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«School-laboratory» - teacher training base for mastering the collective way of learning

Abstract. *School-laboratory is a specially organized group of teachers of one school who want to master innovative activities, willing to make changes in their own professional activities. As a result of this rotation, the needs of each teacher are satisfied in the continuous and individualized nature of vocational training in conditions of advanced training, as well as in the ability to build a new model of productive learning for each student in practice. This approach takes into account the age (experience degree), psychological and pedagogical, and individual characteristics of the adult learner in advanced training. This is important when each student has the right to choose organizational forms, means, teaching methods, also the degree of immersion in innovative practice and the theory he/she is involved in. On the one hand, this kind of training is individual in its nature in the system of advanced training, and on the other hand, there is a collective reflection (collective thought activity) in resolving emerging difficulties in practice, in search of a way out of emerging situations, in general, in resolving various problems related to teaching activities.*

The article deals with the concept of a collective way of learning, the technological aspect. Using the technology of communicative mutual learning, we include the natural structure of learning - dialogic pairs in the educational process. Based on the results of scientific research, the main vector of the further progressive development of education is proposed, associated with the transition to a collective way of teaching.

Keywords: *school-laboratory, collective way of learning, innovation process, innovation activity.*

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Introduction

In educational practice, there are various ways of mastering innovation. Basically, teachers gain knowledge about innovations in refresher courses and through self-education. This way of mastering the new is focused, first of all, on cognition, on acquiring knowledge about specific innovations, however, having such knowledge, the teacher cannot always get positive results in his practical innovative activity. He needs to acquire a set of practical skills and abilities for

the implementation of a specific innovation. This can be done only in the conditions of real school practice. It is in the practical activity of the teacher that the formation of interrelated subject-theoretical, didactic, methodological, psychological, and pedagogical skills, as well as organizational and managerial qualities of the teacher's personality, is possible. These abilities, skills, and qualities are in demand by specific innovative practices and are acquired, formed, and improved by the teacher in the same innovative conditions.

Materials and methods of research

We consider the «School-laboratory» (on the basis of secondary school No. 21 in Krasnoyarsk), as the basis for the development of innovative practice, and as the basis for the implementation of the step-by-step developmental preparation of the teacher for innovative activities in the context of the innovation itself.

In the encyclopedic dictionary, the base (in French it is base, in Greek it is basis) is considered the fundamental basis of something [1, p.493].

Defining the “School-laboratory” as the basis for the development of innovative practice, we consider it as a social institution, a public-state system designed to meet the educational needs of students, parents, teachers, and the state. We understand the «school-laboratory» at the same time and as material, innovative, didactic, and research base; and as the basis for the reproduction of innovation and the formation of conditions that ensure this reproduction; and also as a pedagogical community of like-minded people. In these real conditions, we carried out a step-by-step developmental preparation for mastering innovation by a teacher. In the «School-laboratory» conditions of comfort are created for the work of educators-innovators. It functions as a co-creative organization that is a collaborative activity of educators, students and their parents. Planning their activities, defining the functions, we believe that it is necessary to organize their interaction, i.e. build the structure of their joint activities.

On the one hand, «School-laboratory» in secondary school No. 21 in Krasnoyarsk is a school. On the other hand, it is an experimental laboratory, a structural unit of Krasnoyarsk IPKRO. Its basic platform for the formation of a new educational practice is teaching children through the technology of communicative mutual learning, as well as training teachers in the context of the development and formation of this innovative practice. In the educational space of the school, there is a combination and implementation of the relationship of two important innovative processes: educational - for schoolchildren and educational - for teachers.

Both of these processes take place in the same innovative mode.

