

**РОЗДІЛ І. ГЛОБАЛЬНИЙ КОНТЕКСТ ІННОВАЦІЙНОГО РОЗВИТУ
ВИЩОЇ ОСВІТИ**

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**PROFESSIONAL DEVELOPMENT OF TEACHERS IN THE USA,
CANADA AND THE UK**

The chapter highlights the peculiarities of professional development of teachers working with gifted students in the United States, Canada and the United Kingdom. Two groups of models of GT teachers' professional development are outlined: 1) models that provide organizational or inter-institutional cooperation; 2) models that do not involve large-scale implementation (can be implemented at school, class level, etc.).

Key words: professional development, gifted and talented students, GT teachers, models of professional development, USA, Canada, UK.

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**ПРОФЕСІЙНИЙ РОЗВИТОК GT УЧИТЕЛІВ У США, КАНАДІ ТА
ВЕЛИКІЙ БРИТАНІЇ**

У розділі висвітлено особливості професійного розвитку вчителів, які працюють із обдарованими школярами у США, Канаді та Великій Британії. Окреслено моделі професійного розвитку ОТ вчителів з розподілом на дві групи: 1) моделі, що передбачають організаційну або міжінституційну взаємодію; 2) моделі, які не передбачають масштабної імплементації (можуть бути запроваджені на рівні школи, класу тощо).

Ключові слова: професійний розвиток, обдаровані і талановиті школярі, ОТ вчителі, моделі професійного розвитку, США, Канада, Велика Британія.

Introduction. Gifted and talented children and youth as the future national elite require special attention and pedagogical support. In this context teacher's qualification plays crucial role. In the USA, Canada and the UK continuous professional development is one of the main conditions of GT teachers' effective professional activity. It helps acquire new knowledge and skills related to the identification of gifted children and youth and GT services provision. Taking into account the fact that in Ukraine gifted children get support from regular classroom teachers, because there are no GT specialists in our country, foreign experience of the studied countries in this sphere seems to be very important.

Analysis of relevant research. Gifted education as a whole and GT teachers' training and professional development in Ukraine and foreign countries in particular have become the issue of special interest of such native researchers as V. Alfimov, O. Antonova, I. Babenko, O. Bevz, O. Bocharova, A. Chichiuk, L. Chukhno, M. Drobotenko, M. Halchenko, Yu. Hotsuliak, M. Kabanets, I. Kholod, Ya. Kulchytska, M. Milenina, A. Sahalakova, A. Sbruieva, M. Sbruiev, V. Stryzhalkovska, P. Tadeiev, N. Telychko, V. Volyk and others.

Aim of the study is to characterize GT teachers' professional development programmes in the USA, Canada and the UK and consider the possibilities of use of progressive conceptual ideas of foreign experience in practice of Ukrainian universities and secondary schools.

Research methods – *terminological analysis* with the help of which the essence of the approaches to GT teachers' professional development in different countries is defined; *comparative analysis* aimed at defining common features and differences in the implementation of GT teachers' professional development programmes in the USA, Canada and the UK and finding the ways of using foreign experience in Ukrainian higher education institutions and secondary schools.

Research results. The concept of lifelong learning involves continuous professional development and teacher training, especially those who work with gifted children and youth as the most vulnerable category of students. It should be noted that professional development, in the broadest sense, is the development of a person in his/her professional role. Under the professional development of teachers A. Glatthorn understands professional growth, which results from an increase in the experience and systematic testing of a teacher as a professional [25, p. 41]. The researcher distinguishes between "professional development", "career development" (professional growth that occurs when a teacher is promoted in his/her career) and "staff development" (introduction of organized professional programs of in-service training for groups of teachers is one of the systemic interventions that can be used for the professional development of teachers) [25, p. 41].

It should be emphasized that until recently the terms "professional development" and "staff development" in the foreign scientific-pedagogical discourse were used synonymously, since the only form of professional development was the development of staff through training programs in the workplace, which included participation in seminars/workshops and short-term courses aimed at providing teachers with new information on certain aspects of pedagogical activity.

In modern conditions, professional development of teachers means a long-term process involving continuous opportunities and systematic measures that promote growth and development in the profession [52, p. 12]. In this sense, professional development concerns both formal (participation in workshops and professional meetings, mentoring, etc.), as well as informal (study of special literature, review of documentary television programs related to academic discipline/professional activity, etc.) experience.

