

The Development of Vocational Pedagogical Education in Russia (Organizational and Pedagogical Aspect)

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ABSTRACT

The relevance of the problem under study is based on the necessity to determine the directions of studying and improving the vocational pedagogical education (the system of training vocational pedagogical teachers) in Russia. The purpose of the article is to identify the periodization of establishment and development of the vocational pedagogical education in Russia depending upon the changes of its organizational and pedagogical foundations that occur under the influence of socio-economic and socio-pedagogical factors. The leading approach to studying this problem is historic-logical one which allows us to identify stages of establishment and development of the vocational pedagogical education based on the qualitative changes of its organization and content that are perceived as a reaction to socio-economic and socio-pedagogical conditions at certain periods of time. Based on the qualitative changes of the organizational and pedagogical foundations of the vocational pedagogical education occurred under the influence of the changes in the society during more than a hundred years' time, the stages of establishment and development of the vocational education are detailed in this article. It is stated that the main directions of the Russian vocational teachers' training system development were determined by the requirements imposed upon the system by vocational education and industries. It is shown that the idea of industry-specific vocational and psychological training and training for a worker's profession is the leading one in elaborating the vocation education development strategy. The article can be useful for academic specialists and practitioners in the sphere of vocational and vocational pedagogical education, candidates for a master's degree and students of vocational pedagogical universities and faculties.

KEYWORDS

Professional training, stages of development, vocational pedagogical education, vocational teacher, vocational pedagogical personnel

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Introduction

The intensively changing socio-economic environment related to the development of the job market and the labor market require changing the quality of training of specialists who possess not only special knowledge but also specific qualities that ensure their competitiveness and professional mobility (Fedorov & Davydova, 2014;

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Davydova et al, 2016; Sakhieva & Fedorova, 2016; Masalimova & Chibakov, 2016). In view of this the problem of modernizing the modern vocational teachers' training system becomes very relevant.

The state vocational pedagogical education system (VPES) has since the 1920s been developing in our country with varying degrees of success in the directions influenced by socio-economic and socio-pedagogical factors that determine its contradictions and flaws (Anikst, 1922; Barbashov, 1931; Veselov, 1961; Voevodin, 1973; Ivanovich, 1958; Kairov, 1930; Kalimullin, Vlasova & Sakhieva, 2016; Khuziakhmetov & Nasibullov, 2016; Zakirova & Shilova, 2016). The directions of the system's development were implemented mostly taking into account the available practical experience of its functioning without the necessary theoretical substantiation (Fedorov, 1999). The scientific foundation was the empirics of the vocational education that united in a compiled manner the miscellaneous views of researchers of its specific experience. Due to these circumstances the vocational teachers' training system was developing with insufficient effectiveness.

Studying the establishment and development of the vocational pedagogical education in Russia in its historico-logical context will allow us to determine the tendencies and practical steps towards ensuring its further development in accordance with the requirements of the society and the country's economy.

Materials, Methods and Methodological Framework

Research methodology

The main methodological basis is the historico-logical approach (Hegel, 1812-1816; Popper, 1983) that allowed us to ensure the vision of cohesiveness of the historical process of the establishment and development of the vocational pedagogical education in Russia. Understanding the logics of the historical development allows us to comprehend the nature and the character of the historical specificity, in particular, of the phenomena and processes in the development of the Russian vocational education system.

Research methods

The following methods were used in order to solve the problems of the research: 1) theoretical: analysis of the scientific literature, studying the directives, standard and program-methodological documents in the sphere of professional and vocation education; system analysis and generalization; 2) empirical: studying and synthesis of pedagogical experience.

Results

The vocational pedagogical education in Russia, from its formation to being recognized as an independent branch, developed for a long time and with certain difficulties. The first structural-organizational elements of the state vocational pedagogical education system appeared in 1920 due to the urgent need to train teaching and instructing personnel for professional technical educational institutions (Tenchurina, 1998). At that time the Senior Committee on Professional Education was created which focused, among other things, on organizing the training of vocational teachers.

Adoption of this regulation at the country level was caused by the then current socio-economic environment which was determined by the extremely critical condition of the country's economy resulted from the destruction of the economic and industrial

system during the First World War (1914–1918) and the Civil War (1917–1922). Thus, solving the tasks of restoring the economy was connected with development of the energy industry and transfer of production sector and agriculture to the industrial basis. It is obvious that successful implementation of those plans was considered possible only in case of availability of required materials and technical equipment, as well as of qualified personnel – engineers, technical specialists and workers.

