters of efficiency and sustainability showed that most students' cognitive activity is not sufficiently expressed, so there is a need to involve them more in independent activities. Although the students demonstrated the ability to generate ideas, their content often did not meet the learning objectives. In our opinion, this situation is a consequence of both limited life experience and insufficient research experience in school. There were also data indicating that children have no experience with independent search activities, as well as a habit of receiving knowledge in a ready-made form. This makes it necessary to enrich the experience of younger students with all kinds of activities, involving active forms of organizing the educational process.

Based on a diagnostic study of indicators characterizing cognitive interests in terms of breadth, depth, effectiveness, and stability, three levels of their expression were identified: high, medium, and low. Here is a qualitative description of these levels.

The group with a high level of development of cognitive interests includes students who have formed internal motives for learning. They are characterized by a wide range of interests; an intention to solve a complex problem; interest in different ways of achieving the goal; independence in choosing the method of performing the task, types of activities, and the form of presentation of the result. Such students accounted for 30.2% of all study participants.

Pupils of the average level of development of the studied quality are dominated by external motives of learning – the desire to get a good grade, to improve their status in the team, etc. They show interest in information based on specific facts; prefer problems that are easier to solve; are satisfied with one way to achieve a goal; strive for the result of activities in competitive situations; and their cognitive independence depends on a particular situation. There are 47% of such students.

Students with a low level of cognitive interests lack the motivation to learn. They show occasional interest in certain subjects; they are indifferent to

cognitive activity; in situations of complication, they deviate from what they have started; they participate in entertainment-related activities. Such students need direct coordination from the teacher. There are 22.8% of such students.

Thus, in the process of developing the cognitive interests of younger students, the following qualitative changes can occur: moving away from the "hunger for facts", focusing on the external features of objects and phenomena, dispersal of cognitive reactions to the desire to achieve a specific result of activity through a conscious choice of ways and means of achieving the goal. The variety of manifestations of cognitive interests determines the choice of such developmental tools that will ensure the cognitive activity of students with a high degree of independence; and will allow organizing productive activities full of integrated content and unusual ways to achieve the goal, which is significant for primary school students.

4. Discussion

The analysis of psychological and pedagogical literature demonstrates different approaches to the definition of cognitive interests, which is explained by the complexity and ambiguity of the category. In most works of researchers on this problem, the essence of cognitive interests is considered as the orientation of the individual to active cognition of reality. Cognitive interests are defined as a person's active attitude to reality caused by an awareness of its significance and emotional appeal. They can also be a manifestation of a person's cognitive needs, drives, and experiences that determine the motivational sphere (Savchenko, 2012).

Although some of the child's personality traits are laid down from birth, the development of cognitive interests also occurs due to the physical and social environment surrounding the child throughout the entire period of formation (Bjorklund, 2022). The development of interest is governed by two control systems: emotional and cognitive. In the former case, students are attracted to activities that bring them pleasure, while in the latter case, they consciously engage in tasks that can satisfy, for example, their goals. Younger students are more likely to associate emotional responses with interest-related stimuli, while older students tend to associate cognitive responses, indicating qualitative differences in the development of students' interest in a particular subject (Carmichael, 2017).

When planning learning environments and educational activities, teachers should consider a continuum ranging from children's independent play to direct, child-centered learning (Zosh, 2017). Teachers create learning situations that reflect children's interests; they provide extended time and opportunities for children to engage in independent play (individually and in small groups). Teachers also strategically provide guidance and suggestions and ask questions to help children achieve the learning goal, even if children continue to lead the activity (Hassinger-Das, 2019).

Many studies emphasize that cognitive interest determines the quality of learning activities, affecting the efficiency of knowledge acquisition and the overall development of a student's personality. Giving children autonomy and free will in how they approach problems, hypothesize, and explore potential solutions with others promotes deeper learning and improves executive functioning (Barker, 2014).

To ensure the sustainable development of junior schoolchildren's cognitive interests as a factor in their successful learning activities, we propose to adhere to the following didactic principles:

- Humanism and child-centeredness (combining the child's mental and emotional and volitional powers, taking into account his or her interests as a primary factor in learning).
- The integrity of the world picture (the content of education ensures the child's observation and awareness of various connections between objects of the surrounding reality, and also involves consideration of real situations, and the use of interdisciplinary content information).
- Continuous development of the pupil's personality (the content of the activity includes situations from the environment at the level of educational material, which are a source of analysis and acquisition of personal experience by children).
- Consideration of individual capabilities (multi-level presentation of educational material, enabling students to choose tasks in accordance with their cognitive interests and needs).
- Health protection (age-appropriate dosage of educational material, alternation of types and forms of activity) (Onopriienko, 2020).

5. Conclusions

Cognitive interest is one of the most important factors in learning activities, especially in primary school age. It plays a crucial role in shaping students' active attitude to learning, encourages them to search for knowledge on their own, and helps develop their cognitive and creative abilities. Long-term observations of the actual educational process have shown that the development of cognitive interests of younger students is not so much subject to the logic of age-related changes as it is connected with the formation of their personality. Therefore, there is no scientific justification for the age limits that characterize the level of formation of this quality. In this regard, it is necessary to identify an interconnected group of features and determine trends in the development of children's cognitive interests at a certain stage of life. The state of interest is greatly influenced by the socio-cultural environment in which a student's personality is formed.

The diagnostic methodology, the analysis of psychological and pedagogical literature, and my own practical experience have made it possible to find out that for most younger students, learning motives give way to entertainment moments of learning. At the same time, students of this age group are characterized by sharpness and freshness of perception, a kind of contemplative curiosity. They are also characterized by a close connection between cognitive processes and practical activities. When solving specific problems, students need to anticipate the results of their actions, plan, and determine the means necessary to achieve the goal.

We have found that a wide range of subjects and phenomena are in the area of the current perception of younger students. Their interests are not only related to the nature and content of classes, but often go beyond schooling. At this age, there are changes in the nature of curiosity: students are increasingly interested in the essence of objects, their origin, and internal connections. At the same time, as cognitive needs grow, the purposeful activity of students' changes. This affects their attitude to certain activities: children can independently determine what they want to do and explain their choices. Initially, an unstable and insufficiently realized interest acts as a catalyst for the search. In the course of the activity, it becomes more stable and turns into a direct incentive for activity. Although there are hobbies associated with attractive objects (digital games, toys) or interesting activities (participation in clubs, sports, collecting), in general, the interests of primary school children are becoming more long-term and meaningful.

The conclusions drawn during the study convince us of the need for a targeted impact on the formation of cognitive interests of junior schoolchildren since the success of educational activities, in general, depends on them.

We see the prospect of further research in determining and testing the content of primary education, which would take into account the picture of the identified cognitive interests of primary school students as much as possible.

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