According to E. Villegas-Reimers [52], the process of professional development has a number of characteristics, in particular:

- the basis for professional development is constructivism, in contrast to the “transmission-oriented model”. As a result, teachers are considered to be an active subjects of learning, involved in the solution of specific teaching, assessment, observation and reflection tasks;
- this process is a long-term one, which allows not only to gain new experience, but also to establish links of acquired knowledge with new experiences;
- the process of professional development takes place in a certain context, while the school becomes a community of learners or, by definition of other scholars, the community of inquiry [39], professional community [36], caring community [30], etc.;
- the process of professional development is closely linked to the reform of the school, since it is aimed at creating a culture of an education institution rather than acquiring certain skills;
- the teacher is considered to be a reflective practitioner, which, based on available knowledge, acquires new knowledge and experience, forms his own approaches to teaching;
- the process of professional development involves interaction of teachers, school administrators, parents and other members of the local community;
- this process is multidimensional because the forms of professional development depend on the specific conditions of the learning environment and can have a range of dimensions even in one learning environment. In this context, it is necessary to find out organizational goals, values and practices to determine the most effective model of professional development in a particular situation [52, p. 13–15].

In this context, the opinion of American researches M. Cochran-Smith and S. Lytle about the existence in the educational policy of foreign countries of a number of interrelated approaches to professional development is interesting, in particular: *knowledge-for-practice* –

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generation of formal knowledge and theories by higher education institutions staff that can be used by teachers to improve their pedagogical activity; *knowledge-in-practice* – a certain part of knowledge that teachers must have is “practical”, i.e. can be applied in practice; *knowledge-of-practice* – in this case, knowledge is not divided into formal and practical; teachers acquire knowledge of teaching methods, when they have the opportunity to analyze their practical activities and carry out experimental research in their learning environments [18].

According to American researcher T. Corcoran, effective implementation of professional development programs for teachers should be based on the following principles: stimulation and support of local initiatives (teachers, schools, educational district); awareness of various aspects of teaching (age and individual characteristics of students, theories of personality development, including the development of giftedness (*M.B.*), content and construction of the curriculum, teaching and assessment methods, school culture and joint decision-making); modeling of teaching on the principles of constructivism; promotion of intellectual, social and emotional exchange of ideas and materials with colleagues; respect for teachers as professionals and adult learners; giving enough time and guidance; accessibility and inclusiveness [20].

Agreeing with E. Villegas-Reimers, we emphasize that providing opportunities for professional development of teachers can increase the efficiency of their activity on the one hand and promote their professional growth – on the other [52, p. 67].

Foreign scholars have identified a number of requirements for professional development programs for teachers. In particular, the American researcher J. Little considers that the result of professional development can be increase in knowledge, skills development, effective decision-making about classroom learning and contribution to the development of a professional community [38].

In his turn, Canadian researcher K. Leithwood emphasizes that teachers’ professional development programs should be aimed at: developing survival skills; improvement of basic teaching skills; increase in pedagogical flexibility; acquisition of teaching experience; contribution to the professional development of colleagues; leadership roles and participation in decision making [37].

It should be emphasized that in the USA, Canada and the UK there are different models of professional development of teachers, including those who work with gifted and talented students. Conditionally such models can

be divided into two groups: 1) models that provide organizational or interinstitutional cooperation; 2) models that do not involve large-scale implementation (can be implemented at school, class level, etc.). In addition, we note that professional development forms used within the second group of models are often used in the first group, taking into account its features (see Table 1).

Table 1

GT teacher professional development models in the USA, Canada and the UK

Organizational partnership models	Small groups/individual models
<ul style="list-style-type: none"> • Professional Development Schools; • other types of school-higher school partnerships; • other types of inter-institutional cooperation; • network of schools; • network of teachers; • distance learning 	<ul style="list-style-type: none"> • observation: traditional and clinical; • assessment of students' achievements; • workshops, seminars, courses; • study of cases; • self-directed development; • cooperative or collegial development; • learning best practices; • performing new roles; • skills development models; • reflection models; • project-oriented models; • portfolio; • action research; • teaching narratives; • generation/cascade model; • coaching/mentoring

Based on [52, p. 70]

In the context of our research we consider it expedient to describe the above-mentioned models of professional development in more detail.

Professional Development Schools (PDSs) represent a network of teachers, school administrators and research and teaching staff of higher education institutions, designed to improve the educational process in schools and establish a connection between pedagogical theory and practice.

Foreign researchers J. A. Stallings, S. L. Knight and D. L. Wiseman [50] consider the laboratory schools that were created at pedagogical universities in the United States in the first half of the twentieth century to be the prototype of Professional Development Schools. Despite the fact that gradually the laboratory schools had ceased to exist, in the 80's of the twentieth century, the schools of professional development, created on a similar principle, although for a different purpose, emerged.

It should be noted that Professional Development Schools are a widespread phenomenon for all countries under study, however, unlike in the United States, they are less common in Canada and the United Kingdom. An

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example of PDSs can be partnerships between Ball State University (BSU) and a number of Indiana general education schools. The pedagogical staff at each of Professional Development School, which is a partner of Ball State University, collaborates with the research and teaching staff to ensure high-quality professional development of school teachers, high-quality BSU candidate training, working in schools, improving the educational process and improving student performance as well as conducting research on the problems of improving teaching and learning [9]. These schools are experimental sites, which create a favorable environment for the professional development of teachers and pedagogical practice for university students.

