

PROFESSIONAL COMPETENCE OF MODERN MATHEMATICS TEACHER

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The article deals with questions of the system of professional self-improvement and development of a modern teacher, his mission and role in the period of reforming the Ukrainian school. The study reveals the essence of concepts of “professional self-improvement”, “self-education”, “self-upbringing”, “and professional skills of the Ukrainian teacher”. The paper presents examples of the professional competence development of the mathematics teacher by means of modern information technologies, the teacher’s electronic portfolio, the blog as an instrument for raising the level of competence of the student in the modern Ukrainian school.

Keywords: modern teacher, creative mission, program of individual development, professional development, self-education, self-knowledge, pedagogical skill.

The ideal teacher understands that cannot insert its brain into the head of a pupil and can not live a life instead of a pupil, and therefore the task of the teacher is to teach the pupils to be independent, responsible, resilient to life trials. The true teacher must work for the future, ahead of his time. A teacher must worry not only for a separate personality, but also for the world of people in the whole. Due to this, the pedagogical profession becomes a creative mission. The mission of the teacher is not only his own interests, motives, plans. One is an intermediary between children and a system of ideas, traditions, culture of people and mankind. The duty of the teacher is to bring up decent people who will be able to multiply the achievements of civilization. The new Ukrainian school needs a new teacher who will become the agent of change.

The so-called Y generation, or the “children of the millennium” are gaining in weight in Ukraine, as in the whole world. They were born from 1990 to 2000. Their views, ways of life are fundamentally different from older generations. But there is a generation of Z. The fundamental property of this new generation is that they relate to the introduction of high technologies with ease. But there is a generation of Z. The fundamental property of this new generation is that they relate to the introduction of high technologies with ease. They use these technologies at a completely different level than even the representatives of Y. This generation was born in an era of postmodernism and globalization. It accumulated the features of predecessors, close in time, as well as the features that we feel too, but are not able to precisely formulate yet.

Integration into the European space of our country causes changes in approaches to the development of school education, introduces new requirements for the teacher’s professional training. In such circumstances, the teacher must have a general and vocational pedagogical culture, be initiative, perceive the innovative challenges of the society, be aware of the information, be able to choose non-standard decisions, have the ability to understand, create a situation of psychological comfort, inspire trust and sympathy, be respected by children.

A well-known Ukrainian teacher V.O. Sukhomlynsky in his book “Pavlishka High School” paid attention to the fact that “the teacher is the first, and then, the main light in the intellectual life of a student; one awakens a thirst for knowledge in the child, respect for science, culture, education [1].

Great attention is paid to the teacher’s personality at the stage of reforming secondary education, and at the same time, society puts demands on the teacher: one of which is the ability to self-improvement. And this means continuous learning. Professional self-improvement is a conscious, purposeful process of raising the level of its own professional competence and developing professionally significant qualities in accordance with social requirements, conditions of professional activity and its own development program. This process takes place in two forms – self-education and self-upbringing. Self-education is a process of improving the knowledge, skills and abilities that a teacher has in order to achieve the desired level of professional competence. Self-upbringing is a process of improving the knowledge, skills and abilities that a teacher has in order to achieve the desired level of professional competence. Self-education - an active purposeful activity with the system of formation and development in itself positive qualities and elimination of negative ones.

The purpose of the article is the substantiation and disclosure of the main components of self-improvement of the modern teacher.

The problem of professional growth of a teacher has always worried scholars. The personality of the teacher is the accumulation of power that stimulates positive processes in society and solves the challenges of the modern economic world. The formation of a teacher as a professional and a subject of productive activity approaches to the ideals of culture, the tops of pedagogical skill, creative self-realization. Scientists focus on the professional development of the individual, denoting it as an individual trajectory of professional development, professional skill [2].

The main role of the teacher today is not only to give certain knowledge of the student, but also to teach him to study, to independently acquire knowledge, apply them in practice. So the teacher must form competencies in the individual as a general ability of an experienced person based on knowledge, skills, life experiences and values. The professional skills of the teacher are formed in accordance with the demands of society, European standards of school education.

The development of a competent teacher was considered by domestic and foreign scholars at different stages and levels of education.

