SOCIETY. INTEGRATION. EDUCATION
Proceedings of the International Scientific Conference. Volume I, May 28th-29th, 2021. 766-776

STRATEGY TO FORM STUDENTS POSITIVE MOTIVATION TO EDUCATIONAL AND PROJECT PROFESSIONAL ACTIVITIES

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Abstract. *The article presents the authors' strategy for the formation of positive motivation of students to educational and project professional activities, based on students' project activities structuring and management at different hierarchical levels. For each level (academic discipline, main professional educational program, faculty, university, region, country) the authors propose various forms of project implementation, the content of which meets modern school challenges, professional community requirements and contributes to the transformation of the diffuse nature of students' needs towards professional motives.*
In the course of the research, both theoretical methods (pedagogical literature analysis, modeling) and empirical methods (pedagogical experiment, questionnaire) were used.
The basis for the experimental part of the study was made by 1st year students of Pskov State University, taking the course "Pedagogical Education", studying the discipline "Introduction to Pedagogical Activity" that is built on the basis of a project-oriented program.
An important educational effect of the presented strategy implementation was the growth of motives for professional self-realization, improvement of the emotional background of students' motivation for professional activity, awareness of the subjective need for active interaction, as well as the acquisition of certain educational skills related to project activities and useful for teachers' successful work.
Keywords: *educational and professional activities, project-oriented program, students' motivation.*

Introduction

The leading function of the university today isa professional one. However, the question of the terms and technologies of introducing students to the profession remains unresolved. In the pedagogical community and in the state structures of Russia, peopleinsist more and more on the early inclusion of students in professional activities, as well as on the employment of senior students of

https://doi.org/10.17770/sie2021vol1.6237

pedagogical universities in educational institutions (Prikaz Minprosveshcheniya RF, 2020), what actualizes the need to involve a student in professional activities already in the junior courses of pedagogical educational programs. The new federal state educational standard of higher education (FSES HE) in the direction of "Teacher education" requires strengthening the practical orientation of teacher training. Thus, there has been an increase in the minimum values of the practice volume by three times: from 21 (FSES HE2015) up to 60 credit units (FSES HE 2018). At the same time, a simple quantitative increase in practice hours without an essential change in the approach to the organization of students' educational activities will not lead to an increase in the professional competence of the latter. The solution to the problem is possible in the implementation of project-oriented programs in the training of future teachers.

The article presents the authors' strategy for the organization of project-oriented education of future primary school teachers, and analyzes its effectiveness in terms of developing students' motivation for educational and project-based professional activities.

The Theoretical Background

The methodological basis of the research is the ideas of constructivist pedagogy, based on the discoveries of L.S. Vygotsky (Vygotsky, 2005), J. Bruner (Bruner, 1990) and their followers, who revealed the unproductivity of direct transfer of knowledge from the teacher to the student and determined the need to create conditions for generating the student's own experience in activity.

So, E. Glazersfeld writes about the need to operate with knowledge, about the priority of mastering not so much the concepts themselves, but the ways of dealing with them (Glasersfeld, 1995). In her work, devoted to the review of modern literature on the problems of constructivism in teaching, N. Babich notes the recognition of this approach of the process and functionality of knowledge, teaching as an active process of building knowledge, the result of students' participation "in an active community" and teaching as a process of "supporting learning" (Babich, 2013, p.27).

The project-oriented approach is an actual direction in education that develops these ideas.

Project-oriented teacher training programs are widely represented within the framework of practice-oriented approaches (Emelianova, 2020). In particular, the experience of implementing models of "real-world problem-based learning (PBL)", which uses, among other things, the work of students on group projects (Meiers, 2007), as well as "project-based learning", when students are involved in the study of real-world problems, is useful (Hmelo-Silver & Barrows, 2006).

For our research, the works that describe the types of project activities and project-oriented programs are of particular interest (Mrdulyash, 2017); as well as the works devoted to the analysis of institutional mechanisms for the implementation of project-based learning in higher education organizations (Fedoseev, A., Andryushkov, A., Belinskaya, M., Lazarev, A., & Prosekin, M., 2018), integration of project-based learning into various types of educational activities in teacher education (Ivanova & Vinogradova, 2020), the questions of readiness of students of pedagogical profiles for project-oriented training (Medvedeva, Martynyuk, Pan'kova, & Solovyova, 2020). The authors also have experience in organizing students ' project activities in a number of disciplines (Vitkovskaya, Solovyeva & Ovchinnikova, 2020; Solovyeva & Vitkovskaya, 2020).

