Artículo de investigación

Pedagogical reflection and the ways of its development among the students of pedagogical professions

La reflexión pedagógica y las vías de su desarrollo entre los estudiantes de profesiones pedagógicas

Reflexão pedagógica e as formas de seu desenvolvimento entre os estudantes de profissões pedagógicas

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Abstract

This article is dedicated to the development of pedagogical reflection among students of professions related to teaching. Based on the works of S.Yu. Stepanov, I.N. Semenov, A.A. Bodalev, Yu.M. Orlov, N.I. Gutkin and other Russian researchers. The authors of the article clarified the types of pedagogical reflection, the corresponding skills and the related types of learning tasks that can be used in the training of future teachers. The article also presents the complex of authors of pedagogical conditions that guarantee the development of pedagogical reflection among students. The complex includes the following components: the creation of a favorable emotional environment during the lessons with the students; the use of the didactic technique system designed to take students to a reflective position; the application of reflective pedagogical technologies in the educational process of the university, promoting the development of pedagogical reflection among future teachers and improving the quality of their education. The article also describes the results of the experimental work, which confirmed the effectiveness of the developed complex of conditions that guarantee the development of reflection among students of pedagogical professions.

Resumen

Este artículo está dedicado al desarrollo de la reflexión pedagógica entre los estudiantes de profesiones relacionadas con la docencia. Basado en las obras de S.Yu. Stepanov, I.N. Semenov, A.A. Bodalev, Yu.M. Orlov, N.I. Gutkin y otros investigadores rusos. Los autores del artículo aclararon los tipos de reflexión pedagógica, las habilidades correspondientes y los tipos relacionados de tareas de aprendizaje que se pueden utilizar en la capacitación de futuros maestros. El artículo también presenta el complejo de autores de condiciones pedagógicas que garantizan el desarrollo de la reflexión pedagógica entre los estudiantes. El complejo incluye los siguientes componentes: la creación de un ambiente emocional favorable durante las lecciones con los estudiantes; el uso del sistema de técnica didáctica destinado a llevar a los estudiantes a una posición reflexiva; la aplicación de tecnologías pedagógicas reflexivas en el proceso educativo de la universidad, promoviendo el desarrollo de la reflexión pedagógica entre los futuros docentes y mejorando la calidad de su educación. El artículo también describe los resultados del trabajo experimental, que confirmó la efectividad del complejo desarrollado de condiciones que garantizan el desarrollo de la reflexión entre los estudiantes de profesiones pedagógicas.

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Resumo

Este artigo é dedicado ao desenvolvimento da reflexão pedagógica entre estudantes de profissões relacionadas ao ensino. Baseado nos trabalhos de S.Yu. Stepanov, I.N. Semenov, A.A. Bodalev, Yu.M. Orlov, N.I. Gutkin e outros pesquisadores russos. Os autores do artigo esclareceram os tipos de reflexão pedagógica, as habilidades correspondentes e os tipos relacionados de tarefas de aprendizagem que podem ser usadas na formação de futuros professores. O artigo também apresenta o complexo de autores de condições pedagógicas que garantem o desenvolvimento da reflexão pedagógica entre os alunos. O complexo inclui os seguintes componentes: a criação de um ambiente emocional favorável durante as aulas com os alunos; o uso do sistema de técnica didática projetado para levar os alunos a uma posição reflexiva; a aplicação de tecnologias pedagógicas reflexivas no processo educativo da universidade, promovendo o desenvolvimento da reflexão pedagógica entre futuros professores e melhorando a qualidade de sua formação. O artigo também descreve os resultados do trabalho experimental, que confirmou a eficácia do complexo desenvolvido de condições que garantem o desenvolvimento da reflexão entre os estudantes de profissões pedagógicas.

Palavras-chave: reflexão, reflexão pedagógica, estudantes de profissões pedagógicas, autodesenvolvimento, tecnologias pedagógicas reflexivas.

Introduction

-Introduction to the problem. Currently, in order to be successful in the professional field, a teacher, in addition to a certain amount of knowledge and skills, must master the ability of his activity independent planning, analysis and control, set new learning tasks for themselves and solve them, to be interested in self-development and be capable of it. The development of pedagogical reflection among future teachers is the basis for modern personality important quality improvement: an active life position, self-analysis, the respect for another person, independence, enterprise and competitiveness in the labor market.

- Problem relevance. The urgency of pedagogical reflection development problem among the students of pedagogical professions is determined by the following factors:

• the modernization of higher education due to the changing paradigm of higher education development and the need to improve the quality of education;
• the increase of psychological and pedagogical training role among future teachers due to the changes of the requirements for their professional qualities, which allow to ensure the competitiveness in labor market and, accordingly, the effectiveness of future professional activity;
• the need to develop the skills of independent planning, analysis and control of their professional activities among the students of pedagogical professions, that is, to exercise pedagogical reflection.

