

THE DEVELOPMENT OF SELF-MANAGEMENT SKILLS AS THE FACTOR OF THE IMPROVEMENT OF THE READINESS FOR PROFESSIONAL FLEXIBILITY

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Abstract: *The article presents the results of the experiment in the development of self-management skills among college students. The development of self-management skills in this case is seen to be the factor of the improvement of the readiness for professional flexibility among college students. The moderation technique was suggested as the condition of the effective development of self-management. This technique hasn't become popular in the process of education in secondary technical schools yet. However, the moderation methods contain potential capacity which promotes the development of student's individuality. It can be proved by the results introduced in this article.*

Keywords: *self-management, professional flexibility, moderation technique, college students, development of self-management skills.*

The unstable economic situation connected with crises, population decrease (its ageing and reduction of economically active population) defines the direction of the modernization of education. In the current situation vocational education must prepare highly-qualified staff ready for the exploitation of various innovative technologies, and for carrying out related activity or even for changing a job if necessary. The question of the preparation of professionally-flexible specialists is getting more and more relevant.

Professional flexibility implies the readiness and the ability of a worker to quickly change production tasks, workplaces and even a specialization within one profession and branch, the ability to master new specializations appearing under the influence of technological development. To a large extent the ability to master innovations depends on the level of the development of self-educational learning skills.

The ability to manage your own activity is necessary not only for working in the future professional activity, but also for effective self-education, adjustment to frequent changes of techniques and professional improvement.

L.V. Goryunova, considering professional flexibility of a specialist as the problem of developing education of Russia, focuses her attention on the fact that flexibility of a worker is shown in unusual and extraordinary situations which author calls situations of uncertainty. We share the opinion of L.V. Goryunova that "the person who is in the situation of uncertainty needs the self-management skill" [1, 128].

According to the Concise Dictionary of Psychological terminology system, self-management is "an activity and an ability of an individual connected with the self-organization skill.

The role of self-management in the process of professional development is analyzed in the works of Bodrov V.A., Klimov E.A., Kudryavtseva T.V., Varkova A.K., Sukhareva A.V. and others. The works of Voronova T.A., Kulyutkin Y.N., Sukhobskaya G.S. consider self-management as a factor of self-education improvement.

In spite of the keen interest to the mentioned problem on the part of scientists, there are no still cross-functional methods and techniques which allow to develop self-management skills that is the basis of further work over this problem.

Teachers, methodologists and training officers in an educational institution face the task to select and/or adapt various techniques and methods, which would allow to develop necessary social and professionally-important skills of future specialists without negatively affecting the curriculum.

One of such techniques, to our mind, is moderation. Briefly speaking, the moderation implies the organization of the group work for solving one common problem so that the leader of the activity (a trainer, a presenter or a teacher) becomes the moderator and his task is to smooth possible conflicts

and to set for work but not to take the lead. The problem is solved by inner potential of the group.

The moderation includes the visual representation of the information, opinions, solutions, conclusions, constant communication and feedback. The special place is given to lesson planning. M. Neuland in his book states that with the help of the moderation one can teach students to manage their activity. [5]. However, besides careful management of the activity (in consequence of visual representation of the goals of the lesson or the event and required self-analyses) students define the goals by themselves, draw conclusions on the working results, and correct their actions.

Goal-setting, planning and self-analysis are structural components of a self-management skill (in our case the learning activity) [2].

The plan of work is usually set visually on the board (for all the learners) or on the paper (in workgroups). It is a list or a map. It can help to control the order of all the lesson stages, the questions and to set the goals and draw the conclusions about the final results. When introducing the moderation the teacher explains to the students the rules and all the special aspects of their work. At a later stage the students cooperating together do all the necessary actions by themselves.

In our practice we used the moderation technique for organizing the lessons on learning new material, systematizing and actualizing of given knowledge and skills, and also we held extra-curricular activities focused on vocational and educational guidance.

We offered a suggestion that holding the activities based on the moderation technique can be beneficial in the development of students' self-management.

There were 97 students and 2 teachers who took part in our experimental and exploratory work. There were senior students who specialize in disciplines 230101 "Computing machinery, systems and Network" (23 students in the control group and 21 – in the experimental one) and 230105 "Software engineering for computers and computer-based systems" (25 students in the control group and 28 – in the experimental one).

For the students of the specialty 230101 the organization of the lessons with the moderation technique was based on the subjects "Computer Network and Telecommunications" and "Hardware and software development tools". For the students of the specialty 230105 - on the subjects "Software program development" and "IT security", "Fundamentals of computerized information system". The moderation technique was used towards one third of compulsory curriculum (theoretical classroom hours). In the control groups there was no new methods used.

The development of self-management skills was being examined while the students were working on their course projects in the subjects: "Branch economics" and "Software program development" (specialty 230105), "Microprocessors and microprocessor-based systems" and "Branch economics" (specialty 230101).

