

Forms and Methods of Future Physical Education Teachers' Training: An Analysis of Foreign Experience

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Abstract: The article analyzes the main forms and methods of professional training for future physical education teachers in Switzerland, the USA, Germany, Austria, Norway, and the UK. These countries have been chosen owing to their effective methodical systems. Both original sources and receptive experience of Ukrainian researchers have been taken into account. Therefore, the article aims to select innovative methodical tools that are not widely used in Ukraine. Importantly, the article adheres to a transformational and innovative approach to objectification and prediction of educational changes, as well as to comparative, summarizing and other theoretical methods. Consequently, it has become possible to identify innovative features of professional training for future physical education teachers in the above-mentioned countries and outline potential changes in Ukrainian education after borrowing relevant experience and implementing it within the traditional lecture-seminar system. Furthermore, the article addresses the problem of methodological diversity, as well as the prevalence of axiological approaches over those closely related to physical education and its methods. The international relevance of the article lies in summarizing innovative approaches used in different countries to forms and methods of professional training of future physical education teachers. It will allow one to comprehensively or selectively borrow this experience to improve education in the countries dealing with transformational changes.

Keywords: *principles, methodical innovations, educational traditions, axiological approach, key competencies.*

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1. Introduction

Interest in professional training of future physical education teachers as promoters of healthy lifestyles and physical activities and sports has increased in the 21st century, the age of digital technologies and youth apathy. Therefore, it seems necessary to analyze effective foreign practices to improve such training in Ukraine.

The problem in question is quite relevant in the Ukrainian scientific discourse. Indeed, Ukrainian scholars devote their studies to promising ways of optimizing physical education in higher education institutions (HEIs) and implementing innovative educational models (Bashavets, 2016). The following aspects are of interest: general aspects of optimization (Bashavets, 2016; Berbets et al., 2021; Karasievych et al., 2021; Zhurat, 2020); preparation of physical education teachers to health-promoting activities (Kosholap et al., 2021; Khatsaiuk et al., 2021; Ovcharuk et al., 2021; Soltik, 2019); current trends in the system of professional training for physical education specialists under European integration (Dereka, 2016a; Ivaniij, 2019); comparative analysis of professional training for future physical education teachers in the leading European countries (Khimich et al., 2019).

Emphasis is also placed on the characteristics of professional training for future physical education teachers in different countries and regions. Quite noteworthy are the following topics: the main ways of introducing new pedagogical technologies in professional training of future physical education teachers in European countries (Bakhmat et al., 2019; Bezliudnyi et al., 2019; Maksymchuk et al., 2018; Maksymchuk et al., 2020a; Maksymchuk et al., 2020b; Palamarchuk et al., 2020; Veselovsky et al., 2017); the current status of professional training for future physical education teachers in European HEIs (Grinchenko, 2014); the characteristics of physical education in Western Europe and the Asia-Pacific region (Svatyev, 2014); the features of future physical education teachers' training in Switzerland (Kozhanova et al., 2018); the structure of professional training for physical education teachers in Bavaria (Germany) (Gaiduk, 2013); the organization of master's degrees in sports studies in Austria (Romanchuk, 2019); the forms and methods of bachelor's degrees in sports studies in the USA (Dereka, 2016b); the main principles of professional training for future physical education teachers in Norway and Sweden (Kvasnytsya, 2019).

It is also crucial to compare physical education systems in the context of the curriculum, determine current trends in higher education in the fields of physical education and sports, describe the organization of specialist training

in different countries. However, one should take into account probable differences in professional training of physical education teachers across countries that may be associated with their historical backgrounds, national traditions, territorial characteristics and other social factors.

In this regard, it is extremely *relevant* to conduct a complex study and critically evaluate theoretical findings of Ukrainian methodists from a practical standpoint. It is now clear that traditional forms and methods of professional training for future physical education teachers in Ukraine do not quite meet current requirements and require improvement. Therefore, it is essential to innovate professional training of future physical education teachers in Ukrainian HEIs by borrowing effective foreign practices. In this case, borrowing should imply complementing and modifying, rather than copying.

Thus, this article aims to identify areas for improving traditional methods and introducing innovative ones in professional training of future physical education teachers through comparative-typological analysis and reflection on foreign experience and, thus, reform traditional education in Ukraine.

As noted by Moseychuk (2017), Demchenko et al. (2021), Prots et al. (2021), Nikolaienko et al., (2021), Komogorova et al., (2021) it is expedient to introduce innovations in professional training of future physical education teachers. Today, the education system requires purposeful actions to enhance educational attainment (Moseychuk, 2017, p. 43). Therefore, one can conclude that the introduction of innovative forms and methods in HEIs, taking into account relevant foreign practices, is a priority.

2. Research materials and methods

2.1. Data sources

Data for this research were collected using systematic and comparative analysis of pedagogical phenomena. It was also important to select relevant findings of both Ukrainian and foreign researchers on professional training of future physical education teachers, as well as on its forms and methods. Emphasis was placed on those publications indexed in Scopus and Web of Science Core Collection. Concerning Ukrainian publications, it was essential to consider recent articles, dissertations and monographs on the problem in question. In general, this article relies on scientific achievements presented in 25 manuscripts.

2.2. Research Design

The author's systematic search consisted of the following three stages: collecting materials; analyzing the collected materials; article writing and discussion. These stages reflect current approaches to scientific research and justification of the obtained results in the context of comparative studies.