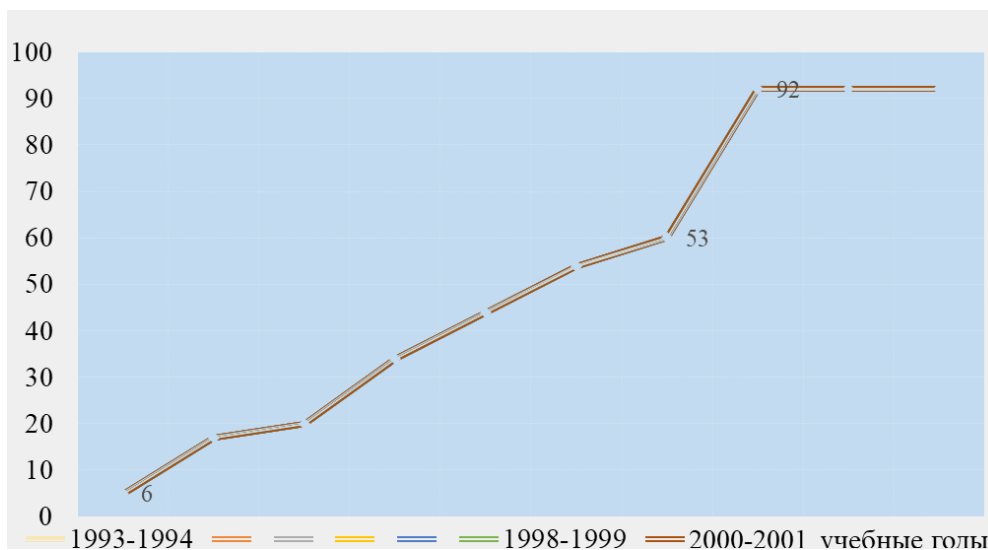
It should be noted that in the «School-laboratory» the teacher performs both normal functional duties and new ones related to the development, implementation and dissemination of innovations to other schools. In such a way, teachers learn to track the innovative educational process at different stages of its transformation, acquiring new skills, professional qualities, changing views, and traditional approaches in their activities. In this context, the teacher acts as subject and object of education at the same time. We believe that preparing teachers for mastering innovation within the framework of «Schools-laboratories» is an integral part, a constant of a holistic educational process in improving the qualifications of a teacher at IPKRO.

«School-laboratory» was formed as a permanent base for the further development of innovation, its reproduction, as well as the preparation of teachers for innovative activities. On its basis, the teacher is included in a new type of activity, which makes up a significant part of innovation. In fact, every school teacher working in an innovative mode has to master new professional skills, mastering a specific innovation.

However, only knowing the theoretical foundations of innovation in the process of innovative training and introducing them into school practice, the teacher learns to competently carry out innovative activities, providing an effective result. For this purpose, special organizational and pedagogical conditions are created to prepare teachers for innovative activities on the basis of the «School-laboratory».

Thus, a special educational space is created for each teacher, in the conditions of which naturally the teacher mastering new ways of thinking and acting. As a result, there formed the teacher's professional qualities that are necessary for the implementation of a specific innovation.

The Russian country has a certain experience of innovation. Thus, in St. Petersburg Technical University, there has been a special training of an «innovation manager» for industrial enterprises since 1998. In the field of education, in our opinion,



Picture 1. Participation of teachers of the «School-laboratory» in innovative activities (%)

* Note: vertically -% of participants in innovative activity, horizontally - dynamics by years.

innovation is possible in the course of teacher training at the IPK RO and innovative activities directly in the «School-laboratory». This will make it possible not only to qualitatively improve the professional training of a teacher, but also, at the same time, to purposefully prepare him for innovative activities, for the further effective implementation of innovation in school practice. In this case, success and quality will determine the competitiveness of the Laboratory School. Particularly valuable in her work is openness, enabling free visit training sessions by teachers who have a need to «try themselves» not only in «living contemplation» of innovative teaching, but also, being subject of innovation, practically take part directly in the learning process of children and themselves.

For teachers-innovators, as much as possible (taking into account the real capabilities of the school, its resources), conditions are created for co-creation, self-realization, self-affirmation, as well as adjusting their own pedagogical activities, “inside” in a circle of like-minded people, comprehending successes and failures in the development and implementation of innovations by means of collective thought activity ...

The meaning of this incorporation is for teachers to participate in the innovative process - the development, implementation and distribution

of a new technology of reciprocal learning. The establishment of the “School-laboratory” has been since 1991 with the preparation for innovative activities of a small creative group of mathematics teachers from secondary school 21 in Krasnoyarsk. Initially, an innovative problem has been identified. There has been carried out a diagnosis of the level of professional knowledge and skills of school teachers. The figure shows the dynamics of the involvement of teachers of the “School-laboratory” in specific innovative activities.