The assessment criteria of self-management skills were the following: a student can define the aim by himself, analyze the learning task, plan a solution, select the methods of solving a problem and to present the results of his work to the teacher in every interim stage, evaluate his results on every stage and in whole.

To the chosen criteria the following levels of self-management development were defined:

- Low: partly independent goal-setting, weak ability to analyze the learning task and to draw a plan of work; irrational choice of the methods of the task set, difficulties in working with the plan sample, delay in presenting the results to the teacher in most of the work stages, inability to finish the work, difficulties in the result evaluation of the work (inadequate self-esteem is possible), the work is carried out with the teacher with a small amount of independence.

- Middle: independent goal-setting corresponding the curriculum, the analysis of the learning task is fulfilled with the help of the teacher, drawing the plan according to the sample; a student chooses the methods of solution the problem independently (not always reasonably), he presents the results of his work on time, but not always in a complete form, he evaluates the results (the teacher's assistance required).

- High: a student defines the goal of his work independently, analyzes the task and necessary material, draws a plan of solution, chooses the methods of solving the problem, grounds the rightness of his choice, he presents the results of his work on time on every interim stage, adequately evaluates the results and the teacher's assistance is seldom required.

For defining the elementary level of self-management skill among the students mentioned above we offered them to do a project on one of the extra-curricular subjects.

Using the criteria and valuation levels described we delivered the results presented in table 1.

Table 1. Levels of self-management skills in the control (CG) and the experimental (EG) groups before and after the experiment

Levels of self-management skills	Specialty 230101				Specialty 230105			
	Before the experiment		After the experiment		Before the experiment		After the experiment	
	CG, %	EG, %	CG, %	EG, %	CG, %	EG, %	CG, %	EG, %
High	13	10	17	48	16	11	16	57
Middle	35	37	40	38	32	25	36	29
Low	52	52	43	14	52	64	48	14

As one can see from the results presented in the table, there is no difference between the levels of self-management skills in the control and experimental groups. It can be proved by the experimental point of Pearson's criteria which are $\chi^2_{\text{exp}} = 0,152$ for the students with specialty 230101 and $\chi^2_{\text{exp}} = 0,849$ for the students of specialty 230105. It proves that there are no significant differences in the levels of the skills mentioned.

The measured aspects coincide within statistical reliability of the accuracy that is important for the organization of the pedagogical research [3].

To evaluate the reliability of the differences in the level of self-management skills we used Pearson's criteria. The critical value was chosen for the level of significance $p \leq 0,01$. Under the set number of gradation (3) the amount of degree of freedom is 2; for significance $p \leq 0,01$ $\chi^2_{\text{cr}} = 9,21$.

The experimental point of Pearson's criteria for the students with specialty 230101 is $\chi^2_{\text{exp}} = 6,322$, which doesn't allow to prove the hypotheses, that the differences in the levels of the skills development are reliable (only with the reliability of 95%). However, the experimental point of Pearson's criteria for the students with specialty 230105 is $\chi^2_{\text{exp}} = 11,125$ which under the chosen level of reliability allows to conclude that the differences of the levels of the skills development are 99% reliable. It is worth mentioning that the students with specialty 230105 were held the classes with the moderation technique in three subjects whereas the students with specialty 230101 – only in two ones.

Within the research of the particularities of readiness formation for professional flexibility among college students in the group mentioned before there were held the interim data slice to monitor the dynamic pattern of the level of the personality characteristic taken. For objectivity the expert group was formed which consisted of teachers, employers, specialists in chosen spheres of activity. Also the evaluation criteria were defined. Here professional competence, sociability and the ability to act in extraordinary situations were evaluated.

The meaning of the correlation parameter, equal 0,74, defines that there is a strong positive connection between the level of the development of the self-management skills and the readiness for professional flexibility of a student.

According to the received results we can assume that an extensive use of the moderation technique in organizing lessons provides the development of self-management skills among college students. It is important to notice that the academic progress of the students of the experimental groups in the subjects with the moderation was not worse than of the students of the control groups. The form of such lessons arouses interest among students and promotes all the participants to get involved.

Besides it is worth paying attention to the fact that the works done by the students, who showed high and middle levels of self-management skills, contained the extra-curriculum material. It proves that there is a self-educational component in the activity of the students and also indicates that the level of self-management among the students depends on self-education.

The correlation parameter between the level of the development of the self-management skills and the readiness for professional flexibility of students shows a strong positive connection between these characteristics of a future graduate.

The moderation itself, though it was carried out for team-work of professionals, is a flexible technique which is possible to adapt for the lessons with students and schoolchildren. There is not only one moderation technique and particular set of methods, but there is a set of various methods, ways, techniques which can vary depending on the activity goals, audience particularities and the moderator

[4]. This means that further development of the moderation is not necessarily working out something new, but competent combination well-known methods and techniques.

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