

Preparation of Students for Professional Careers During the Study of Special Courses

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Abstract: In this article the problem of preparing students for professional careers during the study of special courses is studied. A model of readiness of students for professional careers during the study of special courses (the techniques of subject teaching, health-technologies in the educational process, the theory and methods of educational work) is developed. Pedagogical conditions of functioning of a model of readiness of students for professional careers during the study of special courses are defined: pedagogical control over formation of readiness of students for professional careers during the study of special courses; solution of creative problems during the study of special courses; the indicators of readiness of students for professional careers during the study of special courses are developed. Conclusions and recommendations are justified.

Key words: Readiness of students • Model of readiness of students for professional careers during the study of special courses

INTRODUCTION

In the course of studying the problem of readiness of students for professional careers during the study of special courses we relied on the results of the study presented in «Preparation of students of higher education institution for professional activity in the course of studying of pedagogical disciplines» [1]. This modified article comprises the novelty of our study which is consideration of the problem of preparation of students for professional careers during the study of special courses. In the conditions of improvement of technologies of training and globalization of education new demands to preparation of teachers are made. Along with professional knowledge and skills employers today appreciate new abilities: leader qualities, ability to work in a team, a creative approach to the solution of educational tasks, ability to study and adapt to changes, responsibility for the executed work [2]. Mechanisms of integration of education with fundamental science and production, in which science and technology are put on the first place, become more perspective in respect of increase of efficiency of pedagogical education and preparation of students is based on their inclusion in researches, designing and educational-technological

developments what will help to develop their needs for professional literacy and career skills. These conditions stimulate their aim at professional activity [3].

In a higher education institution special courses are studied during the first - second year. Special courses give fundamental knowledge discovering the whole set of regularities of the nature and also the mechanism of the relation of thinking to life, a subject to an object. At present time there is a need of expansion of the role of special courses in respect of formation of readiness of students to professional activity. The success of integration of fundamental and professional training defines understanding of the essence of readiness for professional activity.

The analysis of the works of modern researchers of professional education showed that there is no uniform approach to understanding of the term «readiness for professional activity». According to V.I. Zemtsova, V.V. Laptev and other researchers [4-7] the concept "readiness" is identified with the term "competence". Competence being characterized as existence in a personality of profound knowledge, formed abilities, experience of activity, ability to make reasonable decisions in various life experiences at the same time is an indicator of readiness for carrying out a wide set of

actions and operations and as a whole for professional activity. Thus we understand existence of fundamental knowledge of special courses and other methodological disciplines as readiness of students of pedagogical higher education institution for professional activity, an ability to use this knowledge in designing activity for the solution of problems of the applied character considering specifics of the specialty and existence of motivation for the solution of professional tasks and ability to work in a team.

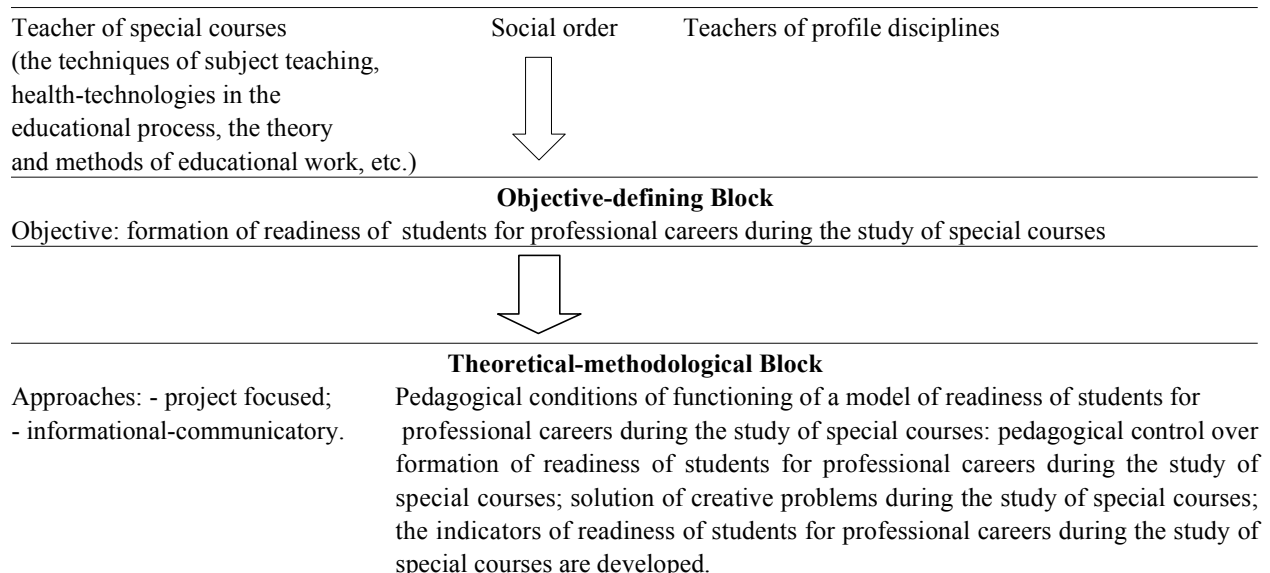
Research objective. For solution of the problem of formation of readiness of students of pedagogical higher education institution for professional activity when studying methodological disciplines it is necessary to develop a model and to formulate pedagogical conditions providing its functioning. Within our research in organizational-procedural aspect we attach great value to this problem.

