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PROFESSIONAL DEVELOPMENT OF BIOLOGY TEACHERS: A COMPARATIVE ANALYSIS

ABSTRACT

Approaches to the professional development of teachers in foreign countries are analyzed. Analysis of the experience of world countries has shown that both public schools and specialized institutions/leading academies and private companies make a significant contribution to the continuous, professional development of teachers, their self-education and professional development. It is emphasized that the professional development of different countries has its own characteristics, is constantly being transformed, taking into account modern needs. Various forms of education, innovative methods, programs, projects, courses are emphasized on. In Finland, teacher training is provided through special programs, school-based project activities, international cooperation projects and national research programs. The training is organized by the National Education Agency of Finland. In the UK, a teacher must take an 18-day (30-hour) training each year. Teachers can choose courses offered at universities, independent counseling centers, education departments, teacher training centers, local education authorities, schools. In France, advanced training is provided by various postgraduate education institutions, university institutes and regional education centers. The professional development of German teachers is based on two main factors: professional development and additional training. In China, self-study and teacher training courses are provided on the basis of educational institutions and envisage an accumulative credit system. Continuing education of Singapore teachers is provided by the National Institute of Education several times during their professional careers. The state financially stimulates the professional development of teachers.

Keywords: professional development, educational environment, tendencies, qualification, education, world practice, competence, advanced training.

АНОТАЦІЯ

Проаналізовано підходи до професійного розвитку вчителів у зарубіжних країнах. Аналіз досвіду світових країн показав, що як державні навчальні заклади і спеціалізовані установи / провідні академії та приватні компанії роблять вагомий внесок у неперервний, професійний розвиток педагога, його самоосвіту. Підкреслено, що професійний розвиток різних держав має свої особливості, постійно трансформується, враховуючи сучасні потреби. Акцентовано увагу на різних формах навчання, інноваційних методиках, програмах, проєктах, курсах. У Фінляндії підвищення кваліфікації вчителів відбувається за допомогою спеціальних програм, проєктної діяльності на базі шкіл, проєктів міжнародного співробітництва і національних дослідницьких програм. Організацію підвищення кваліфікації здійснює Національна Агенція Освіти Фінляндії. У Великобританії вчитель щороку повинен пройти підвищення кваліфікації тривалістю 18 днів (30 год). Вчитель може обрати



курси які пропонують в університетах, незалежних консультативних центрах, департаментах освіти, вчительських центрах, місцевих органах освіти, школах. У Франції підвищення кваліфікації здійснюють різноманітні установи післядипломної освіти, університетські інститути та регіональні центри освіти. Професійний розвиток німецьких учителів базується на двох основних факторах: підвищення кваліфікації та додаткове навчання. В Китаї самонавчання та курси підготовки вчителів здійснюють на базі навчальних закладів та передбачають накопичувальну кредитну систему. Неперервна освіта вчителів Сінгапуру здійснюється Національним інститутом освіти кілька разів за професійну кар'єру. Держава фінансово стимулює професійний розвиток вчителів.

***Ключові слова:** професійний розвиток, освітнє середовище, тенденції, кваліфікація, освіта, світова практика, компетентність, підвищення кваліфікації.*

INTRODUCTION

Today, education is being in transition. Transformational changes in the modern educational space are connected with the need to form a new type of future teacher. An innovative teacher, a professional in his field, mobile, able to continuously improve himself.

The main task of educational processes in modern educational institutions should be the development of the ability to think, to obtain information independently and critically evaluate it, but not just accumulate and memorize information (Kovalchuk, 2018).

Therefore, in the pedagogical professional development of teachers it is fundamentally important to take into account the experience of other countries.

THE AIM OF THE STUDY

The article analyzes the trends of professional development of teachers around the world. The identified ideas can be embodied in improving the system of professional development of teachers in Ukraine.

THEORETICAL FRAMEWORK AND RESEARCH METHODS

Issues of professional development of teachers were considered by both domestic and foreign scientists: N. Huziy, H. Danylova, H. Maralov, L. Mitina, V. Slaktionin, Y. Slipich and others. V. Andriushchenko, M. Byrka, I. Zyazyun, V. Oliynyk, V. Kovalchuk, T. Sorochan, T. Asunta, J. Edge, O. Kulpan, D. Uznadze and others studied the issues of professional development of teachers in the system of postgraduate education.

The main research methods that contributed to the goal were: analysis and systematization of scientific and pedagogical information aiming to study the experience of professional development of teachers in foreign practice.