The then current socio-economic situation determined the country's need to improve the system of professional education. In particular, the necessity to satisfy the deficit of regular labor force required improvement and enhancement of the professional educational institutions' network. As a result, the number of such institutions in Russia by 1921 doubled in comparison with 1910: from 2819 to 5272 (Anikst, 1922). In the Professional Education system the number of secondary-level and initial professional and technical educational institutions (schools, technical schools, courses, workshops etc.) increased from 282 in the end of 1919 to 1607 in 1921. Essentially, during those years the prototype of the initial professional education system was created.

The noted upsurge in the development of educational network for workers' training led to occurrence of several socio-pedagogical problems that prevented the normal functioning and further development of the system. The main was the problem of lack of general subjects' teachers and almost complete absence of teachers of general technical, general professional and special disciplines.

The situation with availability of vocational teachers was almost catastrophic. It was characterized, first, by their insufficient number and, second, poor training and short work experience of available specialists (nothing is changed in the present time).

Thus, we can state that the problem of vocational teachers' training and saturation of educational institutions with required personnel became extremely important for the country and in those conditions was considered to be scientific-pedagogical, socio-pedagogical and socio-economic.

At that time the way to solve the problem was considered to be a wider and more systematic involvement of all suitable technical and agricultural specialists in professional technical and polytechnical education. Yet it is obvious that such decision was accompanied by the fact that a lot of specialists were withdrawn from production in corresponding industries and appointed vocational teachers which contradicted the economic interests of companies. Thus, sometimes less-experienced specialists were involved in teaching which affected the quality of workers' training.

Besides, people who were thus involved in vocational training lacked proper psychology-pedagogical and methodological training. This meant that the problem of providing vocational teachers for workers' training system by involving experienced staff of industrial enterprises was not solved completely.

The noted unsatisfactory solution of the problem to qualitatively and quantitatively saturate the initial professional education system with vocational teachers makes logical the assignment and solution of the task of organizing special training of vocational teachers.

The first structural-organizational element of the vocational pedagogical education system – the technical-pedagogical department – was created within the pedagogical section of the Senior Committee on Professional Education. Its main task was to develop as quickly as possible the program of organizing the vocational pedagogical education, to determine its organizational and pedagogical foundations



that would include structure, organization, content and technologies of training pedagogical personnel for technical and agricultural disciplines.

These events mark the 1920s as the beginning of formation of the state vocational pedagogical education system. It was formed by trying to remove the contradiction between the increasing demand for qualified vocational teachers in order to ensure functioning and development of the initial vocational education system and the practically complete lack of such teachers (currently the secondary vocational education system in Russia has encountered the same problem). Special (vocational educational) institutions of different types were created throughout the country in order to provide training to professional education teachers.

In order to ensure effective functioning of the vocational pedagogical education system, its organizational and pedagogical foundations (for that time they mostly included structural and organizational forms and the content of education) were elaborated taking into account the experience of similar training in the second half of the XIXth - beginning of the XXth century in Russia, Germany and the US that was taken as the historico-pedagogical landmark and prototype.

The analysis of literature on the school history showed that in Russia there was practically no systematic and regular training of professional education teachers until the end of the XIXth century.

Staffing was carried out under the "Rules for those seeking to become teachers of special disciplines and managers of practical classes in secondary and initial technical schools" (1892), according to which such positions were staffed with people who had no vocational education but had a 1- or 2-year experience of working at an industrial enterprise upon graduating from industrial institutes or secondary technical schools (Fedorov, 2001). Thus, the problem of providing educational institutions with vocational teachers even at that time was solved at the expense of involving industrial staff. We can note as a small deviation from this rule the insufficient experience of training special discipline teachers for non-classical secondary schools that was carried out in technical universities (1873) (Panachin, 1979).

Special but small-scale training of teachers and tutors for military educational institutions was carried out at 1- and 2-year courses in the 2nd Military Secondary School (1865). Graduates of these courses who had already had higher education received good pedagogical training and were highly esteemed as teachers. This experience was used by the Petersburg Naval School for training special discipline teachers for naval schools (1905).

This experience was enhanced when special 1-year pedagogical courses were established in the beginning of the 1900s for training people with university or higher technical education for teaching. Yet the educational program at these courses did not include pedagogical practice and the courses of pedagogy and history were shortened as compared with historico-philological institutes. This should be noted as the first experience of vocational teachers' training in Russia that was implemented according to the additive scheme "higher technical education plus pedagogical training".

This situation demonstrates, in our opinion, not the most successful variant of removing the contradiction between the educational system's demand for vocational teaching personnel and the lack thereof which leads to weakening of pedagogical potential of educational institutions and deterioration of education quality.