At the same time, these studies did not pay enough attention to the structuring of students' project activities at different hierarchical levels, as well as to the issues of managing this activity by means of the academic subject.

The analysis of the literature sources allowed us to proceed from the fact that project-oriented training of students who are just starting their studies at the university involves the inclusion of students in project activities that leads to the creation of their own products. Thus, both the product created in the design process and the solution of training tasks become equivalent goals. The purpose of creating and using projects is to involve the student in a professional activity that bears all the features of an educational one, and, in essence, is an educational and professional one. The professional aspect of this activity is manifested in the fact that the student solves (theoretically or practically) professional tasks, and the form of the project requires him to implement the full life cycle (Fedoseev et al., 2018) – from the concept to the receipt and implementation of the product. The educational meaning of such training is to master the student's key academic competencies: set goals, plan, predict, find and update information, monitor and evaluate the work of your own and others, cooperate. Here the student masters the general way of solving a professional problem – the way of designing.

Methodology and Organization of the Research

To achieve the goal of the study, the authors used methods of modeling, designing educational programs, questionnaires, and qualitative and quantitative analysis of the empirical data obtained.

The modeling method allowed us to build a strategy for the implementation of a project-oriented program aimed at forming a positive motivation of students for educational and project professional activities, the system-forming (basic) element of which is the academic subject.

Let us explain our position. Subjects compulsory for students allow us to manage the process of acquiring by them training and professional competencies, which provides training time to master the common way to solve professional tasks of designing, introducing technologies that are guaranteed to achieve results, but also has a control unit that includes assessment tools that allow to diagnose and, if necessary, adjust the competence formed.

In the structure of the proposed model, the management of project activities of students is carried out (ongoing), also at the level of the basic professional educational program (BPEP), the faculty (Institute), the University level, the level of the municipality, the region, and the Russian Federation.

The integration of projects initiated in an academic subject into project activities at higher levels ensures the interconnection of individual and social learning, involving several interconnected learning systems operating in a "spiral reciprocity" (Salomon & Perkins, 1998).

At each level of the model, the forms of project implementation are defined. So, at the level of an academic subject this is the construction of academic subjects in the format of project-oriented programs that form the student's project thinking when working on the problems related to the profession, the level of OPOP involves the introduction of the type of tasks of professional activity – project, the development of appropriate competencies, the inclusion into the curriculum of special disciplines that teach project activities, practices, the implementation of course and final projects. At the faculty (institute) level, students are involved in the organization and support of scientific and professional events, in various forms of student self-government. The university level involves students in projects of special structures of the university, city and region level - in social, cultural, educational projects, contests, finally, at the level of the Russian Federation it means participating in professional contests.

The experimental work involved three stages. The preparatory stage included the development of a project-oriented program of the subject on the basis outlined above models, as well as ascertaining surveying students to identify the orientation of the motives of educational and project activities, allowing to allocate the control and experimental groups. At the main stage, a project-oriented program was implemented in an experimental group of students. At the final stage, the results were summed up, a control questionnaire was conducted in the control and experimental groups of students, and a comparative analysis of the obtained empirical data was performed.

The Results of the Empirical Research

The study was conducted at Pskov State University (PSU) in the 2019-20 academic year with the 1st-year students studying in the direction of "Teacher

Education", but at different departments: the first group – "Primary education and correctional pedagogy" – 51 students and the second group – "Technology and Economics" - 43 participants. The subject, which is the system-forming level of the hierarchical model, is the course "Introduction to Pedagogical Activity", which is taught in the 1st term of the 1st course in all pedagogical profiles. This course is orientational in nature, it is given a large place in the formation and development of professional orientation of students.

A significant role in the formation of the professional orientation of the future teacher is played by its affective component, which includes, among other things, the motivation of the student. In this regard, we were interested in the orientation of the motives of students' educational and project activities, the presence of the motives and how strong they are for professional self-realization of students. To identify the nature of motivation, both groups of students were offered a questionnaire, the results of which made it possible to determine the control and experimental groups of students. In the control group, the discipline was taught traditionally, in the experimental group – on the basis of a project-oriented program.