RESULTS

The future of humanity, society and every state is unquestionably connected with youth, their education and intellectual potential. In the long run, we should focus on the quality of education, which is constantly modernized and sets new requirements for teachers, their competence, creative skills and professionalism, and the teacher, at the same time, becomes the object and driver of positive change. A modern teacher must be a professional who responds quickly to changes in the educational environment, develops and implements innovative methods of teaching and education and who continuously studies and self-improves, who grows professionally throughout life. In the history of Ukrainian pedagogical thought, the problem of professional development of teachers occupies one of the leading places. It should be noted that the problem of improving the professional



development of teachers is not fundamentally new for pedagogical practice, but in world practice there is considerable experience in the professional development of teachers. Today Ukraine needs to update the system of professional development of teachers, taking into account the experience of developed countries. (Martynets, 2017). Reforming the education sector requires a detailed analysis of various innovations, getting acquainted with the processes of professional development in different countries to determine the degree of its effectiveness. In Ukraine, Finnish education is actively promoted, as well as professional activities and teacher training. In Finland, teacher training is provided through special programs, school-based project activities, international cooperation projects and national research programs. The teacher must dedicate three days of each school year to his teaching. The Finnish government allocates €20 million annually through the National Education Agency of Finland (FNAE) for teacher certification. (Asunta, 2006) Teachers' professional training is organized by local municipalities, regular and summer universities, specialized institutions/leading academies and private companies. Every year, the National Education Agency of Finland holds an open competition for funding for teacher training. Both public educational institutions and private companies and non-governmental organizations can take part in the competition. (Holovina, 2020).

Continuing Professional Development is well organized in the UK. Professional development courses for teachers have been carried out since the 1970s. They are held on the basis of pedagogical institutes at universities, independent counseling centers, the Department of Education, teacher training centers, local education authorities, schools and are focused on practical pedagogical situations. Each year, by choosing from a wide range of activities, UK educators are required to improve their professional level, lasting 18 days (30 hours). When the effectiveness of the teacher reduces, the administration has the right to insist on a specific form of training. In turn, the state supports the professional growth of teachers, motivating them by free education and exemption from school for the period of professional development. Instead, in the Ukrainian educational space, professional development does not differ in variability and occurs every 5 years.

In the English system, there are so-called Teacher Centers, which are an intermediate link between the school and local education authorities. Their main tasks are professional growth and assistance to the teacher in solving specific problems of school practice. The number of such centers and the peculiarities of their operation, taking into account the needs of the region, are determined by local authorities. Today in the UK there are popular seminars for local teachers, organized on the basis of several schools, taking into account the common practical educational problems of the region. The content of the programs of such courses is based on the specific needs of schools in a particular district. Here the focus is not only on the knowledge and skills of teachers, but also on the prospect of changes in the levels of students' development. Online inter-school communities and teachers' associations in subject areas are also active. British teacher training is perceived as training throughout the professional activity and updating knowledge in a convenient form, based on previous experience (Semenets-Orlova, 2015).

In France, various postgraduate education institutions, university institutes and regional education centers are involved in raising the professional level of teachers. Their task is to provide teachers with their professional growth and at the same time to orient them in accordance with the real problems of the school and society.

Continuing education in France has priority areas of reforming, including: significant improvement of teacher education, teaching through a research approach, mass



innovation approach in the educational process, the creation of new educational and research institutions of higher level (Synenko, 2002, p. 12). This is the personal orientation of the professional development of the teacher (Korsak & Hraniuk, 2001). For both Ukraine and France, the problems of personal motivation of teachers, lack of replacement in schools for teachers who should be retrained, insufficient budget are urgent (Skrypchuk, 2007).

The content of advanced training courses successfully combines general, special and theoretical disciplines of psychology and pedagogy, as well as the use of acquired knowledge in practice in the school environment. They use educational video demonstrations, modeling, micro-learning, "mini-courses", role-playing games, project demonstrations, telecommunications and information technology. In France, from the beginning of an active career to retirement, all periods of professional development at the expense of the budget or enterprise should be one year (if training is conducted without a break in work or official duties, it is 1200 hours). (Kovalchuk, 2015; Maria Andritsou, 2005).