Thus, we can list the following organizational forms of vocational teachers' training implemented in Russia in the XIXth – beginning of the XXth century:

- additional stage of 1- or 2-year pedagogical training on the basis of higher education implemented in industry-specific (technical, agricultural, military etc.) higher educational institutions. What is valuable in this experience is the idea of stage (additive) training as an organizational form, while the content of provided pedagogical training was insufficient;

- a specialized educational institution that implemented an education program integrating a special industry-specific (technical, agricultural, economical etc.) and psychology-pedagogical training.

We have singled out six stages of development of vocational pedagogical education's organizational and pedagogical foundations in post-revolutionary Russia. They are singled out on the basis of qualitative changes in organization and content of vocational pedagogical education as a reaction to socio-pedagogical environment at certain periods of time: changes in economy needs, changes in workers' training system and taking various decisions at the state level.

Initial stage of the post-revolutionary establishment of vocational pedagogical education took part in October 1920 when, based on the acknowledgment of the need for enhanced development of vocational teachers' training, the following decisions were taken:

- to create higher technical-pedagogical educational institutions;
- to create pedagogical departments in higher technical educational institutions and technical schools in order to provide additional training to some graduates;
- to arrange "refreshing" courses for retraining of ex-teachers;
- to organize courses of instructors (masters) of professional technical training.

In order to implement those decisions the first vocational educational institution was opened in Petrograd – a technical-pedagogical institute (1920). Those with higher vocational training were admitted, the lessons took place in the evenings. The 6-month education plan included more than 30 general technical, special and psychology-pedagogical disciplines. The latter were few and included experimental psychology, experimental pedagogy, history of school and of teaching and tutoring methods and four methodological disciplines.

The technical-pedagogical institute encountered serious organizational and pedagogical problems (lack of academic and pedagogical personnel, lack of learning and methodological support for several disciplines, unsatisfactory facilities and resources, difficulties in enrolling students and large dropout rate). Due to the above-listed factors the education plans and schedules were disrupted which led to closing of this institute as it did not possess enough equipment and academic personnel (1922). Taking into account the fact that the institute opened and functioned without almost any scientific support, such outcome could be expected.

There existed other organizational forms of vocational teachers' training. Thus, expansion of target orientation of 4-month advanced training courses for school teachers led to the change in their organizational and pedagogical basis and renaming as the Higher Academic Pedagogical Courses. That made it possible to organize training of vocational teachers provided to people with higher education or students about to graduate from a higher educational institution.

For example, a 1-year pedagogical department (part-time studies) provided training of polytechnical and special discipline teachers for secondary professional and technical schools. The education plan in this case included mostly psychology-pedagogical skills and knowledge (82% of study time). This form of vocational teachers' training was considered fundamental on the state level (1921). Yet the



problem of elaborating its organizational and pedagogical foundations remained relevant.

In particular, three training programs at the Higher Academic Pedagogical Courses and in institutes were discussed: a program for technical discipline teachers, general discipline teachers and masters of vocational training. The time-limits differed based on the basic education: 1 or 3 years for the first two categories and 9 months for the latter.

The substantial expansion of organizational forms of masters' training resulted from opening of the first secondary pedagogical educational institution – the Moscow Industrial Pedagogical School (1921). Future masters of vocational training could receive not only secondary vocational training but also a thorough profession training (up to the 6th category). This was the first experience of implementing in the vocational education institution a training program that integrated industry-specific, psychology-pedagogical and production courses.

The prototype of higher educational institutions and faculties that comprise the modern vocation education system was the Losinoostrovsky Agripedagogical Institute (1922, 1923). The idea was that pedagogical education would not be additional to the main one – agricultural but a vocational, integrating pedagogical and special training.

The continuing development of economy aimed at industrialization and collectivization inspired the need for expanding the network of initial vocational educational institutions which, in its turn, even more reflected the problem of teaching staff. In order to solve it the organizational-pedagogical foundations of vocational education were elaborated, vocational institutes and faculties within pedagogical institutes were created. Thus, in the beginning of the 1930s there were 3 special-purpose institutes and more than 10 pedagogical institutes that trained specialists for vocational pedagogical education system. During those years the vocational pedagogical education system reached the peak of its development at that stage. Then the education authorities decided to close all specialized higher education pedagogical institutions (1937) and training of vocational teachers was carried out by short-time programs (from several days to 6 months).