The graph shows an upward trend in the employment of teachers of the “School-laboratory” with productive innovative activities. In the 1993-1994 academic year at the beginning of experimental work only 6%, in 1998 - 53%, and in 2000 - 2001 - 92% of teachers were involved in innovative activities. Today 78 teachers are included in this process. They have become familiar with the new technology quite well and are able to train successfully schoolchildren at each of the three levels, monitor work, and, constituting the core of the School, have become employees of the research laboratory at the IAT of EW.

The most significant strategic mission in its activities is to form a new educational practice in the context of using the technology of

communicative reciprocal learning. According to the concept built up there are conditions created for self-actualization of the members of training, the place of the corresponding innovative mode of work is determined, valueological, medical and health-improving principles of training are implemented, and a culturological approach to teaching is carried out. Teachers take an active part in the work of problematic creative groups, educational workshops, subject methodological associations, etc. When developing the teaching and educational process, there is a movement vector from the traditional demanding structure of the lesson to a free-mode class (2-3 lessons at a run). Based on the principle of completeness of training where a person himself/herself builds up the working conditions, determines the work sequence depending on his/her goals and needs, interchanging the intensity of activity with rest, i.e. at school, in teaching itself, some characteristic features of the new pedagogy arise - the pedagogy of the free personality. The "School-laboratory" model has been developed.

In this school, we consider only the technological aspect in accordance with the CSR concept. Using the technology of communicative reciprocal learning, we include the natural structure of communication, i.e. communication in pairs in the educational process. Innovative principles are used in the implementation of innovative activities in the learning process:

- completeness;
- ongoing and immediate acquired knowledge transfer to each other;
- cooperation and mutual assistance between students;
- division of labor;
- pedagogization of the activities of each participant;
- internationalization and multilingualism of teaching [2].

All the listed principles are interrelated and represented in real terms the unity that determines how and in what direction the educational process should be restructured. The integrated implementation of the above system of principles is the essence, the core of learning in the context of mastering this innovation, the

basis for the development of innovative practice created by the "School-laboratory".

The methodological basis of the organization of innovative activity is determined by the fact that many objects, phenomena, processes surrounding a person are interconnected and interact with each other. These, not isolated from each other, objects, processes can be cognized, studied from the standpoint of their consistency (N.V. Kuzmina, V.G. Afanasyev, Yu.A. Konarzhevsky, etc.).

"School-laboratory", in our opinion, acts as an organizational and pedagogical system with subsystems (services) that experience various influences - external and internal, i.e. organized and self-organized at the same time.

The innovative process of the school is provided by special innovation services.

1. Information and methodological service is an important structural subdivision of the «Laboratory-School» where information about the technology of communicative teaching is focused on literature on innovation; description of techniques; technologies; the best experience of teachers in introducing this innovation into school practice:

- authorial curricula, plans, lesson schemes, etc .
- conference proceedings, seminars (abstracts, poster presentations, notes, etc.);
- materials from different periods of implementation of methodological work with teachers (plans methodological association, individual curricula for teachers, etc.), materials on qualifying examinations for teachers of the innovation process. They reveal its characteristics, difficulties of the teacher, positive experience, and fixing the tendencies of its development.

The management of the "School-laboratory" in the context of an innovative mode is specific. Firstly, this specificity is associated with the intensive training of the staff of the "School-laboratory" and the entire teaching staff, and secondly, with the organization of special work with educators-innovators, with the «launch» of their innovative actions, methods, techniques, materials for conducting various contests, pedagogical workshops, etc.

2. The Consulting Service carries out consulting work on various issues of mastering and introducing innovations, as well as helping to get out of «dead-end» situations, analyzing the teacher's «failures» in the innovation process, etc. (This service works weekly).

3. The service of psychological support for innovation provides assistance to teachers-innovators, students, and parents working in an innovative mode. A group of psychologists organizes a psychotherapeutic service to resolve acute psychological problems; psychological counseling for teachers; work is carried out with children in need of psychological help. There is an opportunity for parents of students to use the services of psychologists.

