

Organizational Support of the Educational Process in Vocational Education Institutions in the First Half of the 20th Century in the Volga Region

Study on the Example of Higher and Secondary Vocational Education

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ABSTRACT

The article deals with the continuity of secondary and higher vocational education's system, gives a characteristic of the main teaching and learning activities' methods in secondary and higher vocational educational institutions in the first half of the XXth century in the Volga region. The choice of the territorial framework is due to the fact that the Volga region is the central region of Russia, the particularities of the system of secondary and higher vocational education's development are typical for other regions of Russia. In the first half of the 20th century the future specialists training's methodological and methodological base and the law-making execution of the activities of secondary and higher vocational education institutions' legal framework took place in the Volga region. That has determined the choice of the chronological framework in this article. The authors address the teaching and learning activities that were used by the teachers for learning process's organization in the Volga region's educational institutions, pick out their advantages and disadvantages. The main methods are: the Dalton plan with the various forms of specially concerted activity, the brigade-laboratory method, which was based on students' work in the team and the tasks' conduct independent operations and the multimeter method was formed up the knowledge elicitation (for example, areas of interest and inclinations). The explanatory-illustrative methods of learning, procreational, problem, partly search (heuristic), partly research (experimental) methods were used for preparing future specialists in universities.

Keywords: education, the Volga region, future specialists, teaching and learning activities' methods

I. INTRODUCTION

The systems of secondary and higher education are in direct interaction with each other. As a rule, graduates of secondary vocational education institutions continue their training in higher education institutions. This was the case in the past, and this trend continues today. The continuity of these steps ensures, among other things, the use of various methods of organizing the educational process in the process of training future specialists. The urgency of the problem stated in the title of this article is due to the need to refer to the positive experience of organizing the learning process both in secondary institutions and in institutions of higher professional education.

We have chosen the Volga region as the region under consideration. This is due to a number of factors. First, the Volga region is a typical agrarian-industrial and multinational region for Russia, with a predominant share of the Russian population. Secondly, the development of secondary and higher professional education in the Volga region had a common vector, but different initial substantive and organizational conditions. Thirdly, industrial enterprises were created in this region and the foundations were laid for the rapid development of industry, which led to the emergence and growth of the number of educational institutions of various levels.

The first half of the twentieth century is the most interesting stage in the development of secondary and

higher vocational education. Since during this period a number of models for training technical personnel were implemented, the focus was on the specifics of industrial enterprises in the region under consideration.

Within the framework of this article, it is assumed that a complex of complementary theoretical methods will be used, namely, a theoretical analysis of the literature on the research problem, a conceptual analysis of archival materials in order to identify both the main methodological features of training specialists and the advantages and disadvantages of the methods of organizing the educational process that existed in the period under review. The stated methods will make it possible to analyze the existing scientific knowledge and conclusions on this issue, and also supplement these achievements with new conclusions. Using the method of systemic generalization, the main advantages and disadvantages of the methodological base, as well as its qualitatively new tendencies, will be revealed, which will make it possible to assess the degree of training of specialists in secondary and higher professional education in the period under review.

Working with archival materials requires the formation of certain intellectual skills, such as the ability to analyze information, select the necessary facts, building them in a logical sequence, the ability to put forward arguments and counterarguments, etc. As a rule, in the process of working with archival sources, a problem of theoretical and practical significance often arises, requiring a clear and clear transmission of thought, the ability to formulate this thought orally or in writing. Therefore, the research and search methods used in the analysis of archival materials will contribute to the correct formation of mental activity for a more accurate transfer of the information received.

II. CURRICULA OF THE EARLY XXTH CENTURY

During the period under review, in the course of analyzing archival sources and pedagogical literature (V.A. Slastenin, I.P. Podlasy, etc.), we came to the conclusion that the basis of training in institutions of secondary and higher vocational education was based on a knowledge approach, which was implemented in accordance with the general principles of consistency, development, ideological orientation, scientific nature, connection of theory with practice.

These principles formed the basis of a set of methods that make it possible to solve a number of educational tasks aimed at increasing the general level of literacy of students, developing communicative and social skills, developing labor activity, professional mobility, etc. It should be noted that without methods of organizing the educational process, educational goal, it can fill the educational process with content and

effectively implement this content. The method is the most important link between the goal and the end result of educational activity, which develops as quickly as the methods used allow it. In the process of using various methods in the educational system, the teacher's creativity, his skill, and understanding of the characteristics of the student contingent are actively manifested.