So the works of G. Ball, E. Klimov became the conceptual basis of professional training of teachers in higher education, formation of their professional competence; the professional competence of the teacher and pedagogical skill is considered in the works of O. Aleksyuk, I. Zyazyun, V. Kuzmina, A. Markova, V. Slastonin. A content characteristic of the competence of teachers is found in the works of L. Bezglasnoy, I. Titarenko, V. Demidenko, V. Pereplyichy.

A. Bodalev, G. Danilova, L. Danilenko, I. Zhernosek, V. Oliynyk, M. Kravtsov, I. Lerner, A. Markov, M. Potashnik, M. Skatkin, A. Shcherbakov investigated the development of professional competence of teachers in the system of methodical work.

Competence paradigm in education is a challenge of needs, of problems of the present. The development of professional competence of a teacher is an indispensable condition and an obligatory part of its professionalism. That is why one of the ways of updating and improving the quality of education is the introduction of a competence approach in the process of raising the level of qualification of teaching staff of general educational institutions.

As school practice shows, methodological work at school increases the level of pedagogical skill of the teacher. In the educational institution, methodological work is carried out through the activities of methodological associations of teachers. School methodological

association is the oldest kind of teacher community [7]. Today, when information technology and online resources get rapidly into school, the school methodological association can exist in various forms: pedagogical communities, interest groups, inter-district methodological associations, etc. As a result of joint activities, the product can be created on various issues, for example, work with gifted youth, recommendations to mathematical research, project activities, the creation of a common e-learning content for students.

Mastering promising pedagogical experience, research work on the subject are important for the professional growth of the teacher. This gives the teacher the opportunity to understand the regularities of the educational process, to learn pedagogically correct perception of each child, to study psychological and pedagogical literature, to meet with teacher- innovators to solve pedagogical problems; to take part in the work of methodological associations, seminars, conferences, pedagogical readings, etc. As well as for a modern mathematics teacher there is a need to get acquainted with the pedagogical press, television, communication with the use of social services, the ability to find interesting information on the Internet, work on courses, participate in projects, online consultations, Web conferences.

In the process of professional self-upbringing the teacher must feel free expression. Teaching activities can not be regulated and squeezed into the scope of the instructions. Adoption of professional freedom provides an effective organization of the process of professional growth of a teacher, which is a kind of search for its own path, the acquisition of its own «voice», «handwriting». A teacher who has the freedom of expression, able to manage its own development, can direct its creative forces to finding new ways of teaching and upbringing students.

Self-education is self-acquired knowledge, taking into account personal interests and objective needs of a secondary school, obtained from different sources in addition to those received in basic educational institutions. A distinctive feature of self-education of a teacher is the result of improving the quality of teaching the subject, the quality of educational work, raising the level of knowledge, parenting and development of students [3].

Improving pedagogical skills is, above all, self-education, personal efforts aimed at increasing its own culture of work and in the first place the culture of thinking. Without an individual opinion, without an inquisitive glance on its own work, methodological work is impossible.

Relying on the research of scientists (F. Honobolin, V. Kuretecki and others), we can identify the leading abilities that the teacher must develop all the time: communicative –that includes good attitude towards people, goodwill, sociability; perceptiveness – professional attention, pedagogical intuition, understanding the problems of another person; dynamism – the ability to volitional influence and logical conviction; emotional stability - the self-control; optimistic forecasting; creativity [6].

During the professional life, each teacher acquires a “pedagogical treasure”, which consists of the ability to create a unique precis of a lesson that has its own development in class with pupils. Who do children like? The children love the one who is not like everyone, who every day pleases them with novelty, who is not everyday gray, but a festive creative person. Teachers which conduct lessons for college together with their pupils and receive high praise, thereby raising their rating in the eyes of colleagues, parents and children. As a rule, in many schools where the teacher’s work is creativity, lessons pass in non-standard scenarios. At such lessons, students independently master the knowledge of learning communication, the ability to prove the theorem, to choose the best methods for solving problems. And every teacher is happy to share his achievements with colleagues from a school or district.