The professional development of German teachers is based on two main factors: professional development and additional training. The amount of the task of the first direction is related to the training of teachers in the main professions (subject teachers). Tasks of the second direction in land affairs are related to providing teachers with new pedagogical specialties or improving their professional skills for the transition to higher positions (Synenko, 2002, p. 12). In Germany, in-service training is a voluntary task for every teacher who has the opportunity to obtain additional specializations by taking a preparatory course organized by the Ministry of Culture and Education or a university. The choice of additional subjects will take into account the wishes of students and the needs of the educational institution. In case of successful passing of the final stage of teacher training, a teacher will be able to teach the subject in all types of schools. Today, these activities are in great demand in Germany. After all, professionals who are competent in various scientific fields are more likely to realize their abilities and ambitions in the labor market and increase their material well-being (Vakulenko, 1995). Among the forms of advanced training groups should be distinguished the following: interrelated theoretical and practical qualification courses at the highest classification level; specialized problem courses and seminars in order to prepare for the development of specific innovations in school practice; professional courses and seminars prepared by teachers to perform new professional functions; thematic meetings; subject Olympiads and popular science classes; reports on the latest scientific achievements, laws and organizational changes in certain areas; series of lectures; individual reports; meeting seminars and scientific meetings; seminars and courses to prepare for additional exams to obtain new specialties (Kovalchuk, 2015; Häring, 2000).).

In China, teaching is considered to be a highly respected profession, and the current Chinese government attaches great importance to the social status and professional development of teachers. Teacher training courses are organized on the basis of educational institutions and self-education of teachers (Kotelnikova, 2012). To do this, a system of credit accumulation is used, which makes it possible to take into account the achievements of teachers not only during training, but also during interaction at the level of the educational institution (Shatska, 2012). Education is conducted in the form of day, night and distance learning and is formed taking into account the needs of pedagogical experience, level of pedagogical qualification and improvement of methodology. Teachers have the opportunity to take a variety of courses: courses for young teachers; courses according to the professional experience of teachers; courses with the use of information



technology in the pedagogical field; refresher courses in the form of Educational "menu", in which teachers choose the most interesting subjects from the many offered; rural teacher courses; part-time and in-service courses; short-term and long-term, etc. (Kotelnikova, 2010).

According to China's Information Society Development Plan, the National Teacher Education Alliance, the Coordinating Agency for Teacher Education, provides a combination of distance, full-time and independent education and integrates the best educational resources. The purpose of the Internet Alliance in China is to use modern technologies and various training programs to implement large-scale, high-quality and cost-effective postgraduate education programs (Borevskaya, 2003).

The experience of Singapore is interesting, where a lot of attention is paid to teacher training, creating an extensive system of additional education, which is carried out in various directions; the possibility of internships in foreign countries with the availability of appropriate funding, material incentives for the development of professional skills, the creation of research centers with the involvement of teachers in the development of strategies for reforming education. Continuing education of Singaporean teachers is provided by a monopoly institution - the National Institute of Education (based on Nanyang Technological University). Advanced training here takes place several times during your professional career in specially organized courses. The Ministry of Education considers professional development to be its most important task, creating an extensive system of additional education. Teachers can participate in mentoring, developing standards and programs, conducting trainings, etc., and executives are involved in a variety of leadership development courses. To determine the objectives of additional education, teachers are guided by the results of diagnostics of the effectiveness of their work, carried out on the basis of special methods that allow to assess the effectiveness of teachers of any subjects and levels of education. The level of formation of teacher competencies, which in Singapore are a way of thinking, feelings, actions, style of communication, is measured. The purpose of diagnosis is primarily to support the teacher. They can objectively evaluate their work, control the correct choice of career path, determine the need for professional development (Sergienko, 2018). Singaporean teachers are interested in additional education, as the amount of salary depends on it. The state pays each teacher 100 hours of in-service training per year. Moreover, the more intensively the teacher receives additional education, the higher his salary is. Teachers who work in the classroom with students may receive less than specialists who are on internship (Alishev & Gilmutdinov, 2010). Teachers choose a variety of programs for in-service training, often traveling abroad (Yankovych).

CONCLUSIONS

Thus, from the above we can conclude that the issue of professional development of teachers in different countries has certain features. The analyzed world experience shows that educational institutions and organizations make a significant contribution to the professional growth and self-development of the teacher's personality. Therefore, foreign experience will be useful and relevant for Ukraine, as the level of its professionalism, self-improvement and self-realization influences the current socio-economic and spiritual development of Ukraine. Professional development in the system of postgraduate education should meet the personal needs of teachers, improve skills and professional growth. To do this, according to Ukrainian researcher V. Kovalchuk, it is necessary to work out a diagnostic model of professional development of teachers, according to which they could



determine the level of professional skills and personal needs of their development (following the example of the Netherlands) (Kovalchuk, 2015).

The article analyzes the approaches to the professional development of teachers in many developed foreign countries. The issue of creating optimal conditions for improving the system of professional development of teachers in Ukraine needs further study.

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