MATERIALS AND METHODS

For the solution of the set objectives and verification of initial assumptions the following research methods were used: theoretical - analysis of the studied problem in scientific literature, empirical - observation, conversations, questioning, discussions, interviewing, analysis of the best pedagogical practices, analysis of creative works of students, studying of high school documentation (state standards of education, curricula, standard programs, educational-methodical complexes of special courses) experiments, modeling.

Main Part: In the traditional system of education subject informative training dominates over methodological training of special courses, elemental over qualitative interrelation with profile disciplines [8]. Practically students are not taught (and further they can't) consciously use the potential of methodological disciplines for the complete solution of professional tasks. The lack of traditional approach to the study of special courses is connected with an inefficiency of management of informative activity of students. On the basis of the carried-out analysis an unconventional author's variant of formation of readiness of students of pedagogical higher education institution for professional activity when studying special courses is presented which model is offered in Pic. 1.

In this case a student will be prepared for future professional activity if he masters designing technologies on application of fundamental knowledge in solution of pedagogical tasks on a profile of future professional activity. The main shortcomings of traditional training connected with an inefficiency of management of informative activity of students [9] should be for this purpose eliminated. It is transition from orientation on the average trainee to the specific student by creation of training space which supports and encourages students to professional training [10] by receiving of information on the extent of mastering of a material by the teacher directly in the course of class-room lessons and independent work and creation of a technology of pedagogical support of trainees in the course of their active informative involvement. Elimination of





Organizational-Active Block

Stages: preparatory (interactive entrance testing, selection of the material of professional orientation), forming (transfer of educational activity of the solution of pedagogical tasks to individual designing activity, development of detailed designs, formation of groups, teaching of the elements of implementation of professional projects), final (submission of complex projects and their assessment)



Evaluating Block

Assessment of the degree of readiness of students for professional activity on the following indicators:

- The level of the working knowledge of theoretical material;
 - The level of formation of professionally focused designing abilities: an ability to analyze problematic pedagogical situations, an ability to receive new information for the solution of the set tasks, an ability to choose means and methods of the solution of pedagogical tasks, an ability to work in a team;- the level of motivation for professional activity
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Pic. 1: The model of formation of readiness of students of pedagogical higher education institution for professional activity (by Sakenov D.Zh., Kushnir Y.V.)

shortcomings will be more effective when using interactive methods of training in which the complex of means of pedagogical influence is used.

For an effective functioning of the model of formation of readiness of students for future professional activity the following pedagogical conditions were defined: implementation of a multilevel monitoring of formation of readiness of students of pedagogical higher education institution for professional activity during the study of special courses by means of information and communication technologies; inclusion of the elements of professional activity in the process of formation of designing tasks in the course of studying of pedagogical disciplines; ensuring participation of the teacher of special courses and teachers of profile disciplines in designing and analytical activity of students.

For the accounting of personal features of students, for identification of dominating tendencies in behavior of students, for exploration of effective educational strategies [11] and the initial level of students' motivation for professional activity the first lesson is carried out by a psychologist. The psychologist receives all necessary psychological characteristics of students. Formation of designing groups is carried out on the basis of the results received by the psychologist.

Inclusion of elements of professional activity on the basis of application of designing technologies for the solution of tasks with professional orientation [12] in the

course of special courses occurs with the use of the project focused approach to the training of students of pedagogical higher education institution. We understand the project focused approach to the training of students as such an approach to training the basis of which is an independent designing activity of a student focused on the solution of problematic situations discovered on the basis of interrelation of fundamental and profile disciplines. For realization of this approach pedagogical tasks with professional orientation are presented to students. In the course of the analysis the ideas of the solution of pedagogical tasks through implementation of personal projects which are further reduced to one unified project are formed.