4. Social-pedagogical service studies the nature of the relationship of students in the new learning environment, the process of forming the communicativeness of the individual as a necessary factor of his/her socialization and adaptation; tendency in the development of the team of students, professional interaction of subjects of learning in innovation. The service provides assistance to students, teachers, parents in matters of school socialization, helps to resolve conflict situations, etc.

5. Medical and physiological service. It is represented by the staff of the Scientific Medical and Physiological Laboratory of the IPK RO, engaged in the study of the comparative characteristics of the health of children studying under the conditions of innovation. The dynamics of the state of health of students studying in an innovative mode is revealed.

6. The valeological service ensures the preventive self-regulatory activities of children and school teachers to ensure the safety of their

health, considering taking care of their health as an integral part of the general culture of a person.

7. The monitoring service carries out current and effective monitoring of the innovative educational process in order to identify its compliance with the planned result and assumptions.

All these services provide the effectiveness of the innovation system with the peculiarities of methodological work in a team, with the implementation of an individual-personal variant of promotion in innovation, with the organization of a monitoring service. The "Laboratory School" is open for students of the IAT of EW, courses, teachers of various creative groups: districts, cities, villages of the region, territories of Russia, the CIS. Of course, all this determines the specifics of the management of the «School-Laboratory»

Conclusion

The teacher's professionalism is an integrative characteristic of his innovative activity, which includes scientific-theoretical, and methodological training, as well as professional innovative skills, also skills of creative and research activities. At the same time, one of the most important components of a teacher's professionalism is his creative attitude to his own activities, and constant striving to master innovative methods and techniques that improve the effectiveness of teaching activities.

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References

1. Советский энциклопедический словарь. – Москва: Сов. энциклопедия, 1987. – 1632 с.
2. Дьяченко В.К., Кусаинов Г.М. Основы современной дидактики. – Алматы: «Фылым», 1996. – 386 с.
3. Васильева Е.Н. Технология коллективного обучения: Инновационная педагогическая деятельность: Учебно-методическое пособие. – Алматы: Изд-во «Эверо», 2019.– 125 с.
4. Дьяченко В.К. Развивающее обучение и новейшая педагогическая технология. – Красноярск, 1998. – 125 с.

5. Бабанский Ю.К. Методы обучения в современной образовательной школе. – Москва: Просвещение, 1985. – 200 с.
6. Вершловский С.Г. Педагог эпохи перемен, или Как решаются сегодня проблемы профессиональной деятельности учителя. – Москва, 2002. – 200 с.
7. Васильева Е.Н. Теория и практика подготовки педагога к инновационной деятельности в системе повышения квалификации: монография. – Ростов-на-Дону: Легион-М, 2018. – 200 с.

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«Мектеп-зертхана» - мұғалімді ұжымдық оқыту тәсілін меңгеруге дайындау базасы

Аңдатпа. Мектеп-зертхана-инновациялық қызметті меңгергісі келетін, өзінің кәсіби қызметіне әр кезде өзгерістер енгізе отырып, бір мектептің мұғалімдерінің арнайы ұйымдастырылған тобы. Осындай ротацияның нәтижесінде әр мұғалімнің біліктілігін арттыру жағдайында кәсіптік оқытудың үздіксіз және дараланатын сипатындағы қажеттіліктерін қанағаттандыру, сондай-ақ практикада әр оқушыны нәтижелі оқытудың жаңа моделін құру мүмкіндігі бар. Осындай тәсілмен біліктілікті арттыруда білім алушы ересек адамның жас (тәжірибе деңгейі), психологиялық-педагогикалық, жеке ерекшеліктері ескеріледі. Бұл әрбір білім алушы оқытудың ұйымдастырушылық нысандарын, құралдарын, әдістерін, сондай-ақ инновациялық практикаға және ол игеретін теорияға ену дәрежесін таңдаған кезде маңызды. Бір жағынан, мұндай оқыту тек қалыптасқан біліктілікті арттыру жүйесінде жеке сипатта болады, ал екінші жағынан, практикада туындайтын қиындықтарды шешуде, пайда болған тығырықтан шығудың жолын іздеуде, тұтастай алғанда педагогикалық қызметпен байланысты әр түрлі мәселелерді шешуде ұжымдық ойлау (ұжымдық ойлау қызметі) жүреді.

