TÍTULO: La formación de la reflexión sobre la base de las tecnologías de la información y la comunicación.

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RESUMEN: El artículo aborda los aspectos teóricos y metodológicos de la formación profesional, la tecnología pedagógica de este proceso. El autor describe el concepto de formación de los futuros docentes. Se presenta una versión del modelo del desarrollo del interés cognitivo de los estudiantes sobre la base de tecnologías de la información y de la comunicación. Se dan las características de los criterios e indicadores del desarrollo del interés cognitivo de los estudiantes niveles. Las conclusiones se presentan en la perspectiva de modelado del proceso de aprendizaje teniendo en cuenta el desarrollo del interés cognitivo basado en tecnologías de la información y de la comunicación.

PALABRAS CLAVES: la formación, la tecnología de la educación, la reflexión, el modelado, el interés cognitivo.

TITLE: Formation of reflection on the basis of information and communication technologies.

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ABSTRACT: The article discusses the theoretical and methodological issues of professional training, pedagogical technology of this process. The author describes the concept of training of future teachers. A version of the model of the development of students' cognitive interest based on information and communication technologies is presented. The characteristics of levels, criteria, and indicators of the development of students' cognitive interest are given. The conclusions are presented on the perspective modeling of the learning process considering the development of cognitive interest based on information and communication technologies.

INTRODUCTION.

At present, it is believed that in the current socio-economic conditions, the implementation of reflexive activities is one of the most important criteria of survival, productivity, and hence success.

With the help of reflection, it is determined how consistent, purposeful and effective was the impact and to what extent the previously scheduled result was achieved. It follows from this that reflection is not just a specific skill, significant for the profession, and not just a separate mental operation, necessary for a holistic mental activity, it is a separate, specific kind of activity.

At present, the features of reflection in the process of teaching children and adults, in professional activities, in creativity are especially productively studied. And increasingly, researchers are talking about reflection as a necessary component in the professional development of a teacher (Zimnyaya, 1991; Vergasov, 1997; Ananyev, 2008; Karpova & Yeremeyeva, 2013; Karpova & Belyayeva, 2014).

The concept of "pedagogical reflection" is introduced in everyday life as "awareness of activity already implemented: one's emotional state, successes, and difficulties in performing activities, means, and tools used in this activity, difficulties and ways of solving problem situations".

K. Ushinsky pointed out the importance of reflection for a teacher's activity with the goal of a comprehensive understanding of the essence of human nature, the search for effective methods of upbringing and teaching. This is vividly embodied in the fundamental work of the teacher "Man as an object of education - the main features of the human body in the art of education", which reflects the synthesis of the author's philosophical, psychological and pedagogical views.

The growing urgency of the research problem is determined by the change in socio-economic and educational guidelines of society, the need for humanization and democratization of higher and secondary education, the search for new approaches to solving this problem, where the creative, self-developing, self-developing, and reflecting personality is the starting point (Ellis, 1962).

Due to the fact that education at the present stage is considered as a way of personal development, the teacher must build their professional activities on the basis of cooperation with students, create conditions for the child's awareness of its importance, uniqueness, develop the student's ability,

build relationships with peers based on reflexive processes, their capabilities, both intellectual and physical, "appropriating" knowledge not because of an assessment, but to improve individual life experience. It is in our time, when the "old" moral norms are destroyed, and the "new" are not built, the teacher should pay particular attention not only to how to replenish knowledge but also to help the student to "create himself", to know the world around him, following moral criteria, which will be possible only with the reflective awareness of ethical and aesthetic norms.

The range of issues related to the study of reflexive mechanisms, in essence, forms a special section of the theory of knowledge. As philosophers note, "reflection cannot be put on a par with such traditional forms of knowledge as an experiment, deduction, etc." (Nayn & Umetbayev, 2007). The study of reflection in philosophy concerns such mechanisms of cognition, in which the subject receives knowledge of the new, "self-related" type. Emphasizing the importance and necessity of reflection for personal development, the researchers note that reflexivity is "one of the most important features of human consciousness, without which normal functioning" of mental processes is impossible (Nayn & Shondina, 2013).