Stoppage of progressive development of the vocational pedagogical education system in the beginning of the 1930s was influenced by several economic, political and socio-pedagogic factors:

- changes in the state educational policy which led to the decision to expand the network and increase the number of students in vocational institutes, to reduce the period of studies (in higher educational institutions – to 3-4 years), and organizing several admissions per year, etc.;

- poor organizational and program-methodological basis of vocational pedagogical education (absence of scientifically-proven qualification characteristics of specialists, instability of organizational forms of vocational pedagogical educational institutions, education plans and programs, lack of academic and methodology literature etc.);

- insufficient scientific support of vocational pedagogical education development which led to strengthening of empirical approaches in determining organizational forms and the content of vocational teachers' training.

The latter resulted from, first, lack of qualified academic staff and, second, controversial evaluations and positions of the central and regional education authorities regarding the necessity to develop vocational pedagogical education which did not provide sufficient financial and material support.

In general, the first stage is characterized by the fact that vocational educational institutions functioned from 1 to 6 years due to which they could not fundamentally

change the situation resulted from lack of vocational teachers in the vocational education system.

The search for best forms of organization and content of vocational education carried out in the conditions of novelty, difficulty and lack of theoretical support of vocational pedagogical education problems was accompanied by a lot of mistakes and miscalculations. Yet the experience gained in solving these was undoubtedly useful for further development of the vocational pedagogical education system and confirms the need for theoretical and methodological research of its organizational-pedagogical foundations.

The second stage of vocational pedagogical education system development started in 1943. Starting from that year, industrial-pedagogical schools started to open and served to educate masters of vocational training who had secondary technical education, pedagogical knowledge and were highly-qualified.

The necessity to open educational institutions for specialized pedagogical training of masters of vocational training was determined by insufficient staffing of initial vocational schools. Senior masters were 13.2% undermanned and masters of vocational training -20.4%. About 50% of the masters and teachers of technical schools did not have education and training required at such positions. More than 82% masters of vocational training and about 50% of senior masters did not have even the secondary technical education. Only 11% of the masters had secondary education (28–30% of senior masters). About 2.4–3.4% of masters had higher technical education (14.9–15.2% among senior masters). Masters with pedagogical education were extremely few – 1.1–3.3% (3.0–5.6% of senior masters) (Tenchurina, 1998).

The fact of partial recovery of the vocational pedagogical education's organizational structure with opening of industrial-pedagogical schools is confirmed by the fact that in 1945 master of vocational training program was provided in 16 technical schools for 22 special fields. In 1946 the number of students in those schools amounted to 7,911. Those were people having 7-year education, qualification rating of at least category 3 and having predisposition towards pedagogical activity. The education program included general education (39.9%), general technical (20.0%), special (26.2%) and pedagogical (8.6%) disciplines, professional training, pedagogical and pre-graduation practical training, military training and completion of a graduation project. Graduates were obliged to work for 5 years in educational institutions.

Apart from industrial-pedagogical schools, at that stage the vocational pedagogical education system included pedagogical departments in industry-specific institutes that were recommended as the main organizational form of training special discipline and general technical discipline teachers. Further expansion of the vocational training system at that stage was caused by creating the system of advanced training for vocational teacher (the end of the 1950s).

Starting of the third stage of the vocational pedagogical education development (1958) was related to the changes in the socio-pedagogical environment and the arising need the developing industry had for workers with completed secondary education. The initial professional education system that functioned on the basis of 7-year general education provided only professional training and did not solve that problem. The education system reform program embodied in the Law "On strengthening the connection between school and life and on further development of the people's education system in the USSR" (December 24, 1958).

In order to connect general and professional education the program envisioned transfer from 7-year to 8-year education. Three options of completing secondary education based on linking school studies with industrial work were proposed:



- combining part-time studies with work at an industrial enterprise upon completion the initial professional training;
- continuing studies at secondary polytechnical school along with work at an industrial enterprise;
- studying at technical colleges upon completion of 8-year school education.

With the purpose of unification all education institutions of the professional-technical education system were transformed into full-time and part-time city and country professional-technical schools. The period of studying lasted from 1 to 3 years and from 1 to 2 years, accordingly.

In order to implement theoretical and practical education in schools and technical schools within the new environment it was necessary to expand training of teachers and masters. Thus, in order to develop the vocational pedagogical education system, new faculties were created in pedagogical and industry-specific institutes (1959). As a result, the system of training teachers of general technical and agricultural disciplines included 123 higher educational institutions: 108 pedagogical, 9 technical and 6 agricultural institutes (1962). This allowed to receive vast experience of creating organizational and pedagogical foundations for training of vocational teaching personnel with completed higher education and to confirm the necessity and possibility of their purposeful training at industrial-pedagogical faculties of pedagogical institutes and engineering-pedagogical faculties of industry-specific institutes.