When developing a project-oriented program, we chose such a type of it, when there is only one design of the technologies within the educational program, along with other types of educational formats (seminars, trainings, lectures, and others) (Mrdulyash, 2017). This type was chosen based on the specifics of the subject: the very beginning of training at the university, as well as the fact that students had little experience working in projects. Thus, the results of a written survey of students of the experimental group showed that 45% of the 51 participants never participated in project activities, while the rest (55%) noted that they only sometimes took part in projects.

Planning and management of students' work at this and subsequent stages was carried out within the framework of the rating system of assessment using the technological map of the subject, in which a project module was introduced for the experimental group. At the preparatory stage, the first-year students were introduced to the technological map. A lesson was developed and conducted aimed at their theoretical preparation for participation in projects.

At the main stage of the program the students dealt with the problems of the discipline through the development of full life cycle projects related to the issues of professional activity. The first project – an individual one – was of a research nature. Each student chose one of the issues of modern education proposed by the teacher: "Teacher – who is he: a spiritual mentor or a representative of the educational services?", "Will artificial intelligence replace the teacher?" and etc. The work on this project was carried out in connection with the projects of the university level, as well as of the highest level. It was proposed to take part in the competition of student projects established by the Council of Rectors of

universities of the Northwestern Federal District called "Russia – aspiring to the future" (Konkurs studencheskih proektov "Rossiya, ustremlennaya v budushchee", 2019) by completing an essay or filming a video on one of the mentioned above issues. 12 students of the experimental group took part in the regional stage of this competition, organized by Pskov State University, presenting 3 individual and four group projects. Three projects took winning places. The project that won the first place – an essay on the topic "A modern teacher – who is he?" – took part in the district stage of the competition in St. Petersburg.

The next project was of an applied nature and was carried out by groups of students. Among them were the following events: the organization of a conference on the educators and innovators' creativity, the organization and conducting a competition for freshmen: "On the way to teaching excellence", as well as a project for organizing extracurricular activities of younger students on the topic "How to save the ecology of the Pskov region", which was developed and implemented directly at school. It should be noted that the first two projects had a meaningful connection with the third, faculty (institute) level of the model. These events were organized for all three pedagogical departments of the Institute of Education and Social Sciences of Pskov State University. Project-based learning for the pilot group was that each of these activities was designed and delivered as a project by the groups of freshmen. In addition to the developers, all students of the academic group were involved in the implementation of projects as team members or supporters (with each micro-group preparing its own project), or as developers of interactive information on the work of one or another famous teacher.

The connection of the projects within the described discipline with the content of the second level of the model – at the level of the main professional educational program – was in solving a number of issues of professional activity of the project type, prescribed in the main professional educational program: the organization of project and research (including scientific research) students' activities related to learning problems, education and development of junior schoolchildren, as well as designing their own educational route and professional career, which was expressed in the preparation by the students their individual projects, so called "Programs of professional self-development".

From the point of view of achieving the objectives of our research we should highlight an important feature of student projects which is openness and integration into different social groups. Here we support the idea of student involvement in the professional community (Fedoseev et al., 2018), complementing it with involvement in student communities, as well as in possible social projects. In this regard, as it has already been mentioned above, one of the additional tasks of the project module in the technological map of the discipline

was the participation of students in the implementation of projects at their choice: at the university level, as well as the city level, region and country levels. Modern reality offers the student many opportunities to participate in projects. So, at Pskov State University there is a whole set of activities at the department of educational projects and initiatives, as well as the department for youth policy, including the youth project office. Among them we can point out the open discussion platform "TOK'ing", where hot issues of the Pskov region are discussed, and the interuniversity festival of artistic creativity called "University of Stars". At the city and regional level, social projects are extremely important, first of all, those related to the current volunteer activities: food delivery to the elderly, work in call centers. Participation in these programs has an invaluable educational impact on young people, preparing future teachers for educational work with children.

Since such projects relate to extracurricular activities, they could not be hardcoded. At the same time, students were encouraged to seek out and participate in such activities, which developed their learning skills and formed professional competencies. So, all 1st year students of the experimental group took part in the qualifying round of the All-Russian Olympiad for students "I am a professional" (Vserossijskaya olimpiada studentov "YA – professional", 2020), one student in 2020 passed to the regional stage of the Olympiad and took part in it. To prepare for the competition when developing a lesson project, she had to establish contacts with the school where she studied: with pupils and teachers, and at the same time, she initiated interaction with university teachers who facilitated her participation. Thus, a full-fledged project-oriented learning was implemented.