DEVELOPMENT.

The problem of the development of cognitive interest is the subject of research of many scientists, including V. M. Vergasova, A. K. Markova, N. G. Morozova, G. I. Shchukina, and others. In our study, we rely on the definition of cognitive interest given G. I. Shchukina. Cognitive interest is characterized by the author as a selective orientation of the person, addressed to the field of knowledge, to its subject side and the process of mastering knowledge (Shchukina, 1986).

In the work of G. I. Schukina (1986), three levels of development of cognitive interest are highlighted:

- Low (characterized by the absence of a clearly defined motive, the presence of short-term insignificant interest, unsystematic in the performance of the training task).

- Medium (characterized by longer activities, systematic, coordinated actions in the performance of this task, independent establishment of dependencies, cause-effect relationships).

- High (characterized by independent creative search activities for the development of knowledge, the presence of a strong interest in theoretical and practical problems, there are clearly algorithmized actions when solving a learning task).

As a priority means of developing the level of cognitive interest in the modern educational process, as practical experience shows, are information and communication technologies. Information and communication technologies, by definition of E.S. Polat (2005), actualize the process of preparing and transmitting information to a student, the means of implementation of which is a computer.

The authors developed a model for the development of students' cognitive interest in information and communication technologies based on the requirements of the Federal National Standard of the second generation (Figure 1) ("Federal", 2013).

In the model of development of the cognitive interest of students based on the use of information and communication technologies, the following blocks are singled out such as a social mandate block, destination, conceptual and methodological, content-related, criteria-diagnostic, effective one. The content of the destination block of modeling is the creation of positive motivation in the lesson, the use of various information and communication technologies, the development of the need for cognitive interest. Creating a positive motivation in the classroom is the most important condition for the further successful implementation of the main goal - the development of students' cognitive interest (Bertsefai & Romanenko, 1981; Varlamova, 1997). However, in addition to traditional means of forming cognitive interest, which, of course, are the basis, information and communication technologies can be used.
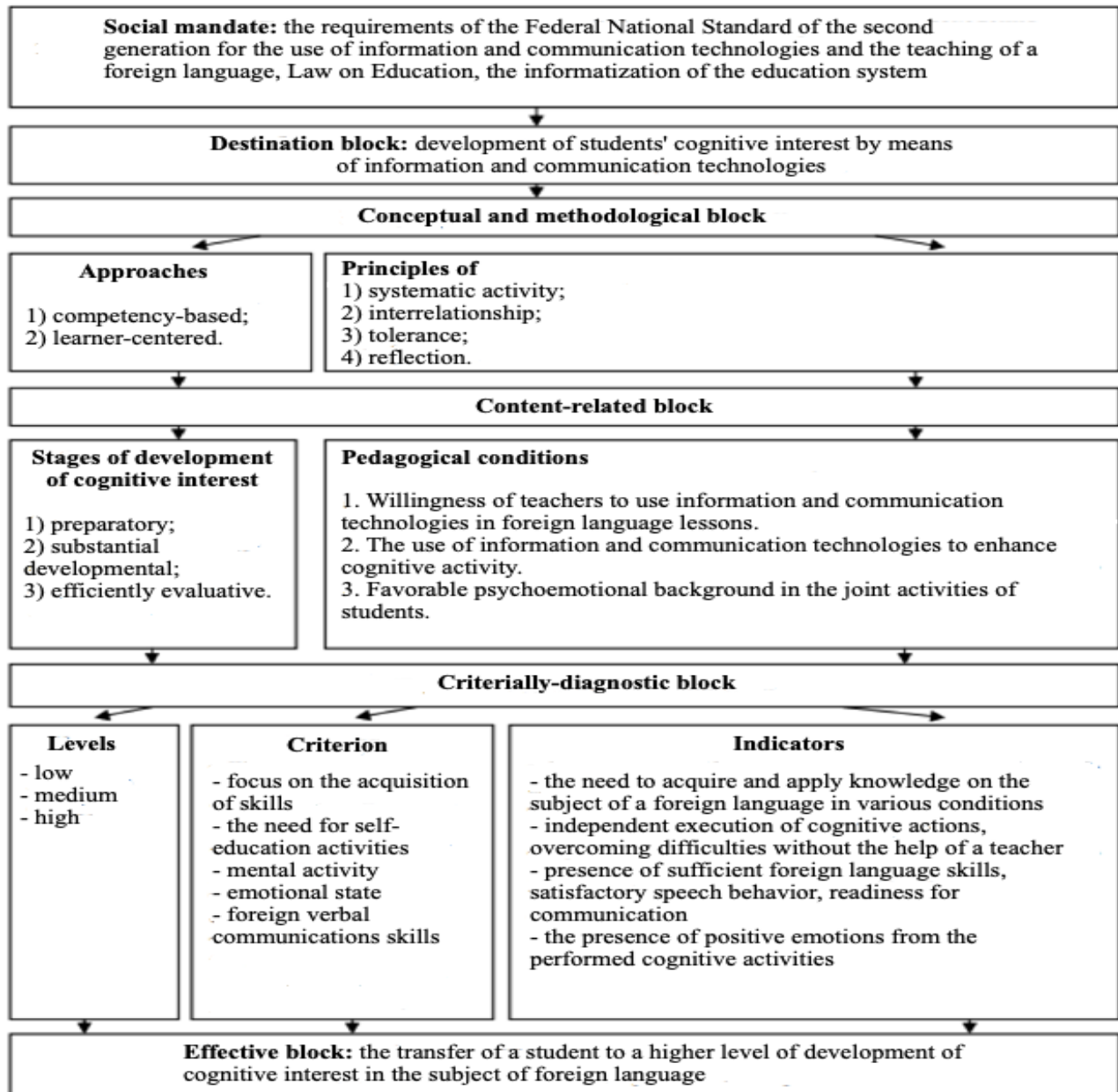
Social mandate: the requirements of the Federal National Standard of the second generation for the use of information and communication technologies and the teaching of a foreign language, Law on Education, the informatization of the education system