This also confirms the fact that organization of training vocational teachers with higher education resulted from the changes that were happening in the professional-technical education system. Thus, in the middle of the 1960s the number of secondary technical schools increased (those schools focused on providing 1-2-year training of highly-qualified workers of complicated professions on the basis of completed secondary school education). Besides, starting from 1969 secondary professional-technical schools started to be organized which focused on providing general secondary education and a trade within 3-4-year period.

Development of the vocational pedagogical education during its third stage continued also by way of expanding the network of industrial-pedagogical technical schools (in 1965 there were 56 technical schools having 39.9 thousand students) and of increasing the number of engineering-pedagogical specialty occupations. In 1970 training on such occupations was provided in 13 higher educational institutions on specialties 0577 – Mechanical engineering, 1219 – Construction and 0315 – Electrical power engineering. This can be regarded as similar to the modern “profilization”.

Besides, the practice of involving engineering and technical staff of industrial enterprises that had no pedagogical training in teaching at vocational educational institutions encouraged development of advanced vocational training system. In 1966 the All-Soviet Union Institute of Advanced Engineering-Pedagogical Training was created and had many regional branches. Starting from 1976 advanced training faculties for vocational teachers were created at industry-specific higher educational institutions.

The content of vocational teachers’ training of that time is not considered to be appropriate. First education plans were unreasonably overloaded and included disciplines which did not correspond to the field of training. This can be explained by the fact that they were developed on the basis of erroneous principle according to which the traditional content of engineer training in this or that field included also psychology-pedagogical disciplines (“arithmetic” principle). Thus, the content of training at technical and pedagogical institute was combined without taking into

account the specifics of vocational pedagogical education activity. In view of this, the next-generation education plans were elaborated trying to determine optimum content and adjust training of teachers at engineering-pedagogical faculties and departments of industry-specific higher educational institutions.

During those years general technical faculties of pedagogical institutes solved the task of training handicraft teachers for general education schools. This was a kind of a transient form of teaching personnel training that existed at the intersection of pedagogical "school" and vocational pedagogical education.

General technical and industrial-pedagogical faculties of pedagogical institutes and engineering-pedagogical faculties and departments of industry-specific higher educational institutions were united not only by similar functions performed by their alumni, but also by proximity of problems encountered during training. Most industry-specific higher educational institutions did not have pedagogical potential specific to pedagogical institutes which, in their turn, did not possess the potential to ensure high theoretical level of industry-specific training. Yet all of them, due to traditions and existing facilities and resources, could not provide high-quality training for specialty occupations which is one of the main specific features of vocational teachers' training.

Thus, there arose a contradiction between the necessity of training teaching personnel for the initial professional education system that would combine engineering and pedagogical excellence with being high-skilled workers and the impossibility to ensure such training within the existing vocational education system. Solving this contradiction was linked to creating a specialized higher educational institution. Besides, creating such an institution was encouraged by the opinion established in the education environment that it was necessary to ensure smooth transfer to training masters of vocational training who would have a university degree.

The next (fourth) stage of the vocational pedagogical education development started in 1979. It was linked to creating a specialized vocational higher educational institution – the Sverdlovsk Engineering-Pedagogical Institute (now it is the Russian State Vocational Pedagogical University) – as the most cohesive and organic form of organizing vocational teachers' training. Creating the institute was determined, first, by the changes in the system of people's education – transfer to universal secondary school education and the fact that professional technical schools turned into one of the forms to receive secondary school education and, second, by the changes in equipment and technology, in the content of industrial and agricultural work. All that made high demands towards vocational teaching personnel regarding pedagogical excellence, the level of theoretical and practical industry-specific (engineering) training and the level of work skill.

This stage was characterized by the combination of the following forms of organizing vocational teachers' training at higher educational institutions: an engineering-pedagogical institute, engineering-pedagogical faculties, engineering-pedagogical and agropedagogical departments, engineering-pedagogical training (additional) at certain chairs of industry-specific higher educational institutions; industrial-pedagogic and general technical faculties of pedagogical institutes.

Besides, training of vocational training masters continued in 74 industrial-pedagogical technical schools.