It should be noted that since 1994 the BSU has a “Center for Gifted Studies and Talent Development”, whose mission is to meet the needs of gifted and talented students, their parents, teachers, school administrators, as well as representatives of the local community through the introduction of enrichment programs, professional development of teaching staff, parent workshops and research aimed at improving curricula for gifted. The pilot sites for the professional development of teachers who work with gifted and talented and trained future GT teachers include PDSs such as the Indiana Academy of Natural Sciences, Mathematics and Humanities, the state-run high school for gifted 11th–12th grade students and the Burriss Laboratory School – a comprehensive state school for gifted and talented students [8].

Another example of the PDSs is the partnership of the Kean University College of Education (NJ) with general education schools of various levels in the state. Each school of professional development offers a program of practical training for students of the pedagogical college, which involves team interaction with school teachers and clinical instructors during the academic semester/year, and other opportunities for professional development, first of all, the implementation of experimental research. The programs of professional development correspond to the following areas of training: bilingual/bicultural education; pre-school education; primary education; primary/secondary education; art; music; Physical education/health; secondary education (English, English as a foreign language, Mathematics, Natural Sciences, Social Sciences, Spanish, Drama); education for students with special needs/disabilities [34]. Consequently, we can conclude that, despite the lack of such direction of training as gifted education, New Jersey teachers working/wanting to work with this category of students have sufficient opportunities to acquire the relevant competencies within these PDSs.

Other types of school-higher school partnerships. In addition to the professional development schools, there are other types of partnerships between higher education institutions and schools in the USA, Canada and the United Kingdom, which are innovative networks that connect practitioners with common interests and educational vision [40, p. 102]. Professional development of teachers within the framework of this model can be carried out both on the basis of school and on the basis of higher education. According to American researcher L. Miller, the main goals of establishing a partnership between school and university are: establishing a solid foundation for two different cultures: schools and institutions of higher learning; overcoming institutional boundaries to meet the needs of a particular area; participating in the decision-making process; creation of new sites for the teacher's development [40, p. 105].

In this context it should be noted that within the framework of this unit, it is not possible to consider all types of partnerships of higher schools in the studied countries, so we will concentrate on a number of most illustrative examples.

Interesting is the experience of cooperation the Université du Québec à Trois-Rivières (Canada) and the educational institutions of the province, which envisages the professional development of teachers in the direction of introducing ICT into the educational process. At the initial stage of the implementation of the partnership project (1996), teachers' professional development programs included mastering computer skills and familiarization with cooperative learning technology. In modern conditions, forms of professional development are the exchange of thoughts and experiences of teachers facing such problems, and the provision of individual consultations for teachers on the effective integration of ICTs in the educational process. Support is also provided via email. We'd like to emphasize that any teacher has the opportunity to participate in this school-based program of professional development, while teachers working with gifted and talented students point to an increased opportunity to provide pedagogical support to gifted and talented students through the acquisition of new ICT skills that is especially relevant for schools in remote areas of the countryside [29].

We consider it important to emphasize that joint projects on the introduction of ICT, within which the professional development of GT teachers is carried out, are widespread in all countries under study (USA, Canada, UK). Thus, according to a report from the British experts "School-University Partnerships: Fulfilling the Potential" (2014), the partnership

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between higher education institutions and secondary schools in the UK is aimed at: increasing the participation of under-represented groups in the decision-making process at the university level; increasing attention to the teaching of subjects of the STEM cycle, which should result in an increase in the number of students who can enter higher education institutions; passing of productive pedagogical practice by future teachers, continuous professional development of teachers and/or joint school research [48]. Consequently, attention to the increase of ICT literacy among pedagogical workers is paid within the framework of the popularization of STEM-education, which is an innovative direction of providing educational services to intellectually and academically gifted students.

Equally important is cooperation between schools and higher education institutions to conduct joint research with representatives of both types of educational establishments, as well as to provide the opportunity to develop research skills for university students – future teachers, including those who will work with gifted and talented students.

The example of this type of partnership is the experience of “Renzulli Center for Creativity, Gifted Education, and Talent Development”, which, from 1990 to 2013, operated under the name of “National Research Center on the Gifted and Talented”. In modern conditions “Renzulli Center for Creativity, Gifted Education, and Talent Development” is an innovative network of universities in Connecticut and Virginia and over two hundred primary and secondary schools from different states. The Center has gained widespread popularity through its unique form of professional development, Confratute, which name is derived from the unification of three concepts: CONFerence, FRATurnity and InstiTUTE. In 2017 Confratute celebrates its 40th anniversary. It’s weekly summer professional development courses for teachers and parents, during which students are introduced to the theoretical and practical principles of providing educational services to gifted and talented students [19].