Destination block: development of students' cognitive interest by means of information and communication technologies

Conceptual and methodological block

Approaches

1) competency-based;
2) learner-centered.

Principles of
1) systematic activity;
2) interrelationship;
3) tolerance;
4) reflection.

Content-related block

Stages of development of cognitive interest

1) preparatory;
2) substantial developmental;
3) efficiently evaluative.

Pedagogical conditions

1. Willingness of teachers to use information and communication technologies in foreign language lessons.
2. The use of information and communication technologies to enhance cognitive activity.
3. Favorable psychoemotional background in the joint activities of students.

Criterially-diagnostic block

Levels

- low
- medium
- high

Criterion

- focus on the acquisition of skills
- the need for self-education activities
- mental activity
- emotional state
- foreign verbal communications skills

Indicators

- the need to acquire and apply knowledge on the subject of a foreign language in various conditions
- independent execution of cognitive actions, overcoming difficulties without the help of a teacher
- presence of sufficient foreign language skills, satisfactory speech behavior, readiness for communication
- the presence of positive emotions from the performed cognitive activities

Effective block: the transfer of a student to a higher level of development of cognitive interest in the subject of foreign language

Figure 1. Model of development of cognitive interest of students through the use of information and communication technologies.

Information and communication technologies in teaching, as shown by experimental work, stimulate the development of students' cognitive interest, if the atmosphere of competition is formed in the lesson, and reflection and exploratory nature of the activity are activated, and the perception and understanding of foreign language material are improved.

In our study, the development of cognitive interest within the framework of the conceptual and methodological block is considered from the standpoint of the main pedagogical approaches - competence and personality-oriented.