The freedom to choose methods and forms of work with pupils is another teacher’s treasure – this is work in pairs, groups, studying a common task, creating a joint educational project, compiling tasks according to local material, holding role-playing games, etc. The only requirement is the formation of knowledge with a detailed proof, with its own opinion, with elements of scientific research. Can the teacher be modern, if he does not feel the awakening of natural talents in children? No new school, no new society, no free Ukraine can be without a creative pupil and teacher.

Hence, professional development is not only growth and improvement, but also destruction and professional destruction, which are characterized as changes in the psychological structure of the individual in the process of teaching activity [2].

Self-education contributes to the formation of an individual style of pedagogical activity, helps in understanding pedagogical experience and self-independent work, it is a means of self-knowledge and self-improvement, through pedagogical development.

One of the modern methods of professional self-improvement of a teacher is the method of “electronic portfolio” - a description of work with an analysis of its effectiveness, the most successful methodological developments, examples of creative work of pupils, etc. It can also contain documents that fix the result of activities (diplomas, letters, gratitude, characteristics, etc.), scientific, creative works, own articles, articles of famous scientists, which cover the peculiarities of the problem over which the owner of the electronic portfolio, the psychological research, precise of lessons, educational measures. All this composition is considered as a summary of the teacher’s work for a certain period. The method of “electronic portfolio” helps the teacher not only to systematize the pedagogical experience, the accumulated knowledge, but also give an objective assessment of their own professional level. The materials of “electronic portfolio” can be arranged according to directions of pedagogical activity, interests, chosen scientific problem, years, etc. The basis of work on the electronic portfolio is the reflection of the professional way of the teacher [2].

During the information society, the teacher can not act without such a modern tool as a computer. Therefore, enriching oneself and gaining own experience, the teacher forms the ability to work with the social service of the web. 2.0. At the present time, a business card of each teacher is created blog. Communicating with pupils and parents through a school site is a norm already in teacher’s pedagogical activity. V.O. Sukhomlyinsky wrote: “A good teacher knows much more than a high school program suggests. The student must see in the teacher a reasonable, knowing, thinking, in love with the knowledge of man” [1]. The teacher creating a learning environment (blog) for pupils increases motivation, a desire to learn throughout the study at a convenient time for the pupil. Such a pupil becomes motivated to the educational process and as a result there are performances at contests of experimental work, Olympiads, protection of ideas (projects), etc.

The next step in self-education is the combination of pedagogical experience with scientific research. Logical transition consists in the fact that the teacher chooses a pedagogical idea which plays an important role in the educational process. The teacher begins to plan of research: studies the idea, selects the facts, reads pedagogical and methodological literature, chooses the modern methods, forms, means, prescribes methodological recommendations, selects the didactic material, tests them in practice, and concludes at the end of the activity. So pedagogical practice with elements of scientific research are combined.

O. Zakharenko wrote that when a teacher analyzes its work thoughtfully, one has an interest in theoretical reflection on his experience, his desire to explain the causal relationships between pupils’ knowledge and pedagogical culture.

No new school, no new society, no free Ukraine can not be without a creative teacher. And independent Ukraine needs a new school like an air, like the water, which will go one step ahead of society. The school with a new content, with a new system and technology of education and upbringing - honest and virtuous, which will give the country a honest, wise, decent, hard-working generation, who will never renounce its statehood, its history, will not deny the holy truths, justice, old and new traditions, friendship

and respect for the culture of other peoples. The best teacher of a citizen of Ukraine is own true history, culture, traditions of the nation“, says O. Zaharenko. [4, p.48 - 49]

Summing up, it should be said that to be a master of pedagogical work it means to possess the methodology, technology of realization of the initial position in the pedagogical process. The more motivated teachers there are in the school, the more we can expect motivated pupils who will be competitive and demanded in the labor market not only in Ukraine, but also in Europe.

Being a master of pedagogical work it means constantly looking for ways of fuller, more successful, deep, accurate, and sometimes sophisticated and skillful resolution of the problems of upbringing and education, organization of the life of children, problems with working with parents and society.

Being a master of pedagogical work it means to be able to foresee possible complications in the pedagogical process and to prevent them in a timely manner, to be able to immediately and correctly solve difficult pedagogical situations, to have a pedagogical feeling, to be able to manage a pedagogical process without coercion, with ease, to be simple, ordinary, but necessary and a favorite for children, putting joy in them, caring, confidence and optimism.