The final stage of the research involved students' presentation of completed projects and their analysis, as well as reflection and identification of the attitude of students of the experimental and control groups to project-oriented learning through questionnaires. Let us recall that the questionnaire was conducted in both groups, also, before the experimental training.

We used a modified version of the methodology for diagnosing the orientation of educational motivation by T.D. Dubovitskaya (Dubovitskaya, 2002). The judgments presented in the stimulus material of the methodology were reformulated in such a way that they dealt with project activities. Students were offered 20 statements about which they needed to express their consent or disagreement. Half of the statements reflected positive motives, which included internal cognitive motives, as well as external positive ones: motives of personal and professional development, cooperation, emotional attractiveness. Traditionally, negative motives were attributed to external avoidance motives, implying the performance of work due to obedience to the requirements of the teacher, the need to follow the curriculum, have a positive assessment, and avoid trouble. One of the indicators characterizing the motive of social success ("I don't

want to be worse than others"), in the framework of this study, we referred to as neutral. The calculation of indicators in points was carried out in accordance with the key: the match with the key was assessed by 1 point, the non-match – 0 points (Dubovitskaya, 2002).

The results obtained were divided into groups reflecting the following levels which we had adjusted:

0-5 – low level: negative avoidance motives prevail;

6-10 – below average level: both negative avoidance motives and neutral motives of social success are presented; there are some positive motives, which in the statements of the respondents are less than 50%;

11-14 – average level: mostly positive motivation, including – personal and professional development, cognitive motives; negative motives are less represented (less than 50%);

15-20 – high level: significant predominance of cognitive motives, motives of personal and professional development; there are individual statements of respondents characterizing neutral and negative motives, accounting for less than 25%.

The results of the survey are shown in Figure 1.

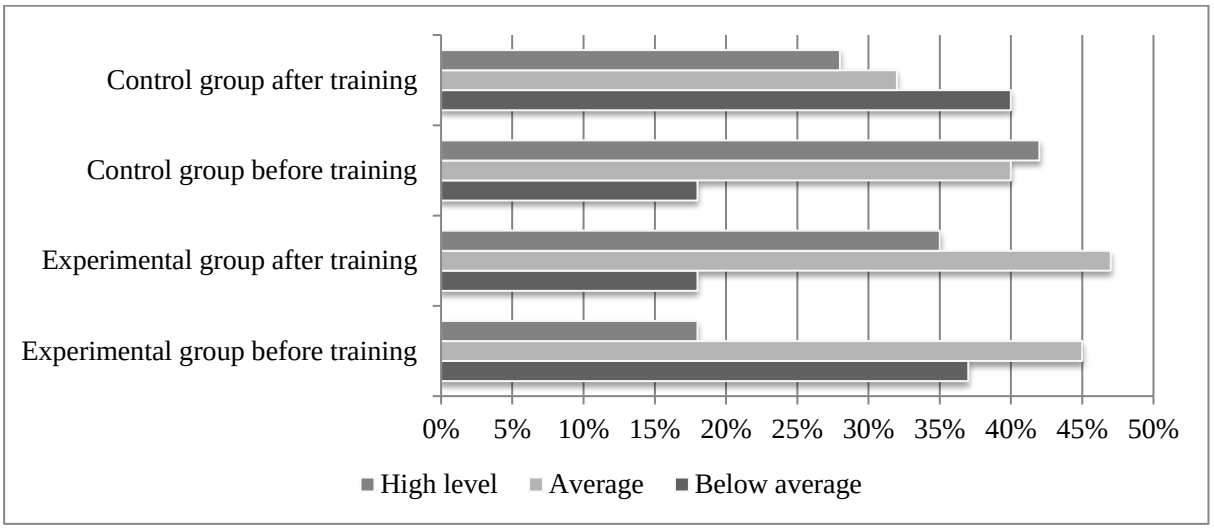

Figure 1 ***Development Levels of Positive Motivation of Educational and Project Activity of Experimental and Control Groups Students***

Both groups were interviewed before and after completing the course of "Introduction to Pedagogical Activity". The decrease in the results of the control group (the high level of positive motivation decreased from 42 to 28%, and the level "below average" increased by 22% – from 18 to 40%) can be explained by the nature of the questions, the content of which related to project activities that were absent in teaching students of this groups.