For a step-by-step consideration of the methodological base inherent in the process of training specialists, we will consider the methods that were popular in the system of secondary vocational education in the Volga region.

When creating a system of secondary vocational education in the Volga region [1], the directorates of public schools, provincial and district school councils, as well as the teaching staff of secondary vocational institutions had independently to create not only programs, but also methods of secondary vocational training. In many questions, one had to start literally from scratch.

The curriculum for secondary vocational training was constantly being improved and by 1916 reached a state of affairs when the most effective and efficient teaching methods were laid down [2]. In these programs, the entire system of secondary vocational education was faced with the most difficult task [2]: to provide students with a complete secondary vocational education and teach them their chosen profession. And for this it was necessary to choose the most effective from the total number of available methods.

Solving the problems of teaching methods [3], much attention was paid to the maximum activity on the part of students in the educational process. It was believed that laboratory, excursion and work methods should educate students in organizational skills. For this purpose, in the educational institutions of the Volga region, special attention was paid to the connection of these methods with local production. Concurrently, it was assumed that training should be of a research nature. Although later historians of pedagogy have characterized these methods as "bourgeois and imposing", it cannot be denied that teachers nevertheless managed to find a rational kernel in these methods.

In 1925, at the first conference of workers of secondary vocational educational institutions in the Volga region [4], it was recommended to use the Dalton plan, which is a system of organizing educational work based on the principle of individual training. When organizing work on the Dalton Plan, students were given freedom, both in the choice of activities and in the use of their study time. The student received instructions from the teacher-counselor how to better plan his work for a given day, and then worked

independently. Particular attention was paid to the accounting of students' work, carried out using a complex system of registration cards. The role of the teacher was essentially reduced to the role of a consultant, and the class-lesson system of classes was destroyed. Therefore, both positive and negative aspects were highlighted in the Dalton plan [5].

Among the positive features are: adaptation of the pace of learning to the student's abilities, the development of initiative and independence, stimulation of students to search for rational methods of work and self-education, the formation of such qualities as discipline and responsibility, control over the student's performance in accordance with the obligations assumed.

According to the State Archives of the Ulyanovsk Region, in the quarterly report for October-December 1924-1925, Alatyrovsk vocational school, we find lines that record achievements in methodological work. The Dalton discipline plan introduces the following changes: the subjects of SOL (scientific organization of labor) and hygiene are added to the existing schedule of classes. There is also teaching by lecture method. The material is closely linked to production. The report states that the productivity of students has increased: "not to lose a single minute of working time from signal to signal exclusively for useful work," the students decided and performed "flawlessly without the influence and pressure of the leadership" [6].

At the same time, when using the Dalton plan, certain difficulties arose and associated, first of all, with the need to revise the role of the teacher and the content of the subjects. So, when working according to the Dalton plan, the teacher needed knowledge in the field of the psychology of communication and management, it is often difficult for him to force himself not to interfere in the work of students, to work in constant noise and treat it as a natural background.

Therefore, to the State Archives of the Penza Region, the Dalton plan was not so actively used in educational institutions of the Penza province, which was primarily due to the lack of teaching aids and classroom equipment, as well as the level of training of teaching staff. In Penza, teachers in colleges were mostly graduates, some of whom took advanced training courses. Only a small part of the teachers had a higher education. In this regard, the teachers of Penza educational institutions more often used a complex method [6]. It was a teaching method based on identifying a single connecting rod (for example, areas of interests and inclinations, acquaintance with a certain circle of life phenomena, studying the homeland, performing practical tasks) [7].

Among the main components of this method are the following: lump-sum system, cyclic method and

method of one-time tasks [8]. The chord system was a collection of information or knowledge organically connected by thematic links, which covered a number of disciplines (technical disciplines, practical and laboratory studies, etc.). So, for example, for the most rational study of the course and the creation of the integrity of the impression, related subjects and practical work were grouped into cycles ("packs") with teaching each 4-6 hours a day, so that during this time the necessary amount of information was communicated, the so-called "Knowledge chord". The cyclic method was the unification of all academic disciplines in certain cycles, linking related subjects. Based on this method, such cycles as general education, political, economic and special cycles were created in institutions of secondary vocational education. According to the method of one-time tasks, teaching materials were compiled from individual completed practical educational tasks, which were aimed at mastering certain practical actions. Most often this method was used when organizing industrial practice.