Representatives of the competency-based approach (B. G. Ananyev (2008), I. A. Zimnyaya (1991), A. V. Khutorskoy (2007)) found that the main task of teaching at the moment is not to transfer student's knowledge and skills, and in the formation of key competencies. The leading competence in studying materials, as M. Sapae says, is communicative competence, which has the following components:

- Linguistic competence (knowledge of vocabulary and grammatical rules);

- Sociolinguistic competence (ability to use and interpret language forms in accordance with the situation/context);

- Discourse competence (the ability to understand and logically build separate statements for the purpose of semantic communication);

- Strategic competence (the ability to use verbal and non-verbal strategies to compensate for missing knowledge);

- Sociocultural competence (a certain degree of familiarity with the sociocultural context);

- social competence (the desire and willingness to interact with others, the ability to manage the situation).

Formation of communicative competence and its main components, as the practice has shown, will be more efficient with the use of modern information and communication technologies introduced into the educational process (Khutorskoy, 2007).

The use of a person-centered approach to learning based on information and communication technologies is to provide opportunities for the realization of the student's personal aspirations, the disclosure of individuality, manifestations of independence (Canale & Swaine, 1980). The

development of cognitive interest in the activities performed, the ability of students to work with information (interpret, analyze), the ability to make independent decisions deserves special attention.

Based on the analysis of literary sources and own pedagogical experience, the authors determined that the following pedagogical principles are the basis for the development of students' cognitive interest such as systematic activity, interconnection, tolerance, and reflection (Bodalev, 1983; Bodalev & Kovalev, 1987).

The principle of systematic activity involves the development of cognitive interest in the inclusion of students in the learning process at all stages. The principle of interconnection is responsible for the continuity between the stages of development of cognitive interest, the use of previously achieved success at subsequent stages of development. The principle of tolerance implies respect for the opinions of other students, respect for the individual as a whole, the creation of situations of success for students. The principle of reflection implies the development of self-criticism, self-improvement, self-knowledge, the formation of an integral personality of students (Morozova, 1979).

The content-related block of the model includes the following steps:

1) The initial (development of curiosity, external activity caused by unexpected circumstances in the application of information and communication technologies);

2) The main (development of curiosity, sustained interest, determined by persistent positive emotions, the search character of the activity);

3) Result-effective (development of persistent cognitive interest, the need for new knowledge, reflection of the activities performed).

Successful implementation of the model of development of students' cognitive interest is provided by the pedagogical conditions. In their study, the authors rely on the definition proposed in the work of A.Ya. Nayn and Z.M. Umetbayev (2007). Under pedagogical conditions, we mean the totality of the objective possibilities of the content, forms, methods, means, pedagogical techniques, and material-spatial environment, aimed at solving the tasks set in the study.

In the psychological and pedagogical literature of recent years, researchers K. Abulkhanova-Slavskaya, E. Klimov, A. Markova, V. Orlov, A. Savchenko, T. Shamova, and others. Focus on the importance of reflection for the process of professional development of the future specialist as the core component that determines the relationship between the meaning of life and professional activities.

This software is presented in an integrated manner in the technology of the formative process developed by the authors, in which the main mechanism is step-by-step (step by step) use of appropriately structured content (Berne, 1988). The units of this structure are the learning situation and the learning task. These structural elements are represented in the corresponding system.

First, we turn to the general characteristics of the process. To clarify it, we define the essence of the original concept of "technology". In the social and human sciences, the use of this term depends on its various characteristics and the scope of application of this or that technology; for example, teaching technology, education technology, educational technology, pedagogical technology, innovative technology, learning technology, teaching technology (Arutyunyan & Petrovskaya, 1981; Babanskiy, 1982; Markova, 1986).

Pedagogical technology belongs to the most commonly used concepts, although there is no unambiguously accepted interpretation according to it. A. Savchenko explains this by the fact that the use of such a concept in the organization of education is complex and not sufficiently studied, although the need for improving its methodological support is great, therefore many researchers

turn to clarify this phenomenon in order to clarify and methodically fill it. So, still remain controversial common and distinctive signs in the definitions of the concepts "technology", "method", "technology of learning", "method of learning".