In the process of introduction of the project focused approach it is necessary to carry out: stage-by-stage teaching of designing activity for students during the study of special courses, detection of personal features of students, formation of the ability to work independently and also abilities to solve problems in a team. On the first propaedeutic stage a disclosure of the specifics of designing activity and its value for professional activity of teachers is carried out. On the second stage the training of individual designing activity is carried out. It is necessary for a teacher to give each student a chance to realize oneself during the study of special courses, to understand its fundamental mission for further mastering of the future specialty and to learn how to apply

pedagogical knowledge during further professional activity. On the third stage the training of group designing activity of students is carried out. It is necessary for a teacher to teach students how to work in a team and approach the solution of professional tasks creatively.

Transition to an independent project focused activity of students should be carried out in a system «student - teacher, teachers of the professional discipline» as this coordination of organization of activity of students by teachers of special courses and profile disciplines promotes identification of all most topical issues which will be further a component of professional activity of the expert.

Let's Allocate the Following Indicators of Readiness of Students for Future Professional Activity:

- The level of knowledge of theoretical material;
- The level of formation of professionally focused designing abilities;
- The level of motivation for professional activity.

On special chairs it is necessary to form certain abilities of students in the field of corresponding pedagogical knowledge for further application in professional activity. Integration of professional and fundamental knowledge is carried out on the basis of selection of the contents of pedagogical material of special courses for presentation of the tasks focused on professional activity. Selection of the material is carried out according to the following requirements: compliance to the state educational standard; compliance to the level of the training standard of students; concrete connection with the issues of future professional activity.

An important stage during the study of special courses is presentation of pedagogical tasks to students considering the specifics of future professional activity of students. The tasks are split into elementary components which mastering is checked in a class-room with feedback and then problematic situations which are caused by insufficient connection of special courses with problematic tasks of future professional activity of students come to light. Formation of an idea of the solution of pedagogical tasks through the complex project is carried out. Originally students carry out private projects and then reduce them to one unified project. Development, representation, assessment of projects occur with direct participation of both the teacher of special courses and teachers of profile disciplines.

Work on projects raises the level of knowledge of theoretical material. A report of students in the form of presentation, the program for calculation, calculations, animation demonstrations define the level of development of professionally focused designing abilities and create a motivation basis of future professional activity.

Motivation of students for professional activity is estimated by the purposes which are put by students of pedagogical higher education institution, the ways they choose for their achievement and their aspirations.

Level I (low) is characterized by small positive motives for future professional activity. Generally these are personal motives or the motives of avoiding of inconveniences and discomfort. Informative interests are amorphous and situational.

Level II (average) - interest in future professional activity becomes apparent. All positive motives are connected only with the productive part and are focused on success and achievement of the result. The doctrine represents itself as a means of achievement of the purpose.

Level III (high) is characterized by formation of all components, accurate motivation and steady orientation of informative motives.

Data on the level of formation of motivation for professional activity and the coefficient of the level of formation (CLF) are presented in the Table 1.

The results of examinations on all studied sections of special courses were used for an assessment of the level of knowledge of theoretical material. The results of examinations in control and experimental groups are presented in the Table 2. the techniques of subject teaching, health-technologies in the educational process, the theory and methods of educational work

The level of mastering of theoretical material is estimated by means of the criterion χ^2 . According to the table of critical values for the level of reliability $P = 0,05$ (with an error of 5%) and the degree of freedom $m = C - 1 = 3$ the critical value of criterion δ_1 is 7,81. The results of calculation of the criterion χ^2 are presented in the Table 3.

Between the results of mastering of theoretical material there are statistically significant differences in the studied groups.

The level of formation of professionally focused designing abilities was estimated with consideration of the ability to analyze problematic pedagogical situations (1), to receive new information for the solution of the set tasks (2), to choose means and methods of the solution of pedagogical tasks (3), to work in a team (4). Summary data

Table 1: Level of formation of motivation for professional activity

| Academic year | Number of students | Levels of formation of motivation | | | CLF, % |
|---------------|--------------------|-----------------------------------|---------|------|--------|
| | | Low | Average | High | |
| 2010-2011 | CG 55 | 13 | 37 | 5 | 61 |
| | EG 52 | 3 | 28 | 21 | 76 |
| 2011-2012 | CG 53 | 10 | 39 | 4 | 62 |
| | EG 57 | 5 | 29 | 23 | 76 |
| 2012-2013 | CG 58 | 19 | 31 | 8 | 60 |
| | EG 59 | 2 | 32 | 25 | 77 |