Such a grouping of this method made it possible to ensure, in the opinion of teachers, the maximum assimilation of the acquired knowledge and skills.

Along with the Dalton plan, the brigade-laboratory method began to be actively used in institutions of secondary vocational education, which is a method based on the work of students in the brigade and the independent performance of production tasks.

Students, united in teams led by a foreman from among them, independently worked on assignments for a period of 2 weeks to 1 month. The tasks indicated the sequence of work, educational literature, tasks and exercises were given and control questions were posed. The teacher did not explain the new material to the students and advised them only in cases of difficulty. Upon completion of all tasks, final classes were held, at which the teams reported on the work done. There was no individual tracking of student progress. All this had a negative effect on the knowledge of students, giving rise to unsystematic, impersonal and irresponsible in teaching and educational work.

Due to the State Archives of the Penza Region, most of the secondary vocational educational institutions of the agricultural type (Penza Land Management College, Penza Garden-Ogorodny College, Penza Agricultural College) worked according to the brigade-laboratory plan, while the curriculum was divided into 8 months [9].

For each month, on the basis of 24 days, tasks were given for each subject (8 tasks per year). Students were united in links of 3 - 5 people. Each link of students, at their discretion, chose one of the classrooms or laboratory for a particular day and hour. Having appeared in the office, the students showed their

registration cards to the teacher on duty. The teacher noted the time of classes for each student in the office, accepted the completed assignment and put his signature on the registration card [10].

In addition to the above methods, such forms of specially organized activities as a laboratory lesson, a class lesson, a collective lesson, and a conference were widely used [11].

In 1919, P.P. Blonsky first spoke about the studio method of organizing the educational process. However, the application of this method was not found in archival materials.

Thus, in the middle of the 20th century, teachers of secondary vocational education institutions used a variety of teaching methods, the main of which was the Dalton plan. Concurrently, it is possible to single out only some forms of using the Dalton plan: strengthening the collective moment, both in developing a plan and in performing tasks; preservation, along with free laboratory studies, group (classroom) classes; extensive use of the above active methods of work; correct formulation of not only quantitative, but also qualitative accounting, giving it the character of collective self-accounting and self-control.

V.G. Pashchenko thought that at the end of the 30s in the XX century in the city of Penza there were 15 technical schools, in which 5110 students studied, 55 secondary schools and 8 schools for the adult population [12]. Thus, the basis was created for organizing recruitment to higher educational institutions. However, only since the opening of the Automobile and Road Institute in Saratov in 1930 and the evacuation of the Odessa Industrial Institute in Penza in 1943 was the beginning of the organization of a higher technical school, and, consequently, the system of training scientific and pedagogical personnel in the studied region.

The methodological base of higher professional education was organized quite clearly. However, as in institutions of secondary vocational education, in higher educational institutions there were difficulties with the staff. In the materials of the State Archives of the Penza Region, we discovered an interesting fact: in 1945, the Penza Industrial Institute had 15 teachers without a completed higher education. In addition, the fourth year students conducted classes on the theory of mechanisms and machines in the second year. The insufficient number of qualified teaching staff caused a similar circumstance [13]. They tried to solve this problem, including by inviting teachers from other universities in the country, in 1949 – 1952, to the industrial institute (Penza), such a doctor of Technical Sciences, Professor S.G. Salzburg, N.E. Kobrinsky, V.N. Milstein, Ph.D. B.A. Trakhtenbrot and I.I. Eterman.

The specificity of training specialists in the higher education system of the Volga region was that it was carried out within the framework of scientific schools. Conformity, the choice of methods for organizing the educational process was determined by the approach of a separate department. For example, technical universities in the Volga region were closely associated with enterprises. Thus, the Penza Industrial Institute (later Polytechnic) worked closely with such industrial enterprises as Penztekstilmash, Penza Machine Building Plant, Penzpromstroy, Penzkompressormash, Penztyazhpromarmatura, Penzkhimmash and Penzagropromsty in this regard, in the preparation of future specialists, such methods were used as explanatory-illustrative, reproductive, problematic, partly search (heuristic) and research (experimental).