In the development of the motivation of students in the experimental group, there is a significant positive dynamics: the high level increased from 18 to 35%, the average level slightly increased – from 45 to 47%, and the level "below average" dropped significantly – from 37 to 18%.

Structural analysis of the motivation of students in the experimental group is presented in Figure 2.

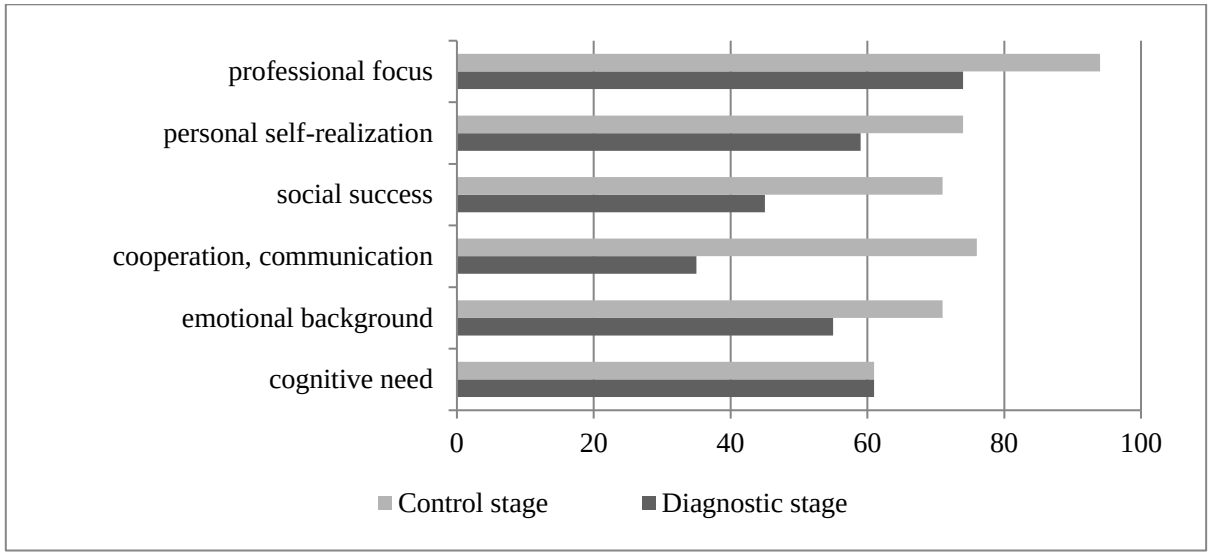

Figure 2 ***Orientation of Motivation of Educational and Project Activities of the Experimental Group Students***

As can be seen in the figure, only internal cognitive motives did not have dynamics, which is explained, in part, by the high level of their development at the ascertaining stage of the experiment (for 61% of the respondents). As for the remaining groups of students' positive motives in relation to educational and project activities, there is a significant increase: from 15% in the group of motives for personal self-realization to 41% in the motivation for cooperation. Particularly important for our study are high rates of motives for professional self-realization, which increased by 20 percent: from 74 to 94%, which directly confirms the effectiveness of the proposed strategy of project-oriented student learning in their professional development. We believe that since all projects carried out by students, in their topics and content, reflected the professional activity of a teacher, all other indicators of motivation also indirectly characterize the attitude of students to their future profession.

Conclusions

Thus, the study showed that the developed strategy for teaching students on the basis of a project-oriented program, based on the structuring and management of students' project activities at different hierarchical levels at the basic level of the academic discipline, allows to successfully form positive motivation of students for educational and project activities. It should be noted that in the structure of this motivation, a significant place is occupied by motives of professional self-realization, which allows us to conclude that the strategy has a positive influence on the professional development of future teachers. We also emphasize the indirect positive influence on the attitude to the future profession and motives of a different orientation (cooperation, emotional attractiveness, personal self-realization).

This model may be relevant for the implementation in other disciplines of the general professional module on pedagogical educational programs in order to form professional, primarily, project competencies in future teachers. The described strategy can be successful in a situation where there are no specially allocated credit units for project activities in the curriculum, or, if there are any, as a means of practical implementation of the design skills formed in special disciplines in relation to the educational and professional activities of a student – a future teacher.

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