Technology, as noted by A. Savchenko, besides the objectives of training, contains a description of the conditions and procedures by which you can achieve the final result. The essential feature of the technology is a detailed description of each step through the achievement of results and the necessity of reproducing the course of action. She has clearly defined procedural characteristics that, when applied, give a positive result.

The method also provides a variety of ways to achieve goals that allow for changes and do not guarantee the expected result. This is their difference and multidimensionality. Concerning the professional training of teachers used in pedagogical communication, there is a "pedagogical technology", although according to it there is no unambiguous interpretation either.

Both domestic and foreign scientists (V. Beotalko, I. Zyazyun, M. Klarin, A. Infantry, A. Savchenko, G. Selevko, S. Sysoyeva, and others) pay great attention to the development of pedagogical technologies. They concluded that the use of pedagogical technologies increases the efficiency of the pedagogical process and allows it to be optimized through precise programming of the joint activities of the teacher and the student. Virtually every technology uses elements of reflection.

In the works of S. Sysoyev, "pedagogical technology" constitutes a theoretically based educational and educational system of socialization, personal and professional development and human self-development, created in accordance with the needs and capabilities of an individual and society. objectives and possibilities of reproducing the process at the level of mastery of the teacher.

Modern pedagogical technologies of vocational education, as V. Orlov notes, are a combination of the main components of the pedagogical process, ensuring active learning of the knowledge and skills provided for by the program, simultaneously with the formation of the personality of a specialist, the development of his professional culture and the provision of professional development. The main thing in the pedagogical technology of professional development is the design of the process of formation of the student's personality, the future specialist, and therefore the intensification of its intentions for the result of vocational training, the professional development of the individual in the conditions of the formation of professional consciousness and the need for self-improvement are at the forefront".

A. Savchenko, revealing the technology of forming the key competencies of the subjects of the educational process, calls reflexive abilities as a prerequisite for their formation, ensuring the ability of an individual to realize his or her abilities to perform a certain activity; analyze and evaluate their own methods of action, set new requirements for its improvement.

Elements of reflection are actively used in the development of educational technologies (V. Bibler and Y. Kurgan, G. Selevko, S. Sysoyeva, T. I. Shamova, A. Khutorskaya, etc.).

Reflection is an element of technology developmental education, which is successfully used in school practice (V. Davydov, L. Zankov, I. Yakimanskaya, etc.). In particular, in the concept of developing education by V. Davydov, the central component of the formation of younger students in learning activities is a way to solve the learning task, which necessarily involves reflexive activities aimed at transforming conditions in order to find a common way, building private tasks solved in this way, controlling their decision and evaluation of their performance. I. Yakimanskaya, developing the technology of personality-oriented, developmental training, argues that the training tasks should contain the reflection of the teaching as a subject activity. However, in these

technologies, in our opinion, reflection is the primary focus on its individual elements (self-control, self-esteem) or interpreted as a quality inherent in man.

The study by F. Maklashova applied a systematic approach to the development of reflection. It introduces the concept of reflexive technology as a procedural organizational and pedagogical algorithm for constructing a reflexive situation, initiates a phased reflexive activity of a teacher, stimulates him to independently acquire the necessary knowledge, develop personally meaningful pedagogical skills and assimilate new ways of professional activity in a problem pedagogical situation. The researcher focuses on individual indicators of the formation of reflection of the pedagogical activity but does not consider the specifics of training future teachers of primary school.

In the works by O. Savchenko, an algorithm is proposed that can be used by both students and young teachers in organizing and conducting such lessons. First, the scientist advises them from the first days of working with students to consistently discuss how best to achieve goals in the classroom and to encourage students to do so. And, as a sample, it leads the following work sequence:

The first step is to define the goals of the lessons in their system.

The second is determining the content of the lesson, analyzing the possibilities of the textbook (and other sources) for the realization of the goals and objectives of the lesson in accordance with the readiness of children to absorb the educational material.