Yet in spite of that, as of January 1, 1987, the qualification level of vocational teaching personnel in the initial professional educational institutions was characterized by the following: 52.9% teachers and masters of vocational training with a university degree (including teachers of general education disciplines) and 38.5% of teachers and



masters with a degree in secondary professional education. The deficit of teaching personnel was due to the following reasons:

- a certain part of educational system managers in the central and local education authorities tended to involve industrial workers in vocational pedagogical training;

- outperforming rates of initial professional education growth as compared with the rate of vocational pedagogical education system development, the extent of which failed to ensure training of necessary amount of alumni. From 1981 to 1983 the total number of educational institutions within the initial professional education system doubled (from 3,684 to 7,519) and the number of students tripled (from 1,064 thousand to 3,728 thousand people) (Stoyanov, 1988; Stepanova, 1979);

- lack of sufficient scientific support of vocational teachers' training which remained mostly empirical. In some cases, it was based on the "engineer + teacher" scheme, in other cases the training was parallel to engineering training without integrating these main components;

- insufficient number of educational program specializations for vocational teachers' training;

- poor quality of vocational teachers' training that was insufficient for qualified performance of increasingly complex functional responsibilities, especially training for a trade, technical creativity and educational methodology (Zeer, 1988);

- high staff turnover and their poor stability in the initial professional education system.

Poor productivity and effectiveness of vocational pedagogical education system noted at that stage, as well as insufficient development of its organizational structure were the reason of special attention being paid to the status and development prospects for the system of training and advanced qualification training of engineering-pedagogical personnel. This is confirmed by the following main decisions taken at the special joint meeting of the State Education Committee and the Senior Committee on Professional Education of the USSR (1987):

- to arrange training of two types of vocational teachers:

- 1) those with a university degree, able to perform functions of technical disciplines' teacher and a master of vocational training ("engineer-teacher" qualification);

- 2) those with secondary education, able to perform functions of a multi-skilled master of vocational training ("technician - master of vocational training" qualification);

- to arrange training of specialists for "engineer-teacher" qualification" in engineering-pedagogical higher educational institutions (similar to the Sverdlovsk Engineering-Pedagogical Institute) and at engineering-pedagogical faculties of higher technical education institutions with enrolment plan of at least 200 people;

- to arrange training of specialists for "technician - master of vocational training" qualification in industrial-pedagogical technical schools;

- to reduce period of study in engineering-pedagogical higher educational institutions (faculties) for people having secondary vocational education for a similar specialty;

- to appoint the Sverdlovsk Engineering-Pedagogical Institute (now it is the Russian State Vocational Pedagogical University) the leading higher educational institution in the sphere of engineering-pedagogical education, to create at its premises an educational and methodology association for developing education plans and

programs, other education and methodology documents, generalizing and distributing the pedagogical experience etc.;

– in order to boost scientific research on the problems of engineering-pedagogical education to open standard doctorate programs in higher educational institutions that perform training of engineering-pedagogical personnel, and to apply to the State Commission for Academic Degrees of the Ministry of Education and Science of the Russian Federation to establish in the Sverdlovsk Engineering-Pedagogical Institute the Doctoral Dissertation Defense Committee for pedagogical specialties.

Those decisions were extremely important for the development of the vocational pedagogical education system. By the beginning of the 1990s the system included 2 engineering-pedagogical institutes, 38 engineering-pedagogical faculties of higher educational institutions, 68 industrial-pedagogical technical schools and a network of advanced training institutes.

Yet all of that was not sufficient for satisfying the demand of the initial vocational education for specialists with a university degree in vocational pedagogical education. All in all, as of January 1, 1990, 89.8% of the teachers of general technical and special disciplines had a university degree including only 8.3% with a university degree in engineering-pedagogy. Thus, most teachers did not have required psychology-pedagogical training. Among masters of vocational training only one in five had a university degree including 3.3% with engineering-pedagogical education. Only 20% of masters graduated from industrial-pedagogical technical schools.

Thus, the fourth stage of vocational education system development was characterized by the expansion of organizational variety by opening specialized engineering-pedagogical higher educational institutions, increasing the level and quality of theoretical, practical and industrial training of specialists.

The fifth stage of development of vocational pedagogical education started in 1992 and is related to implementing of the decisions taken at the state level to further expand the vocational teachers' training.

The organizational-pedagogical foundations of vocational pedagogical education have been enriched upon the creation of the Ural State Vocational Pedagogical University (now it is the Russian State Vocational Pedagogical University) and creating the Education and Methodics Association of Higher Education and Secondary Education Vocational Institutions. A new scientific discipline 13.00.08 – Theory and Methodology of Vocational Education was created. In order to enhance scientific research on problems of vocational education in the Ural State Vocational Pedagogical University (now it is the Russian State Vocational Pedagogical University) a standard and higher doctorate are opened, as well as the Doctoral Dissertation Defense Committee for pedagogical specialties.