It should be noted that this network provides opportunities for conducting scientific theoretical and experimental research not only for teachers (within the framework of professional development programs) but also for university scientists, for whom network-based schools are an experimental base, as well as university and high school students within the frames of research program for talented teenagers “Mentor Connection” (for three weeks, senior school students live in a university campus and get acquainted with all stages of scientific research) [46].

Other types of inter-institutional cooperation. In the United States, Canada, and the United Kingdom, as well as in other developed countries, the introduction of teacher professional development programs is the result of joint efforts of a wide range of stakeholders. In this case the members of such networks are not only schools and higher schools, but also state and local government bodies of the national and regional levels, professional organizations, business structures, etc. For example, in Canada, a number of collaborative projects on teachers' professional development have been introduced by the local authorities, universities and provincial education ministries. In particular, University of Toronto created "Center for Teacher Development", which works with school boards, where implemented long-term professional development programs for teachers in the workplace. In the province of British Columbia all pedagogical universities work closely with the Ministry of Education and school districts to organize summer institutions and workshops for teachers and school administrators. The Alberta Regional Professional Development Consortia has been set up in Alberta, which is aimed at: promotion of professional development of teachers and school administrators to implement effectively the Alberta Provincial Education Business Plan, District and School Curriculum; coordinating and helping stakeholders to identify available professional development resources; implementation of professional development in accordance with the identified needs of educational stakeholders; promotion of leadership skills of teachers and other stakeholders; providing access to professional development programs for all stakeholders at reasonable prices [6].

Another interesting form of inter-institutional cooperation between schools and professional organizations outside the formal education system, described by American scholars D. L. Bainer, D. Cantrell, P. Barron [7], is the partnership between teachers/schools and professionals, for example, in the field of natural sciences, which usually act as informal teachers, since they do not have a formal pedagogical education. This partnership allows teachers to deepen their knowledge of natural sciences and improve their teaching skills, which is extremely important for teachers working with gifted children and youth in this area.

Networks of schools. In this case, it concerns cooperation of schools in order to carry out professional development of teachers in order to increase the efficiency of the activity of the education institution. Such networks operate in each of the studied countries. In particular, in the UK, the network of schools is influenced by the Cambridge Teaching Schools' Network, which includes Teaching School Alliances and National Support

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Schools. According to the definition provided on the UK government site (<https://www.gov.uk>), National Support Schools are leading schools (based on the evaluation of OfSTED), which provide support to other schools in increasing the effectiveness of their activities [41]. From the beginning of the Teaching Schools' Program, such schools-leaders as Cambourne Village College, Comberton Village College, Histon and Impington Junior School, Parkside Federation, Saffron Walden County High School, Swavesey Village College decided to unite efforts in order to increase the efficiency of their activities. Above mentioned National Support Schools run the Alliances, which include thirty partner schools of different types. The main areas of activity of this network are: 1) assistance to newly qualified teachers (who have less than 6 months experience of work at school; 2) implementation of all types of professional development, in particular short-term and long-term courses, evening classes and professional development programs at the request of the consumer of educational services; 3) support for schools in accordance with the individual needs of education institutions, for example in the field of gifted and talented education, and 4) support for the research and implementation of projects for individual teachers and institutions in general [15].

Within the framework of this model of professional development, it is also important to consider the Schools Network SSAT, whose coordination center is situated in London. The SSAT is an international school network of more than 3,000 primary, secondary, specialist, independent schools, as well as university technical colleges (UTC) (the latter are university-funded secondary schools), both in the United Kingdom and in the countries of Europe, North America, Asia and Australia. The main objective of the SSAT activity is to increase the efficiency of schools throughout the world, in particular through the introduction of personalized learning that takes into account the individual needs, interests and abilities of each student, including gifted and talented, which is the subject of our study. The key to achieving the goal is to organize the professional development of teachers and to carry out research. The SSAT holds annual conferences to exchange ideas and experiences from leading scholars, young scientists, teachers and school administrators from all over the world. In particular, at the 2013 conference in Manchester, the course was aimed at the professionalization of the teaching profession, since, according to the definition of leading educational theorists, led by M. Fullan, "professional capital is a key aspect of a comprehensive theme of new professionalism for the country's leaders and teachers" [49].

Networks of teachers combine the latter with the aim of solving the problems they encounter in their work, thereby implementing the professional development of individuals or groups. Such networks can be informative, involving regular teacher meetings, as well as formal, institutionalized structures. According to the American researcher M. Huberman, these networks are a powerful means of support, bringing together teachers of one or several schools, who teach in one parallel or one academic subject. Within this network, teachers communicate, exchange ideas and learning materials, observe each other's work, engage experienced professionals to learn best practices, etc.

It should be stressed that most of the networks in this area, existing in the United States, Canada, and the United Kingdom, receive financial support for their development from the education institution or the state. We also emphasize that in these countries, teachers are united in the network either within the school or within specialization, such as Council of History Educators, Association of Mathematics Education, etc. In the frames of our research the most interesting are professional networks of gifted and talented teachers. At the same time, it should be noted that analysis of the experience of such networks of international, national and regional levels was carried out by the author in the series of publications [1; 2; 4]. We'd also like to emphasize that great contribution in the analysis of GT professional networks has made prominent native researcher A. Sbruieva in the article "Gifted and talented education: organizational foundations and trends in the development of international cooperation" [5].