The third step is the selection and combination of teaching methods and techniques.

The fourth is the choice of forms of organization of educational activities.

The fifth is the interrelation of the structural components of the lesson and its relative completeness.

The sixth is a prediction of the methods of reciprocal communication, control, and assessment of students' knowledge.

The seventh is the preparation of a lesson plan, in which it is necessary to clearly envisage all the stages of the lesson, the basic factual material, assessment, homework (Bespalko, 1989, 1995).

Considering the formative potential of the technological approach, as well as general pedagogical algorithms, the authors developed a technology for the formation of professional reflection of future primary school teachers. In its structure, we highlight the conceptual basis, the substantive content of the training (the goals and content of the educational process), the actual procedural part containing the technological steps of formation and the effective component (Andreyeva, 1988; Anikeyeva, 1989).

The main approach to the development of professional reflection technology was defined by the authors as reflexive-innovative, aimed at ensuring professional and personal development and self-improvement of the personality of the future teacher based on reflexive activity in the process of various types of individual and collective activities, when their own past experience of reflexive dialogue is rethought teacher with a student. In accordance with this, the process of professional preparation of the future teacher can be presented through a reflexive strategy in which the principles defined by the authors are implemented (Wiegand, 1990; Jussium, 1991).

The content part of the technology is associated with the definition and assimilation of the content of training, with the aim of students mastering all the components of professional reflection.

Based on the principles of problem and cognitive activity, the authors of the training content structured in the form of multi-level pedagogical tasks, the solution of which will contribute to the development of professional thinking and the assimilation of the experience of professional reflection.

The goals of mastering the content of psychological and pedagogical disciplines are determined, on the one hand, by the need for students to deeply and firmly master this system of knowledge and to practice reflexive skills to use them in their professional activities (cognitive and operational-

technological components of professional reflection). On the other hand, the ability to select the content of tasks in such a way that students can comprehend subjectivity and accept the value of professional reflection as a necessary condition for achieving a high quality of future professional activity (axiological component). In this regard, the content is emotionally and value-enriched in order for students to activate relevant feelings and awareness, through which they can professionally decide, assess their preparation and develop professionally important personal qualities (emotional and evaluative component) (Abdullina & Pligin, 1998; Barkhayev, 1998).

The authors choose the technologically realized content chosen in this way as a system of learning situations, during which the students' personal qualities that contribute to the development of professional reflection are actualized (the personal component).

In accordance with the objectives of the experiment, the system of training tasks covered:

1) Analytical tasks (working out the ability to analyze and assess the situation of professional activity).

2) Projective (the formation of the ability to independently search for and apply ways to solve the tasks assigned to the student as a future primary school teacher).

3) Game (tasks, modeling situations of professional activity and real interaction of a teacher with students).

4) Algorithmic (tasks to determine the sequence of reasoning in the construction of reflexive judgments, the use of an algorithm for the formation of reflexive skills);

5) Reflexive-heuristic (tasks that allow determining the heuristic role of professional reflection in solving new professional problems for students) (Ananyev, 1968; Ageyev, Davydov, & Rubtsov, 1985).

The content and logic of these tasks were determined to consider the stages of learning professional experience when the future specialist acquires the experience of knowledge and skills, the experience of creative activity and the experience of emotional value attitude to the surrounding reality. Adequate use of learning tasks in accordance with the stages of learning reflexive experience will help students gradually move from reproductive to reproductive-creative ways of solving the problem, use the skills of self-analysis and self-organization of their own activities (Strauman & Higgins, 1988).

The process of formation of professional reflection should be carried out throughout the study of the entire cycle of psychological and pedagogical disciplines and provide for the participation of students in specially designed learning situations not only in training sessions but also during extracurricular and independent work.

So, the authors rely on the principles of the reflexive control of students' self-developing activity, when the future specialist takes the position of an active subject of learning in the process of joint activities with other subjects of professional training. Then, as the pedagogical process itself is organized through learning situations by solving educational and cognitive tasks based on the teacher's reflective dialogue with the student, subject-subject and polysubject learning (Bazhanov, 1991; Antonova, 1995; Bordovskiy & Izvozchikov, 1993).