Discipline “Professional Education” for training vocational teaching staff with higher education is created (since 2000 – “Professional Education (by industries)”). A multi-level training system “Bachelor’s degree – Graduate - Magister” is organized as an experiment. New qualifications are introduced to the state educational standards of the 1st generation: agriculturalist – teacher, fashion designer – teacher, designer – teacher etc. Engineering-pedagogical education transformed into vocational pedagogical education Since 2000 for those with higher vocational education a generalized qualification title “vocational teacher” was approved which determined the specialists’ sphere of activity and is integrated and cohesive.

Initial professional education is managed on a regional level.



The Federal Law dated December 29, 2012 No.273-FZ “On Education in the Russian Federation” is adopted.

The latest modern stage of the vocational pedagogical education development started in 2012. At this stage the vocational pedagogical education system includes a vocational university (the Russian State Vocational Pedagogical University), engineering-pedagogical institute, engineering-pedagogical faculties, vocational pedagogical and professional colleges (technical schools), institutes and faculties of advanced training.

The re-organization of higher education system in the country has been started. New Federal State Education Standards of higher and secondary vocational pedagogical education have been approved. The multi-level vocational pedagogical education under the system “Bachelor’s degree – Graduate – Magister” is being implemented. The system of initial professional education has been transformed into the initial training level within the secondary vocational education system. Secondary vocational education, in its turn, is managed on a regional level.

The professional standard for vocational teacher has been approved which has led to increase in relevance of the problem of making the qualification of current and future vocational teachers compliant with the requirements of the professional standard.

Thus, the analysis performed allows us to note that the establishment and development of the vocational pedagogical education was caused, first of all, by the needs of initial and secondary professional education for vocational teachers. The idea of integrated industry-specific and psychology-pedagogical training appeared in Russia before 1914.

The logic of vocational pedagogical education development complied with the administrative decisions, and it is only the recent changes in socio-economic and socio-pedagogical environment that allowed to expedite the development process, make it more predictable, better managed and scientifically justified. The conclusion is obvious: modern vocational education requires a new specialist – not only a teacher of a certain discipline, but a specialist with a higher-education degree, who has industry-specific, psychology-pedagogical and technological (professional) training.

On content-related and institutional levels the vocational pedagogical education is influenced by the changes in the society. That’s why in modern environment, in order to determine ways of further development and improvement of organizational-pedagogical foundations (integrated training in the group of pedagogical focus, profilization in the industry-specific training and additional psychology-pedagogical training), it is reasonable to take into account the specific features, regularities and contradictions of development that are inherent to it.

Discussions

The analysis of the scientific literature allows us to state the absence of special research dedicated to historico-logical analysis of the vocational pedagogical education development from the end of the 90s years of the XXth century up to the present moment.

Until recently, among the many studies that cover the content-related and organizational aspects of the establishment and development of the general education school and all levels of the vocational education, there have been no works dedicated to the purposeful description of the history of vocation education in Russia. At the same time, the analysis of the organizational and pedagogical foundations of selecting and training of vocational teachers in the USA and Germany has shown that in the end of the

XIXth and the beginning of the XXth centuries quite a wide system of such training was established in these countries. Depending on the implemented educational programs the system was characterized by different organizational forms, time-limits and content of education.

In the USA heads of training workshops and masters of vocational training attended special 4-year pedagogical courses (departments) that were organized in technical colleges and universities of several states. The education plan included studying general scientific disciplines during the first two years and then mostly special disciplines during the next years. The special disciplines included learning subjects that were directly related to the future industrial training activity: psychology (including pedagogical psychology) and psychology-pedagogical measurements, introduction to pedagogy and fundamentals of pedagogy, school hygiene, organization of education in the USA, industrial and professional training, manual labor methodology etc. The course of education during these years also included 4-hour weekly pedagogical practice. Training at such courses was aimed at industrial training (Shevarev, 1928).

Another method of training masters of vocational training was implemented in pedagogical colleges at special courses where the training period lasted 1 year in case of full-time education and 2 years in case of part-time education. Such courses were also characterized by extensive (480 hours) pedagogical training which included studying such disciplines as history, theory and practice of vocational education, analysis of labor and arrangement of instruction, education of thinking and fundamentals of behavior, as well as pedagogical practice (Barbashov, 1931).