Distance Learning. Traditionally, distance learning involves self-assimilation of a certain amount of educational material transmitted at a distance using such means as radio, television, telephone, written teaching materials and materials written on media, electronic teaching aids, etc. As a form of professional development of teachers, distance learning has been criticized in the studies of the late twentieth century [13; 43; 51], primarily because of the inability to check the effectiveness of the use of the acquired knowledge in practice.

However, with the rapid development of ICT, distance learning as a form of professional development of teachers in modern conditions is gaining popularity. With the expansion of the possibilities of using computers and the Internet, the proposal and structure of professional development of teachers is significantly changing. Thus, American, British and Canadian higher education offer a wide range of on-line professional development programs for teachers and school administrators. In

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particular, deserve attention program of Center for Talent Development of the Northwest University (USA), which covers online on-line professional development modules, which represent four-week courses offering classes in the sphere of gifted education in on-line mode 2–4 hours a week to develop skills for effective work with gifted students. In 2016 Center for Talent Development offered the following courses: “Differentiation of gifted”, “Use of ICT in the process of differentiation” and “Effective identification and development of programs for gifted” [45].

The University of Connecticut offers a number of on-line programs for GT teachers professional development, in particular “Gifted education and talent development”. This program provides for obtaining certificates in the field of GT education as a result of mastering 12 online credits during the year, allowing them to get master degree or advanced diploma in the field of GT education. The program “Gifted education and talent development” provides students with knowledge on: identifying unique educational characteristics and needs of students; available educational services that meet the needs of the students; the use of multilevel criteria for the identification of GT students; introduction of all components of the “Whole-school enrichment model” (J. Renzulli); differentiation of curriculum and learning experience for students based on their previous academic knowledge, interests, educational advantages; introduction of strategies for problem solving in teaching practice; stimulating the development of creativity and critical thinking of students; providing support for students with social and emotional needs [24].

Compared to traditional forms of distance learning and other models of teachers’ professional development, innovative models of professional development in the on-line mode have a number of advantages, however, according to J. Killion [35], they also have certain disadvantages (see Table 2).

Table 2

Advantages and disadvantages of on-line programs for the professional development of GT teachers

Advantages	Disadvantages
<ul style="list-style-type: none"> • wider access; • flexibility of curriculum; • promotion of cooperation; • better profitability 	<ul style="list-style-type: none"> • lack of quality content or clarity of structure in some programs; • don’t take into account previous educational experience or qualification of the student; • focus on the “average” teacher; • hidden costs in some programs

Systematized by the author based on J. Killion [35]

Turning to the consideration of small groups/individual models, we'd like to note that, unlike the first group, these models represent mainly forms of professional development.

Observation: traditional and clinical. In the countries under study observation in traditional format is conducted by a school administrator (the so-called "inspectorate" model [12]) who attends teacher classes and makes notes or, guiding by the list of criteria, determines whether the teacher fulfills all the requirements. It should be noted that in this case there is no feedback because the controller does not report the results of his observations to the teacher. However, the results obtained influence the career advancement/its absence, the term of employment and even the possibility of renewal of the contract for the following year. In addition to the lack of feedback, the drawback of traditional observation is the lack of support that should be based on the results obtained, as well as the fact that the teacher's professionalism is assessed solely on the basis of lesson assessment [52].

Understanding the imperfection of traditional observation as a form of professional development (in this case, professional development is limited to career development) led to the need to change its functions. In modern conditions observation becomes one of the components of the teachers' professional development program, a means of providing support and recommendations for improving their activities. Consequently, traditional observation is gradually transformed into clinical observation, which is becoming increasingly popular as an effective form of professional growth and development. According to P. Grimmer and P. Crehan, "Clinical observation was first introduced at the Harvard-Newton summer school as an instrument for the teacher's professional development through discussion, observation and analysis of the teacher's activity in the "clinic of the classroom" [26, p. 68]. We consider it expedient to draw attention to the fact that clinical observation is an effective form of professional development for young teachers who do not have the experience of work or students. The essence of clinical observation is that a young teacher conducts classes in the presence of an experienced teacher who, on the basis of observation, gives tips on how to improve his/her teaching [17]. We'd like to stress that in the field of GT education, clinical observations are carried out only by teachers who have special training and positive experience of work with gifted students.

Assessment of students' achievements. In modern conditions standardized and result-oriented assessment of student achievement is considered by foreign researchers as one of the forms of professional

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development of teachers [22]. In our view, in this context the assessment of students' achievements should be considered not as a form but as one of the main areas of professional development of teachers, since a large number of teacher professional development programs are aimed at developing skills for assessing students' achievements. It should also be noted that the ability of GT teachers to evaluate students' achievements is extremely important as this process is an integral part of the identification process, and therefore almost all the programs of professional development of GT teachers contain this line.