The procedural part of the technology involves the coverage of methodological support for the formation of professional reflection. Let's consider its stepwise phasing.

The first step (object stage) formation involves the use of methods and means of activating the reflexive position, based on the mechanisms of formation of the subjective position of students in educational and professional activities. It provides for the development of skills of self-knowledge, self-esteem, self-attitude, self-reflection; the formation of techniques of reflexive self-regulation, mastering the skills of reflexive auto-training; teaching skills of forecasting, decentralization,

divergent thinking; the formation of the ability to pedagogical observation, the distribution of attention; formation of a reflexive position in interpersonal relations, subject interaction, mastering non-verbal means of communication in the educational environment.

The activation of the reflexive thinking of the content was facilitated by the organization of reflexive-problem forms of conducting classes; mastering the techniques of reflection of alternative ways of solving life and professional problems using the method of "positional discussion", reflective dialogue and polylogue (Blinov, 1987; Bogdanova, 1989).

One of the results of this step was the ability of students in the process of group work to draw up charts reflecting the modern characteristics of professional reflection. Let us give two examples of the fulfillment of these tasks by students of 11 courses in a practical lesson in pedagogy on the topic "The structure of the personality of a teacher as a subject of pedagogical activity".

During this practical lesson, students deepen their knowledge of the structural components of the personality, in particular the personality of the teacher as a subject of pedagogical activity, carry out self-analysis of professionally important qualities, drawing on their own experience and knowledge of psychology and pedagogy, revealing and interpreting the content of the concept of "self-knowledge" and its derivatives such as self-observation, introspection, self-awareness, self-esteem.

To understand, clarify and further operate with these concepts, each student used his own notebook "Steps of My Knowledge", where he wrote down the definitions and expressions that characterized his personal and professional "I". Students took material for performing this type of work from scientific and reference sources (psychological, pedagogical dictionaries, textbooks, autobiographies of famous people, etc.) or gave their definition, which was identified with personal and professional qualities. Let us give one of the fragments of the records that the student of the 2nd course made, "Self-observation is the ability to constantly observe yourself, your inner world, your actions, feelings, thoughts, feelings, especially when you are alone with yourself. Self-analysis is

reasoning about their behavior, actions, actions from the standpoint of spirituality, criticality, self-judgment. Self-esteem is a kind of higher authority that a person endows himself with; the dynamics she wants, the result she wants to achieve. Self-awareness is the awareness of oneself, one's "I," one's desires.

At the second step (object-subject stage), students are taught the basics of professional reflection through the analysis of the methodology, the main components of the content, the structure of professional reflection. An information-reflexive background is created, the cognitive reflection of students is actualized, an understanding of the reflection of values and meanings of educational and professional activities, the assimilation of methods of studying value and life-span orientations, mastering the skills of reflection of individual projects, fragments of professional activity, design skills, modeling the life and professional path, designing personal and professional perspectives; nurturing the need for reflection of personal and professional self-realization.

At the third step (subject-subject stage), such qualities of students' professional reflection as the reflexive readiness for self-formulation and professional solution of life and professional tasks are formed; elements of professional project culture; reflexive-transformative attitude to one's own life activity; reflexive mechanisms of activity, behavior and communication, performing a regulatory function. At this stage, pieces of training on pedagogical communication, organizational and business games were conducted, individual ways of reflecting creative expression in the educational process were involved, a reflexive search for an individual lifestyle and professional activity was carried out, the basics of reflexive-innovative activity were conducted.

The fourth step (the actual subjective stage) of the formation consisted in teaching students of the practical basics of implementing individual reflexive stimulation programs, professional personal self-development, reflexive analysis of educational, professional and life achievements, "nodal stages of self-development", "growth points"; implementation of the functions of reflexive

correction of one's own vital activity; formation of the need for reflection of self-improvement; status growth in the personal and professional aspects of social and communicative competence; analysis of the subject's reflexive attitudes regarding their own life and professional ways, diagnostics and the formation of a reflexive position in organizational and action-related games.