Teachers of special disciplines for secondary vocational educational institutions were trained in technical and agricultural colleges according to two schemes. Under the first scheme, the college students who wanted to additionally receive the right to teach were organized into inter-faculty groups studies in which were performed in addition to studies under the general educational programme. The list of studied psychology-pedagogical disciplines was quite extensive: fundamentals of psychology and pedagogy-psychological measurements, introduction to pedagogy and professional pedagogy, fundamentals of didactics and methodology of agricultural and industrial subjects, professional consultancy and school management (Shevarev, 1928).

Under the second scheme, organization of special discipline teachers' training came down to introducing industrial- or agrapedagogical departments (faculties) into the structure of industrial colleges. The education plan for such departments was formed by changing the education plan of main faculties towards reducing the volume of special (technical or agricultural) disciplines, introducing psychology-pedagogical subjects and doing pedagogical training within the released time. The time-limits of studying under both schemes amounted to 4 years and corresponded to the time-limits of main training in colleges.

Several differences in organization and content of the above-mentioned training of special discipline teachers mainly regarded the content of psychology-pedagogical course. The general list of this course's disciplines, apart from the above-mentioned, included the following: history of pedagogy, pedagogical and experimental psychology, pedagogy, psychotechnics, testology, school hygiene, professional education, organization and management of schools, inspecting school works etc. (Shevarev, 1928).

A distinctive feature of the structural and organizational scheme of vocational teachers' training in the United States was that it included the advanced training system (evening courses, accelerated summer courses, conferences etc.). This system was intended for engineering and technical practitioners invited for teaching special



disciplines and managing the industry-focused professional training who did not have a special pedagogical training.

Training of vocational teachers in Germany was mostly organized in a way similar to the USA.

In our opinion, the results of the performed analysis of vocational teachers' and masters' training (see experience of Russia, USA and Germany before 1914) confirm that in all these countries vocational education existed as an independent type of education and its organizational and pedagogical foundations were mostly similar. During that period in Russia there was no advanced psychology-pedagogical training system for engineering and technical practitioners who taught in elementary vocational educational institutions and has no pedagogical education.

The main difference between Russian and foreign experience regards the level and content of psychology-pedagogical training. Such training in educational institutions of the US and Germany tended to be fundamental and was superior to the Russian system in width and variety of aspects.

Currently several Russian books and articles are known for covering certain issues of vocational teachers' training (Veselov, 1961; Voevodin, 1973; Ivanovich, 1958; Kairov, 1930; Kravtsov, 1977; Lednev, 1975; Malenko, 1980; Prokhorovich & Kovalenko, 1975; Romantsev, 1997), monographs by L.Z. Tenchurina (1998) dedicated to history of vocational pedagogical training during 1920–1991 and by V.A. Fedorov (2001) which describes the periodization up to 2001. Besides, during the period of activity of the Education and Methodics Association of Higher Education and Secondary Education Vocational Institutions of the Russian Federation since 1988 up to the present time the data on vocational pedagogical education development have been accumulated. The presented historico-logical analysis of the vocational pedagogical education has been mainly carried out using the referenced materials.

Conclusion

The results received during the research confirm and elaborate the conclusions of the prior research (Fedorov, 2001). It is stated that the development of the vocational pedagogical education as a socio-pedagogical system is influenced by social and economic factors, and at the same time the system functions on the basis of own regularities and principles and has a tendency towards cohesiveness and further development:

- a personality of a student and a teacher in this system is both a target and an actor;
- the main direction of the vocational pedagogical education system development was the conformity to the requirements set by the vocational education and industry;
- based on the qualitative changes of the organization and content of vocational pedagogical education that are perceived as a reaction to socio-pedagogical environment at certain periods of time, the stages of establishment and development of the vocational pedagogical education are identified;
- the idea of integrated industrial and psychology-pedagogical training and professional training is the leading one for elaborating the vocational pedagogical education development strategy.

Recommendations

The proposed periodization of establishment and development of the vocational pedagogical education in Russia can be used by researchers and administrative and pedagogical personnel of different levels (federal, regional, local):

- 1). to study the status of the current level and further prognosis and projecting of the development of the vocational pedagogical education system in the country;
- 2)/ to evaluate work of educational organizations that provide training of vocational teachers;
- 3)/ to determine the directions of further scientific research and studying the development of the vocational pedagogical education in a dynamically-changing socio-economic and socio-pedagogical environment.

The results of the presented research will be useful for academic specialists and practitioners in the sphere of vocational pedagogical education who participate in training vocational teachers and research problems connected thereto, as well as for students and post-graduate students of vocational universities, faculties, colleges and technical schools.

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No potential conflict of interest was reported by the authors.

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