-Problem study. Reflection (from the Latin reflexio - turning back) is the self-knowledge of internal mental acts and states by a subject. Let's note that the concept of reflection appeared in philosophy and initially meant the process of individual thinking about the happening events in his own mind. The concept of "reflection", implying the process (and experience) under which the accumulation and the generation of new ideas occurs, was used for the first time by the English philosopher J. Locke. G. Hegel divided the reflection on the subjective (connected with self-consciousness) and objective (connected with practical activity). In the 20th century, M.K. Mamardashvili, G.P.

Schedrovitsky, A.P. Ogurtsov and other Russian and foreign researchers tried to carry out the philosophical study of reflection concept in the context of consciousness and activity problem (Mamardashvili, 1996; Schedrovitsky, 1982; Ogurtsov, 1988).

In the psychological-pedagogical literature, reflection is viewed from different aspects: as a professionally important teacher quality (V.I. Zagvyazinsky and others); as the component of teacher training (I.I. Ilyasov and others); as the component of pedagogical creativity (V.A. Kan-Kalik, I.Ya. Lerner, N.D. Nikandrov, etc.) (Zagvyazinsky, 1987; Ilyasov & Bergman, 1964; Kan-Kalik, 1987; Lerner, 1981; Nikandrov, 1995).

The analysis of the current situation characteristics in the education system allowed the authors to conclude that it is necessary to develop the reflection among the students of pedagogical professions. The study of scientific literature showed that in recent decades, the ideas for the development of pedagogical reflection have been developed in the theory and practice of education in Russia (Clark; 1997; Korthagen & Kessels, 1999; Hatton & Smith, 1995). However, nowadays, reflection as a pedagogical category has not been studied deeply enough and its constructive nature has not been disclosed fully in the activities of a future teacher within the constantly changing educational situation. This circumstance determined the choice of the article topic.

- Hypothesis. The development of pedagogical reflection among the students of pedagogical professions will be successful with the implementation of the following set of pedagogical conditions:

1. The creation of a favorable emotional atmosphere in a classroom with students;
2. The use of didactic technique system aimed at student bringing into a reflexive position;
3. The use of reflective pedagogical technologies in the educational process of the university, contributing to the development of pedagogical reflection among future teachers and the improvement of their education quality.

Methods

The development of pedagogical reflection idea among the students of pedagogical professions was built by the authors on the principles of consistency, activity, humanization, individualization, feedback, reflexive activity and problematics. The work is based on the following methods: theoretical (analysis, synthesis, systematization, synthesis, modeling) and empirical (conversation, observation, quantitative and qualitative analysis of research results, testing).

Main part

Based on the fact that the presence of reflection, first of all, allows a person to plan, regulate and control their thinking consciously; secondly, it allows to evaluate the consistency and the correctness of thoughts; thirdly, it improves the results of practical problem solutions, the second article concludes about the reflective nature of pedagogical activity.

Based on the works by S.YU. Stepanov, M.V. Klarin, I.S. Ladenko, and other Russian researchers, the authors of the article specified the types of pedagogical reflection, their corresponding skills and the types of learning tasks associated with them that can be used in the training of future teachers (Stepanov et al, 1991; Klarin, 1994; Ladenko, 1989).

Personal reflection is associated with self-awareness and self-determination of student personality studying pedagogical professions. It explores the subject's own actions, the images of one's own I as an individual and associated with self-knowledge. This kind of reflection is associated with such skills as the ability to analyze their actions; to determine the reasons of their behavior; to analyze the errors and their causes; the ability to perceive their abilities and personal abilities adequately; the ability to predict possible options for their own development. The goal of personal reflection development among future teachers should be the work for the correction of their professional personal concept, the rethinking of personal stereotypes and the negative attitudes in pedagogical activity and the development of personality as a whole.

Intellectual reflection, the basis of which is the control, evaluative and critical consideration by students of their mental action features aimed at finding the solutions to teaching and educational problems. This kind of reflection is based on the following skills: the ability to assess one's own position, the ability to predict the consequences of decisions, the ability to assess the correctness of the chosen action plan. The development of intellectual reflection among the students of

pedagogical professions can be characterized by the following criteria: the level of future teacher skills concerning the methods of the studied educational material processing, the understanding of its presentation logic, the understanding of information systematizing methods, and most importantly, the skills to find the most effective and rational ways of pedagogical task solution.