Based on materials from the institute newspaper "For engineering personnel", at the Penza Industrial Institute (later Polytechnic) in the 1950s a scientific school for the development of digital measuring devices was formed, the leader of which was Doctor of Technical Sciences, Professor, Honored Worker of Science and Technology of the RSFSR V.M. Shlyandin [14]. According to the researcher A.P. Mikheev, at the Penza Construction Institute, the first scientific schools arose in the 1960s under the guidance of talented scientists and teachers, Doctor of Technical Sciences, professors I.A. Ivanov and P.R. Taube [14].

In the scientific school of V.M. Shlyandin, an important pedagogical principle can be distinguished: the connection between theory and practice. In this regard, scientific and technical seminars were one of the main forms of work of scientists with young personnel. At them, novice inventors reported not so much about the results of their work as about the process of obtaining them. Often the reports were subjected to harsh criticism from associate professors and professors, who were guided by the well-known principle "truth is born in a dispute". Simultaneously, A. Prokuntsev noted that the relationship at the department remained benevolent. This form of work was quite effective. It resulted in numerous inventions of the team [15].

The teachers of the scientific school in their work with young researchers used various methods: the partial search (heuristic) method (E.K. Shakhov), the research method (A. I. Martyashin), production meetings, etc. [16].

Doctor of Technical Sciences, Professor E.K. Shakhov used a partial search (heuristic) method and built a system for training specialists according to the principle of a vertical hierarchy. The professor supervised research workers, who, in turn, were graduate students and applicants. Graduate students supervised engineers who were engaged in research work with students.

III. CONCLUSION

According to the archives, the training of teachers for both secondary educational institutions and institutes was carried out for their own needs. Thus, the Kuibyshev Polytechnic Institute "recruited scientific forces at the expense of its own graduates" [17]. The reproduction of human resources in higher education during this period is a characteristic trend in the post-war period.

Thus, in the system of secondary and higher professional education in the Volga region in the first half of the twentieth century, along with traditional teaching methods, personality-oriented, problematic and other methods were used, their choice was determined by the principles of the learning process, its goals and objectives, content, educational capabilities of students and the capabilities and level of qualifications of teachers. The training of future specialists in institutions of secondary and higher professional education was carried out depending on the needs of production and in loose interaction of specialists from industrial enterprises with the teaching staff of leading universities. There was a borrowing from abroad of various methods of organizing the educational process in institutions of secondary vocational education.

regions): abstract... Candidate of Historical Sciences: 07.00.02. Samara, 1991. 17 p.

References

- [1] GAUO (State Archives of the Ulyanovsk Region). Fund 190. - Op. 1.- D. 714, L. 60
- [2] G.A. Alekseev, To the history of education in the Middle Volga region. Methodical development. Issue 1. - Cheboksary, Chuvash GPI, 1990. pp. 48 – 49
- [3] GAUO. F. 390. - Op. 1.- D. 71, L. 54
- [4] GAUO. F. 390. - Op. 1.- D. 180, L. 35
- [5] GAUO. F. 390. - Op. 1.- D. 192, L. 67
- [6] GAPO (State Archives of the Penza Region). F. r. 253., - Op. 1.- D. 810, L. 67
- [7] GAPO. F. r. 253. - Op. 1.- D. 370., L. 139
- [8] GAPO. F. r. 253. - Op. 1.- D. 370., L. 140
- [9] GAPO. F. r. 253. - Op. 1.- D. 1430., L. 35
- [10] GAPO. F. r. 253. - Op. 1.- D. 1430., L. 38
- [11] GAUO. F. 390. - Op. 1.- D. 225, L. 16
- [12] V.G. Pashchenko, Penza State University. Essays on history and modern life. Penza: PSU, 2003. 411 p.
- [13] GAPO. F. R-2417. Op. 1.- D. 67, L. 46.
- [14] A.P. Mikheev, Penza State Architectural and Construction Institute. Essays on the history of public education of the Penza region. Penza: IPKiPRO, 1997. pp. 370 - 373.
- [15] A. Prokuntsev, Production scientists / A. Prokuntsev // For engineering personnel (Penza). 1968. No. 32 - 33. S. 2.
- [16] TsGARM (Central State Archives of the Republic of Mordovia). F. R-2542. Op. 1.- D. 204, L. 179
- [17] A.V. Kalyagin, The development of university science in the Middle Volga region. 1891 - 1985 (Based on materials of party and public organizations of Kuibyshev, Penza and Ulyanovsk