For the development, formation, and correction of such personal and professional qualities as self-improvement, the authors used psychosomatic methods in practical classes such as self-hypnosis (monologue - reasoning, conscious influence on various body functions), relaxation, sublimation (monologue - internal setting). Thus, students were asked (even during the lesson) to relieve feelings of fatigue, irritability, and excitability to use these techniques: walk around the audience, switch to a slow pace of presentation of the material, give the task to work independently, and do physical training with the students. An internal installation such as "I am excited, I need to calm down", "I will be fine", "I can do it, it is feasible for me", "I do everything right", "I can be successful if...", "I calmly communicate with students", "Nobody annoys me".

The discussions that they had about resolving such problems and finding the right answer led to self-reflection about those internal contradictions that arise because of conflict with oneself (hierarchy of motives) or contradictions between subject-subject and polysubject interactions. In such classes, the teacher should not allow students to make hasty evaluative judgments, unambiguous decisions, but on the contrary, encourage them to express their own opinions, attitudes, and turn to the experience not only of their own, but also of their classmates, mentors, and teachers (Bitinas & Katayeva, 1993; Bozhovich, 1997).

Thus, the use of such methods of self-knowledge as a monologue-adjustment, monologue-reasoning, monologue-proof, in our opinion, step by step forms in students the ability not only to self-analyze, but also to such reflective skills as self-improvement, self-development, self-

actualization, self-confidence, self-regulation, self-adjustment, self-order, which contribute to the development of both personal and professional reflection.

CONCLUSIONS.

During the study, the following pedagogical conditions were successfully tested such as the formation of teachers' willingness to use information and communication technologies in the classroom, the use of information and communication technologies to enhance the cognitive activity, the creation of a favorable psycho-emotional background in students' joint activities that promote the development of informative interest. In our study, the criteria-diagnostic block of the model is used to determine the levels, criteria, indicators of the development of students' cognitive interest based on diagnostic methods (questioning, observation, testing, interviews with students and teachers) and analyzing the dynamics of the results obtained.

The final unit of the model is the effective unit associated with the reflective activity of students.

Thus, the pedagogical tools implemented in the author's model are an integral system for the implementation of information and communication technologies in the process of developing the cognitive interest of students in practice. The use and observance of the pedagogical conditions proposed in our model allow us to successfully plan, organize and monitor the development of the cognitive interest of students in the learning process based on information and communication technologies. In our opinion, the diagnostic tools developed in the model (level characteristics, criteria, and indicators), providing objectivity, consistency, and comprehensiveness of monitoring and assessing the development of students' cognitive interest during the lesson using information and communication technologies, have practical significance. The practical significance of the study lies in the fact that substantive and technological support has been developed for the process of developing and introducing a pedagogical technology for forming reflection. The materials of

this study can be used in the mass practice of working with schoolchildren, as well as in the system of training teachers.

The proposed guidelines make it possible to scientifically substantiate and select the forms and teaching methods of schoolchildren, to carry out an assessment and self-assessment of readiness for learning activities, which contributes to the quality and effectiveness of the learning process.

The validity and reliability of the research is determined by the analysis of modern achievements of psychological and pedagogical science, a comprehensive research methodology, reproducibility of experimental data, verification of research results and representativeness of experimental data obtained, verification of research results at various stages of experimental work, their quantitative and qualitative analysis, confirmation of advanced research hypothesis experimental result, processing experiment governmental data.

At the same time, the study showed the general didactic significance of the implementation of the research results and does not exhaust the content of the problem under consideration. Further development of the research can be continued in the following areas such as the development of a system of diagnostic procedures for the formation of reflection, the study of changes in self-esteem and self-control in the implementation of pedagogical technology, the development of methodological equipment of pedagogical technology of reflection formation.

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