Workshops, seminars, institutes, conferences and courses. As it has been noted above, the most traditional form of professional development of teachers is the professional development in the workplace, which involves conducting master classes, seminars and short-term courses. In the traditional sense, such a form of professional development is considered ineffective by foreign researchers, since it does not take into account the needs of teachers and the problems of an education institution [31]. At the same time, according to E. Villiges-Reimers, as a component of the process of continuous professional development, thematic workshops or seminars adapted to the needs of teachers, and complemented by other forms of professional development, are quite successful [52]. An example of such form of professional development can be Middle School Mathematics project, which was attended by 32 Math Teachers from Boston (USA). This program included attending workshops on the theoretical and practical aspects of teaching mathematics twice a month for two years. In addition to attending workshops, teachers should conduct experimental research with their students. According to the teachers who participated in the program, this experience proved to be very valuable, as it contributed not only to the enrichment of knowledge and development of skills and abilities of teachers (including in the sphere of time management, resource management and risk management), but sharing experiences with colleagues [21].

The widespread form of GT teachers' professional development in the USA, Canada and the UK are *face-to-face workshops*. An example of such a form is the author's course developed by British trainer Ann Bridgland "Practical Approaches to Ofsted Outstanding for Able, Gifted and Talented Learners (Primary)".

The purpose of this 1-day course is to get acquainted with the teaching methods and strategies for improving the academic achievements of talented, talented and talented students according to the New National Curriculum. The "New National Curriculum" envisages taking into account the needs of all students. Teachers should stimulate students at each key

stage of learning, identify high expectations for each student, plan motivational lessons and set ambitious goals [44].

According to Ann Bridgland, planning and delivery of educational services to able, gifted and talented students should be provided through the formation of a culture of high achievements for each participant of this process. That is why the workshop is devoted to the study of innovative forms and methods of working with the specified category of students. The structure of the course involves clarifying a number of questions: Who are the “most capable students”? What does it mean to “stimulate students”? How to create a culture of high achievements for all students? Practical strategies to achieve an excellent level of compliance with the requirements of Ofsted [44].

During the workshop, participants receive handouts that can be used by teachers in their further professional activity.

Thus, this workshop is one of the numerous examples of such a common form of teachers’ professional development of as face-to-face seminar/workshop, which allows the latter to increase their professional level and make teaching gifted and talented students more effective.

Study of cases. In this case we are talking about carefully selected real examples of pedagogical situations, which become the subject of discussion of teachers in small groups. According to American researcher K. Barnett, “case study helps teachers understand the complexity, multidimensionality and conflict of situations that seem to be easy at a first glance” [10, p. 26]. The case method is based on the assumption that knowledge is built on previous knowledge, which, in combination with experience, transforms, evolves, and as a result the student finds not “right answers” but alternative ways of solving the problem [27, p. 203]. In the countries under study, using the case method as a form of teachers’ professional development, in particular GT teachers, allows the latter to discuss certain situations during regular meetings with colleagues. An example is the teachers’ professional development program, based on the “Mathematics Case Method”, implemented in education institution WestEd (Oakland, CA, USA). Within the framework of this program, a group of 6–15 teachers meet once a month to discuss pedagogical situations that occur both in their professional activities and are written by the teachers themselves. It should be noted that the subject of discussion is often the problems of teaching and providing support for mathematically gifted students.

Self-directed development. The mentioned form of professional development implies that the teacher (individually or in a small group) defines: the target which, in his opinion, is the most important at this stage of

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his professional activity; a list of measures that will help achieve the goal; necessary resources and ways to measure progress. In this context, teachers assume responsibility for their own professional development, and the role of the school administration and mentors is to stimulate, manage and support this development. One of the main problems is to provide objective feedback to assess the effectiveness of this form of professional development.

Cooperative or collegial development. This form of professional development is similar to the previous, as teachers are developing a plan for professional development in small grains. The main goal of such groups is to improve the quality of the education institution as a whole and certain aspects of its activities by: discussing professional issues of personal interest; developing a curriculum when teams of subject teachers develop separate sections; organization of mutual control, mutual support and mutual learning; joint experimental research.

A. Glatthorn defines the main conditions for the success of the outlined form of professional development of teachers: a truly collaborative school context (teachers take decisions on professional development independently, they are not imposed “from the top”); support of teachers’ efforts on the part of the administration of the education institution; availability of sufficient time resources to perform specified tasks; necessary teachers’ training for the introduction of this model of professional development [25].

In the context of our research, the most interesting is building of GT teachers’ team who jointly develop professional development strategies aimed at deepening knowledge about the nature of giftedness and outstanding abilities, the procedures for identifying gifted students, and developing an enriched curriculum that takes into account the needs of the target group of students.