The master of pedagogical work is a person who has a broad outlook, sensitive, benevolent, principled. One is struggling for the new and against the old-fashioned pedagogical work, closely watching the development of pedagogical and related sciences, with promising experience.

Consequently, we can conclude that modern educators need to study throughout life to continuously replenish their scientific knowledge through books, periodicals, the Internet.

According to V. Sukhomlynsky, “The more deeply your pupils are in love with the subject you teach, the better you are a teacher, the more educator and teacher your person joins. The problem of upbringing abilities, inclinations, vocations can not be solved without the direct influence of the teacher’s personality on the personality of the pupils. Abilities are cultivated only by abilities, inclinations - by inclinations, vocations - by vocations.

Good teachers start at the school desk. The light of the love to the teacher’s profession such person is able to ignite which loves children, has the greatest pedagogical wisdom - constantly awakens in the young heart the desire to be good, the desire to become better today than yesterday [5, 185 p].

References:

1. Sukholinsky V.O. Selected works in 5 vol. – Vol.4 – K., Soviet school, 1976. – 640 p.
2. Meshko G.M. Introduction to the pedagogical profession: Textbook. Manual., G.M. Meshko. - K., Academic edition, 2010. – 200 p.
3. Moiseyuk N.E. Pedagogy: Tutorial; .5th edition, supplemented and redone., N.E. Moiseyuk – K., 2007. – 656 p.
4. Zaharenko O. Hurry to do good: reflections of the academician-pedagogue on the fate of education and the child, teacher and family, the region and the Motherland., O. Zakharenko. – Cherkasy., 1997. – 28 p.
5. Sukhomlynsky V.O. One hundred advices for the teacher., V.O. Sukhomlynsky – K., Sov. Sch., 1988. – 310 p.
6. U profesionalizmi - dija! [Professionalism is an action!], Access mode: <http://kuropyatnik.blogspot.com/>
7. Osvita.ua., Access mode: <http://osvita.ua/>



CHALLENGES IN TRAINING ACADEMIC AND PEDAGOGICAL STAFF IN UKRAINE

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The article deals with the state of the current system of training and retraining of qualified academic and pedagogical staff with consideration to the society’s requirements to the scientific ‘elite’ and based on a holistic scientific approach that is in turn based on development of effective technologies and understanding of modern and future conditions of Ukrainian science.

Keywords: *academic and pedagogical staff, system of training and retraining of qualified academic and pedagogical staff, doctoral and postdoctoral studies.*

State policy should be oriented towards ensuring the interests of individuals, quality and accessibility, competitiveness, integration into European and global educational and research networks, regular national and international monitoring and comprehensive analysis of the development of education, stable and sufficient provision of financial and intellectual resources.

Analysis of the real conditions of educational, pedagogical and psychological sciences proves the need to develop their organizational, human, financial and resource provision according to societal demands and modern challenges as well as the need to develop in line with European and global tendencies in the development of educational and research environments. It is necessary to realize the importance of education, pedagogy and psychology in establishing a new type of civilization - a knowledge society that is dominated by research and innovation.

Efficiency of modern specialists in current labor market conditions is largely dependent on their personal characteristics and competitiveness. This is especially important for academic and pedagogical staff (hereinafter APS), who are mandated with training the next generations of professionals, capable of working under competitive market conditions. APS also have to serve as an example of such professionalism and competitiveness they are trying to instill in their students through training programs.

Adoption of the Law of Ukraine on “Scientific and research and development activities” in 2015 was an important step towards the integration of Ukraine into the European research space.

Currently, Ukraine prepares APS of higher qualification in 25 various scientific domains and in over 600 specializations. The country has a network of specialized academic councils that are responsible for awarding Candidate of Sciences and Doctor of Sciences academic degrees in a number of areas. As of today, just the institutions attached to the National Academy of Pedagogical Sciences have 1066 academic researchers, which is 22.2 % more than in 2015. 17 specialized academic councils in 10 scientific institutions facilitated the defense of 206 theses: 49 doctoral and 157 candidate of sciences.