Table 2: Results of examinations in control and experimental groups

| Academic year | Number of students | The techniques of subject teaching | | | | Health-technologies in the educational process | | | | The theory and methods of educational work | | | |
|---------------|--------------------|------------------------------------|----|----|----|--|----|----|----|--|----|----|----|
| | | 2 | 3 | 4 | 5 | 2 | 3 | 4 | 5 | 2 | 3 | 4 | 5 |
| 2010-2011 | CG 55 | 7 | 34 | 9 | 5 | 9 | 34 | 10 | 2 | 8 | 32 | 11 | 4 |
| | EG 52 | 5 | 16 | 18 | 13 | 4 | 13 | 21 | 14 | 4 | 9 | 25 | 14 |
| 2011-2012 | CG 53 | 8 | 31 | 11 | 3 | 6 | 30 | 12 | 5 | 9 | 32 | 9 | 3 |
| | EG 57 | 5 | 15 | 22 | 15 | 5 | 17 | 23 | 12 | 7 | 18 | 22 | 10 |
| 2012-2013 | CG 58 | 9 | 32 | 12 | 5 | 10 | 33 | 10 | 4 | 9 | 35 | 11 | 3 |
| | EG 59 | 6 | 17 | 22 | 14 | 6 | 13 | 27 | 13 | 6 | 21 | 19 | 13 |

Table 3: Results of calculation of the criterion X²

| Academic year | The techniques of subject teaching | Health-technologies in the educational process | The theory and methods of educational work |
|---------------|------------------------------------|--|--|
| 2010-2011 | 10, 32 | 10, 50 | 10, 62 |
| 2011-2012 | 10, 36 | 10, 53 | 10, 62 |
| 2012-2013 | 10, 38 | 10, 56 | 10, 64 |

Table 4: Summary data on the levels of formation of professionally focused designing abilities

| Academic year | Level of formation | Groups | Professionally focused designing abilities | | | | | | | |
|---------------|--------------------|--------|--|-------|--------|-------|--------|-------|--------|-------|
| | | | 1 | | 2 | | 3 | | 4 | |
| | | | Before | After | Before | After | Before | After | Before | After |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2010-2011 | Low | cg | 15 | 10 | 19 | 15 | 16 | 9 | 26 | 18 |
| | | eg | 15 | 5 | 17 | 3 | 16 | 4 | 27 | 8 |
| | Average | cg | 29 | 31 | 26 | 29 | 31 | 36 | 25 | 29 |
| | | eg | 27 | 32 | 29 | 36 | 29 | 35 | 22 | 27 |
| | High | cg | 11 | 13 | 10 | 11 | 8 | 10 | 4 | 8 |
| | | eg | 10 | 16 | 6 | 13 | 7 | 13 | 3 | 17 |
| CLF, % | cg | 62 | 67 | 61 | 62 | 60 | 65 | 54 | 61 | |
| | eg | 63 | 73 | 60 | 73 | 59 | 72 | 52 | 71 | |
| 2011-2012 | Low | cg | 19 | 22 | 13 | 10 | 17 | 14 | 25 | 13 |
| | | eg | 21 | 11 | 13 | 6 | 18 | 7 | 23 | 5 |
| | Average | cg | 26 | 28 | 32 | 32 | 31 | 28 | 24 | 31 |
| | | eg | 29 | 28 | 35 | 35 | 32 | 31 | 31 | 30 |
| | High | cg | 8 | 15 | 8 | 11 | 5 | 11 | 4 | 9 |
| | | eg | 7 | 18 | 9 | 16 | 7 | 19 | 3 | 22 |
| CLF, % | cg | 61 | 63 | 62 | 66 | 58 | 63 | 53 | 63 | |
| | eg | 60 | 70 | 63 | 71 | 61 | 72 | 54 | 75 | |
| 2012-2013 | Low | cg | 25 | 17 | 16 | 9 | 31 | 24 | 35 | 18 |
| | | eg | 23 | 12 | 18 | 8 | 28 | 11 | 37 | 7 |
| | Average | cg | 22 | 23 | 34 | 39 | 17 | 16 | 19 | 23 |
| | | eg | 29 | 22 | 32 | 22 | 17 | 20 | 19 | 21 |
| | High | cg | 11 | 18 | 8 | 10 | 10 | 18 | 4 | 17 |
| | | eg | 7 | 27 | 10 | 29 | 14 | 28 | 3 | 31 |
| CLF, % | cg | 57 | 66 | 62 | 66 | 54 | 62 | 48 | 61 | |
| | eg | 59 | 77 | 63 | 81 | 59 | 77 | 47 | 81 | |

on the levels of formation of professionally focused designing abilities and the coefficient of the level of formation are presented in the Table 4.

Conclusions and Recommendations: An analysis of the results shows an increase of the level of knowledge of theoretical material of special courses, the growth of the level of formation of professional-oriented designing skills during the study of special courses, the level of motivation for professional work when this scheme of special courses is used.

This confirms the necessity and possibility of solution of the problems of formation of readiness of pedagogical institute students for professional work during the study of special courses from the perspective of transition from subject to professional training on condition of transition of the educational process of a special course to designing activity.

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