Мақалада ұжымдық оқыту тәсілі тұжырымдамасында технологиялық аспект қарастырылған. Коммуникативті өзара оқыту технологиясын қолдана отырып, біз оқу процесіне оқытудың табиғи құрылымын – диалогтық жұптарды қосамыз. Ғылыми зерттеулер нәтижелерінің негізінде оқытудың ұжымдық тәсіліне көшумен байланысты білім беруді одан әрі үдемелі дамытудың негізгі векторы ұсынылады.

Түйін сөздер: мектеп-зертхана, ұжымдық оқыту тәсілі, инновациялық процесс, инновациялық қызмет.

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«Школа-лаборатория» - база подготовки учителя к овладению коллективным способом обучения

Аннотация. Школа-лаборатория – специально организованная группа учителей одной школы, желающих освоить инновационную деятельность, внося всякий раз изменения в собственную профессиональную деятельность. В результате такой рациональности происходит удовлетворение потребностей каждого педагога в непрерывном и индивидуализируемом характере профессионального обучения в условиях повышения квалификации, а также в умении на практике выстраивать новую модель продуктивного обучения каждого школьника. При таком подходе в повышении квалификации учитываются

возрастные (степень опыта), психолого-педагогические, индивидуальные особенности обучающегося взрослого. Это важно при осуществлении выбора каждым обучающимся организационных форм, средств, методов обучения, а также степени погружения в инновационную практику и осваиваемую им теорию. С одной стороны, такое обучение носит сугубо индивидуальный характер в выстроенной системе повышения квалификации, а с другой стороны – происходит коллективное осмысление (коллективная мыследеятельность) в разрешении возникающих затруднений в практике, в поиске выхода из появляющихся тупиковых ситуаций, в целом в разрешении проблем разного рода, связанных с педагогической деятельностью.

В статье рассматриваются, в концепции коллективного способа обучения технологический аспект. Используя технологию коммуникативного взаимообучения, включаем в учебный процесс естественную структуру обучения – диалогические пары. На основе результатов научных исследований предлагается основной вектор дальнейшего поступательного развития образования, связанный с переходом на коллективный способ обучения.

Ключевые слова: школа-лаборатория, коллективный способ обучения, инновационный процесс, инновационная деятельность.

References

1. Sovetskij jenciklopedicheski slovar' [Soviet Encyclopedic dictionary]. (Moscow, Soviet Encyclopedia, 1987, 1632 p.), [in Russian].
2. Dyachenko V.K., Kusainov G.M. Osnovy sovremennoj didaktiki [Fundamentals of modern didactics]. (Almaty, «Gylym», 1996, 386 p.), [in Russian].
3. Vasilyeva E.N. Razvivajushhee obuchenie i novejšaja pedagogičeskaja tehnologija [Technology of collective learning: Innovative pedagogical activity: Educational and methodical manual]. (Almaty, Publishing house «Evero», 2019, 125 p.), [in Russian].
4. Dyachenko V.K. Razvivajushhee obuchenie i novejšaja pedagogičeskaja tehnologija [Developing education and the latest pedagogical technology]. (Krasnoyarsk, 1998, 125 p.), [in Russian].
5. Babansky Yu.K. Metody obuchenija v sovremennoj obrazovatel'noj shkole [Methods of teaching in a modern educational school]. (Moscow, Enlightenment, 1985, 200 p.), [in Russian].
6. Vershlovsky S.G. Pedagog jepohi peremen, ili Kak reshajutsja segodnja problemy professional'noj dejatel'nosti uchitelja [Teacher of the era of change, or How the problems of professional activity of a teacher are solved today]. (Moscow, September, 2002, 200 p.), [in Russian].
7. Vasilyeva E.N. Teorija i praktika podgotovki pedagoga k innovacionnoj dejatel'nosti v sisteme povyšeniya kvalifikacii: monografija [Theory and practice of teacher training for innovation in the system of advanced training: monograph]. (Rostov-on-Don, Legion-M, 2018, 200 p.), [in Russian].

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