Communicative reflection, based on the analysis of interpersonal relationships that develop between all the participants of the educational process and at school and university. It acts as the most important component of communication and interpersonal perception, which is characterized as a specific quality of human knowledge by a man. Based on the analysis of actions, behavior, emotions and reactions among education subjects, the communicative reflection is associated with the ability to "take the place of another person", the understanding of another person action reasons in the process of interaction, the analysis of experienced situations and the consideration of other people actions in their behavioral strategies. The development of future teacher communicative reflection should be associated with the development of their pedagogical communication skills and pedagogical artistry. This is facilitated by the introduction of group discussions, role-playing games, the analysis of moral choice situations, and communication skill training into the educational process.

Cooperative reflection is based on student skills concerning the ways of interaction organization with the educational process subjects. It is expressed in the following skills: the ability to navigate in the current professional situation, the ability to take responsibility for the situations happening in a team, the ability to carry out a step-by-step organization of activities, the ability to relate the results with goals. It is advisable to include the group cohesion tasks, the implementation of collective projects with subsequent group and individual analysis and other forms of joint activity in the educational process for the development of cooperative reflection of future teachers.

Within the framework of the problem under study, we developed a set of pedagogical conditions that ensure the development of pedagogical reflection among the students of pedagogical professions.

The implementation of the first determined pedagogical condition (the creation of a favorable emotional atmosphere during the lessons with students) requires active actions by the teacher. He needs to organize the educational process in such a way that it contributes to student motivation increase during teaching activity mastering and creates the situations of success during the mastering of the material under study and in interpersonal communication. Positive motivation contributes to the creation of a dialogical environment in a classroom, implies the mutual respect between a teacher and a student and a high level of communication. In such an environment, the self-esteem of a future teacher increases, there is the desire to self-development, the fear of a possible error disappears. Emotional comfort in the educational environment contributes to the self-actualization of students, orients them towards the success in their goal achievement, not only in the process of knowledge obtaining, but also in the communication with peers, teachers, and future students. The basis for a favorable emotional atmosphere creation in a classroom with students can be the following types of academic work: the involvement of all students in the educational activities; the creation of non-standard situations during the training session; the demonstration of each student achievements during each practical lesson; the provision of an opportunity to prove himself for every future teacher; the differentiation of homework, making it creative.

The second pedagogical condition, which promotes the development of pedagogical reflection among the students of pedagogical professions, involves the use of didactic technique system aimed at bringing the students into a reflexive position. Relying on their own long-term experience with the students of pedagogical professions, the authors determined the most effective didactic techniques, the use of which in training sessions contributes to the development of student pedagogical reflection. These include:

• "Reflection Questionnaire", consisting of the questions developed by the teacher and forcing students to think about necessary questions, for example: "What do I know?", "What can I do?", "What are my difficulties?". This technique can help future teachers to cognize themselves as the subjects of learning

activities. You can conduct such a questionnaire as you study the thematic chapters and at the end of the academic discipline study. Questioning gives the teacher the opportunity to have real and detailed feedback with each student, and a student has the opportunity to reflect on himself and on his activity.

• "Reflective map", which is the variant of graphic reflection. The students are invited to draw a graph of their own interest changes (the level of knowledge, personal activity, self-development). The reflection by reflexive maps provides a lot of material for a teacher to analyze and adjust the educational process for future teacher training.

• "Self-diagnosis sheet on the topic of employment." At the beginning, students learn about the content of the self-diagnosis sheet (for example, an individual success tree), and then use conventional symbols to show the level of access or learning of a particular piece of topic. Thus, a teacher and students receive information for corrections in subsequent classes.

• "Complete the phrase." A teacher utters the unfinished phrase and indicates the participant to whom he offers to complete it. For example: "The topic made me think about ...", "During the lesson I particularly liked ...", "During the discussion I learned ...", etc.

• "Keyword". Students are asked to write one word with which they associate the content of the past lesson, after which a brief analysis is performed concerning the results obtained by a teacher or students.

• Resume, essay, mini-essay. Future teachers are invited to write small texts on the following topics: "My evaluation of seminar results ", "What did the participation in the project give me?", "My thoughts about my work in this discipline module", etc.

• "Table" method - the compilation of the summary table after new information reading. The table includes the following columns: "Studied concept", "Knew before", "Learned at the lesson", "I want to know".

• The observation sheet in the course of group work that helps students to record conclusions about their activity effectiveness. For example, to name three points that they did well in the

process of the lesson, or to suggest one action that will improve their work at the next seminar.