Learning best practices. A number of professional development programs provide teachers with the opportunity to watch colleagues in order to study the best pedagogical experience. In most cases, such observations are one of the components of a professional development program, while in others it is their core.

An example of such a model is the Teachers International Professional Development Program, introduced by the British Council. Within the framework of this program, British teachers have the opportunity to attend different schools in different countries to monitor the work of teachers and disseminate best practices in their schools and communities.

It should be noted that in the USA, Canada and the UK there are many other, more “informal” programs for the professional development of teachers, including GT, which allow less experienced teachers to observe the work of their experienced colleagues, both within and outside the same education institution.

Performing new roles. The basis of this model is the idea that improving professional development of teachers can be achieved through their active participation in the management, organization, support and monitoring of this development. According to the foreign researchers, the responsibility for the professional development undertaken by the teachers makes this process more effective [52].

Skills development models. The purpose of this form of professional development is to familiarize with innovative teaching methods and the development of relevant skills. As noted by American researchers B. Joyce and B. Showers, the effectiveness of this model depends on the availability of significant amounts of additional time. The main components of the model are: the study of the theory through attending lectures, participation in discussions and readings; demonstration of the skills to be acquired through video or “live” trainings; practice in artificially created conditions (20–25 lessons within 8–10 weeks); feedback made by colleagues under the guidance of a coach (preferably using video and audio recordings); coaching during transition from training sessions to direct teaching by new techniques in the classroom [33]. B. Joyce and B. Showers emphasize that such a model of professional development is effective for GT teachers as it allows the latter to master the skills of work with the given category of students.

Reflection models: teacher as a reflexive practitioner. This model is based on the teacher’s personal pedagogical experience and suggests that the latter pays attention to the daily events in his teaching activity and comprehends their significance and effectiveness. The main features of the reflection model include: readiness of the teacher to serve the interests of students, determining which aspects best suit their needs; professional duty to analyze their own practical area in order to improve the quality of teaching; professional duty to continue to improve their own practical knowledge. We believe that in the case of GT teachers, an analysis of their own professional activities in order to determine whether individual needs and interests of gifted and talented students have been met, is extremely important.

Project-oriented models. The first goal of this model, according to the British researcher M. Eraut, is “development of students’ (teachers’) skills of independent and collective activity as reflective practitioners – a goal

that can be reached not only through their own project activity, but also by related discussions, comparisons with examples from research literature and the work of colleagues. The second goal is to make a positive contribution to the development of an education institution in which a teacher works” [23, p. 625]. These models prepare teachers for performing leadership roles in class and school, as well as improving the quality of their professional development in general. An example of this form of professional development is the project, which included an in-depth course on the development of thematic training materials for gifted students. A number of formats of this course were offered, which differed in the number of lectures and practical hours. Teachers were involved in discussions, assessment, reflection, materials development, etc., and then evaluated, along with the researcher, those aspects of the program that turned out to be most effective [52].

Portfolio. In the United States, Canada and the UK, as in other foreign countries, portfolios serve as a means of engaging teachers in discussions on teaching-related issues. The most common are three types of portfolios used by the teaching staff: portfolio for employment; portfolio for evaluation (reflects the acquisition of the necessary competencies by the teacher and the achievement of the planned results) and teaching portfolio (a collection of materials that helps teachers to comprehend and describe learning achievements). Teachers’ portfolios help complement the current assessment, final evaluation and self-evaluation [14].

Action research. According to the definition of British researcher K. O’Hanlon, action research is a process of study, reflection and concrete action, aimed at continuous improvement of the quality of the subject of research. This is a form of experimental research that involves self-evaluation and critical reflection, as well as complementing existing knowledge in the educational community [42]. The scientist gives a number of arguments in favor of action research as an effective model of professional development of teachers, in particular: orientation to the experimental study that allows the teacher to study the scope of his immediate activities; the focus on improving the educational process in an education institution; the focus on improving the conditions for learning and teaching at school [42]. We consider it worthwhile to point out that K. O’Hanlon advocates the need for action research specifically for teachers who work with pupils with special educational needs, which also include gifted and talented ones, since in this case it is possible not only to identify

problems that inevitably arise from the specified category of schoolchildren, but at the same time take measures to overcome them.

We would also like to emphasize that action research as a form of professional development of teachers in the countries under study is not usually used separately; as a rule, it is part of wider initiatives, such as: community-based projects, small-group projects, individual research with the support of small groups.

Teachers' narratives. Foreign researchers P. Clements [16] and P. Wood [53] point out to the significant influence of teaching narratives (or "autobiographical studies") on teaching activities and their professional development. According to the authors, the effective means of professional development is the teacher's statement of daily events and examples of solving pedagogical situations in the classroom. These notes may be passed on to other teachers who are members of the training group to review and write feedback. Narratives are discussed after a certain period of time. Initially, teachers focus on a particular event, and then make links to other events and address the problem in a wider context. The mentioned form of professional development not only allows teachers to analyze and discuss examples of different pedagogical situations, but also helps the author of the narrative to look at his own experience from another person's side.