The third pedagogical condition that promotes the development of pedagogical reflection among the students of pedagogical professions is associated with the use of reflective pedagogical technologies in the educational process of the university. The educational technologies built by reflexive mechanisms of interaction in the "teacher-student" system help the students to master the methods of conscious analysis, design and problem solution, and develop an adequate self-assessment of their own actions. These technologies, based on such mechanisms of thinking as awareness, self-criticism and self-assessment, form the intellectual skills of future teachers and enhance reflexive mechanisms in their educational activities. The work performed by the authors on the study of reflective pedagogical technology effectiveness in the professional training of future teachers showed that the use of such technologies as:

• Project technology, which implies the shift in priorities from the assimilation of ready-made knowledge to an active independent, cognitive activity of each student. The project technology is focused on the independent activities of students - individual, pair or group, which students perform during a certain period of time. This technology involves the solution of a creative research task with a previously unknown result, aimed at the obtaining of a specific result by students related to professional - pedagogical activity.

• Case - technology, the advantage of which is the ability to combine the theory and the practice of future teacher training optimally. Since research cases are the model for obtaining new knowledge about a pedagogical situation and possible ways of behavior in it, case technology allows to develop creative skills to work with various sources of information and develops the skills related to independence and self-analysis.

• Portfolio technology related to the collection and the analysis of information about the learning process and the results of student learning activities. It is the organizer of his learning activities for a future teacher, it is the means of feedback and the tool of activity assessment for a teacher. There are several types of portfolio: the portfolio of achievements, the report portfolio and self-assessment portfolio, which is of the greatest interest for our work. It includes

the self-assessment of students' achievements and their relationship to future professional activities; the results of psychological tests that help in self-determination; creative works, abstracts and projects; and all that a student wants to put himself, believing that this reflects his personality.

• The technology of learning based on personal experience, which allows to turn to the life experience of future teachers, which is reflected on different positions. It is the result of experience reflexion that becomes the basis for logical conclusions presented in different forms (diagrams, tables, reasoning, conclusions, etc.). The theoretical filling with new information leads to a new experience, which is comprehended, becoming a new expanded personal experience, leading to further reflection and, thus, to self-development.

• Contextual learning technology that provides for the transition, the transformation of cognitive activity into a professional one with a corresponding change of needs and motives, goals, actions, means, objects and results. Contextual learning gives integrity, systemic organization and personal meaning to assimilated pedagogical knowledge. A teacher in contextual education does not teach and educate so much, but he rather actualizes, stimulates students for development, creates the conditions for their self-analysis and self-development. The training session, built in the contextual technology mode, allows students to carry out reflexive interaction both at the stage of joint goal setting and in joint activity at the understanding stage. And to assess their own activities and the activities of other students at the stage of reflection.

The effectiveness of pedagogical condition developed complex ensuring the development of pedagogical reflection among the students of pedagogical professions was confirmed as the result of experimental work carried out during 2014-2018.

Conclusions

In the process of the experimental work, we obtained the following results:

1. Systematized domestic and foreign experience in the development of pedagogical reflection among the students of pedagogical professions.

2. They clarified the specificity of pedagogical reflection development among future teachers, its types, their respective skills and the types of learning tasks associated with them, which can be used for the training of future teachers.

3. The author complex of pedagogical conditions that ensured the development of pedagogical reflection among the students of pedagogical professions was tested and introduced into the educational process. The testing of the stated complex of pedagogical conditions took the form of a developing experiment, in which 120 full-time students of pedagogical professions took part, divided into control and experimental groups. The study used the following methods: the methods which determine the level of reflection development (Karpov, 2004), the methods studying the motivation of learning at high school (Polyakova & Lushkina, 2011), the methods of studying the professional activity motivation (Sarantsev, 2016), as well as the author questionnaires and questionnaires. In the course of the experimental work, the results were obtained that showed that the level of pedagogical reflection development was increased among the future teachers from the experimental group. Thus, prior to the experimental work, a low level of pedagogical reflection was diagnosed among 26% of students; and among 12% of students after it. The number of students with a high level of pedagogical reflection development has increased from 9% to 31%. In the control group, the level of student pedagogical reflection development did not change almost.

4. The results of pedagogical condition developed complex use for the development of pedagogical reflection among future teachers were monitored during the passage of teaching practice at school. The

study showed that the students with whom the work was performed on the development of pedagogical reflection made less mistakes during the development of subject-subject relationships with pupils, made better contact with the class and analyzed the results of the work more effectively.

All of the mentioned above leads to the following conclusion: the development of pedagogical reflection among the students of pedagogical professions will be effective during the implementation of the following set of pedagogical conditions: the creation of a favorable emotional atmosphere during the training sessions with students; the use of didactic technique system aimed at student bringing into a reflexive position; the use of reflective pedagogical technologies in the educational process of the university, contributing to the development of pedagogical reflection among future teachers and improving the quality of their education, which confirms the hypothesis put forward by the authors.

Conflict of interest

The authors confirm that the presented data does not contain a conflict of interest.

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