Generation/cascade model. Within the framework of this model, the first generation of teachers after a certain period of special training becomes coaches for the second generation, whose representatives, in turn, teach the third generation (an increase in the number of generations is ineffective). Important in this context is the careful selection of teachers of the first generation. An example of such a form of professional development is the program aimed at introduction ICT at the school curriculum, implemented in Texas school districts (USA). A small group of teachers, having got special training, trained colleagues to use effectively ICT in their teaching, namely in the work with gifted and talented students [52].

Coaching/mentoring. Coaching is a process in which a colleague who acts as a critical listener/observer poses questions, makes observations and suggestions that help the teacher to develop and produce a variety of decisions [28, p. 28]. Coaching creates enormous opportunities for professional development. Foreign researchers K. Harwel-Kee, E. Villiges-Reimers et al. [28; 52] consider mentoring as a form of coaching, distinguishing short-term (for example, for a novice teacher) and long-term mentoring.

As P. Robbins emphasizes, "mentor provides the beginner with support, guidance, feedback, uniting in a network of colleagues who share

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resources, views, experiences and materials” [47, p. 40]. As a form of professional development, mentoring is effective both for beginner teachers, who receive help from the mentor, and for experienced mentor teachers. The main functions of the mentor include: providing information and access to resources, role modeling, counseling, coaching, stimulating reflection, advising career advancement, and supporting new teachers.

Noteworthy are the models of mentoring outlined by the British researcher M. Jones [32, p. 76]:

- apprenticeship model – mentor is an experienced teacher who is an example for imitation;
- competence model – mentor carries out training and assessment in accordance with the established standards;
- reflective model – the mentor performs the role of a “friendly critic”, which helps the teacher to analyze positive aspects and disadvantages of the teaching process.

As it has been discussed in our previous researches on the topic [3], in modern conditions more and more popular is becoming telementoring. It is especially effective for GT teachers working in remote rural areas and unable to get advice from a qualified mentor who is knowledgeable about gifted and talented problems at his or her education institution.

Conclusions. Summarizing the foregoing, we should note that in the countries under study, the professional development of teachers working with gifted and talented students is of great importance, as stated in the standards of professional development of teachers. Existing in the modern conditions models of professional development of GT teachers, foreign researchers divide into two groups: models providing organizational or inter-institutional cooperation (Professional Development Schools; other types of school-higher school partnerships; other types of inter-institutional cooperation; network of schools; network of teachers; distance learning) and models that do not envisage large-scale implementation and can be implemented at the school, class level, etc. (traditional and clinical observations, assessment of students’ achievement, workshops, seminars, courses, case studies; self-directed development; cooperative or collegial development models; learning best practices; performing new roles; skills development; reflection models; project-oriented models; portfolio; action research; teachers’ narratives; generation/cascade model; coaching/mentoring). It should be stressed that the most effective is the combination of several forms of professional development, as well as giving preferences to certain forms at different stages

of formation of the GT teacher as a specialist, as evidenced by numerous studies of foreign scholars.

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ВПРОВАДЖЕННЯ ІННОВАЦІЙНИХ ОСВІТНІХ ТЕХНОЛОГІЙ ТА ЇХ ВПЛИВ НА ПРОГРЕСИВНІ ЗМІНИ РОЗВИТКУ СУЧАСНОЇ ВИЩОЇ ОСВІТИ

У дослідженні з'ясовано цільові пріоритети використання інноваційних технологій навчання та особливості їх впливу на розвиток вищої школи. Схарактеризовано основні завдання, дидактичні можливості й функції нових інформаційних технологій навчання у вищій школі. Показано освітні можливості сучасного інформаційно-комунікаційного середовища, що сформовано у межах глобальної мережі Інтернет. Зроблено висновки щодо позитивного впливу інноваційних технологій навчання, зокрема ІКТ, на розвиток сучасної вищої освіти.

Ключові слова: вища освіта, вища школа, інновації, інноваційні освітні технології, зміни, впровадження, ІКТ.

Постановка проблеми. В системі освіти все більше поширюється впровадження інноваційних технологій навчання, які націлені на оновлення педагогічної теорії і практики. Оновлення вищої освіти зорієнтовано на виховання індивідуальних особливостей і здібностей особистості, яка здатна до саморозвитку й самовдосконаленню. Сучасність вимагає нових підходів, методів, засобів, форм до навчання. Актуальність реалізації та вирішення проблеми застосування новітніх засобів навчання в освітньому процесі, завдяки яким здійснюється становлення та розвиток студентської молоді, є пріоритетним напрямком. Тому особливого значення набуває розробка та впровадження інноваційних педагогічних технологій в освітній процес ВНЗ.