2.3. Qualitative analysis

This article uses qualitative methods based on analytical induction and generalization to conduct contextual comparisons of professional training of future physical education teachers in different countries and, thus, identify characteristic features of its forms and methods.

The authors' contribution lies in the fact that, for the first time, they have systematically identified innovative methods and forms of professional training for future physical education teachers which Ukrainian practice lacks and justified the expediency/inexpediency of their implementation in both Ukraine and developing countries.

Concerning ethical aspects, the article includes detailed references to the original sources. Besides, the authors do not deny the value of traditional ideas but only offer to supplement them with innovative ones.

3. The Main Trends in Reforms in Physical Education Abroad

Before analyzing Ukrainian scholars' views on foreign experience in professional training of future physical education teachers, the authors of the article have analyzed the latest (non-Ukrainian) publications in Scopus. It was important to consider scientific discussions on the problem in question, as well as identify other problems addressed outside the Ukrainian educational space. Unfortunately, one can observe that methodical issues mostly remain open since most publications are related to administrative issues, changes in teacher training and teachers' role in the conditions of globalization.

In South America, there is a debate about the impact of new educational and exchange programmes on social goals, strategies of educational courses and physical education teachers' autonomy. This situation can be explained by new requirements for physical education, tolerance and conflict prevention. Some researchers believe that physical education should become a school subject that nurtures subjectivity, autonomy and professional identity of both teachers and students. A social survey following the implementation of a TPSR training programme on

prospective physical education teachers' social goals, discipline and autonomy strategies in Spain, Chile and Costa Rica reveals cultural and traditional differences. As noted by Alcalá et al. (2019), "Spanish and Costa Rican PE teachers demonstrated a significant positive change in their perspectives on discipline strategies, and Chilean PE teachers demonstrated a significant positive change in their perception of social goals after experiencing a 'TPSR intervention'". Social research on the ideological and personal potential of teacher training in countries with different educational backgrounds should help shape new strategies for social, cultural and professional behaviour. Physical education is seen as a unique and holistic natural-cultural space for self-determination and self-realization in a multimodal world. It is designed to eliminate segregation, conflict, legal and behavioural inequality.

In 2018, the Italian government launched a reform of physical education teaching in primary schools. In this regard, it was decided to update university education in terms of its universalization. Fernández-Batanero et al. (2019) compared education content in 38 universities by the following four parameters: 1) sports and physical activity; 2) biological, biomedical and clinical competencies; 3) psycho-pedagogical competencies; 4) historical, legal, economic, statistical and sociological competences. Their findings show that psycho-pedagogical training is allocated only 34% of the whole. It is also planned to focus on teacher qualifications, rather than general training. Given education humanization, the methodology of physical education and sports should now have the same structure of subjects and promote professionalization and self-realization.

Thus, it is crucial to reform axiological, motivational and professional spheres. For instance, Singapore is implementing pilot programmes to improve the skills of practising teachers and trainers. As noted by Koh et al. (2017), the creation, implementation, and evaluation of a values-based training programme for sports coaches and physical education teachers in Singapore bring the following effects: a) novice teachers realize the importance of continuing professional development; b) novice teachers feel the need to improve motivational and axiological spheres; c) positive dynamics is seen in intra-professional communication, as well as in the interaction between teachers and parents, them and athletes (Koh et al., 2017). Thus, one can conclude that there is a need for broad communication with physical education teachers to shape and transmit values.

According to the Western European educational discourse, the experience of the last fifty years in physical education teachers' training proves that "their role should be considered in all social, cultural and scientific

innovations that drive change” (D’Elia et al., 2018). Therefore, administrative and legislative reforms are being introduced to adapt educational pathways to the most effective European practices of human-centred, information- and communication-related, subject-oriented professional training. After all, even developed countries lack adequate methods and relevant content of physical education in the conditions of globalization.

Today, all education systems are departing from traditionalism, so there is a problem of current but universal selection, training and recruitment of physical education teachers. It is because physical education teachers must possess knowledge in different fields. This refers to interdisciplinarity, which requires the socialization of professions and the involvement of those engaged in regular physical activity and seen as the bearers of innovative ideas and promoters of non-traditional strategies in physical education teaching (O’Neil & Richards, 2018). The first step to such changes lies in checking future teachers’ motivation towards professionalization, as well as their professional suitability under the new concept of teaching and coaching.

Such reforms in both leading and developing countries are caused by a) relativity and decline of universal cultural values among the youth; b) a small percentage of students who become athletes or feel the need for regular physical activity. In this regard, it is vital to teach future physical education teachers to identify children’s talents with the help of such instruments as “I do” and “I like” (Atradin et al., 2020). It is expected that such measures will increase the effectiveness of the educational process, as well as eliminate its marginalization.

Destructive demonstrative and over-regulated forms of physical education have been observed in Africa and Oceania (West Sumatra, Indonesia). The PJOK (the subject of Physical Education of Sport and Health) learning model is currently being actively implemented there. At the same time, it serves as an Internet platform that works on the principle of “preparation, implementation and evaluation” based on innovation.

After comparing the problems of the above-mentioned studies with the Ukrainian practice of adopting foreign experience, one can conclude that Ukraine needs to strengthen the existing system with the recognized innovations, rather than implement globalization- or value-oriented reforms.

4. Today's Forms of Organizing Professional Training for Future Physical Education Teachers in Different Countries

First of all, it is essential to specify such concepts as “teaching forms” and “teaching methods” in the theory of physical education. It is well known that higher education teaching is a certain structural-organizational and managerial construction of educational activity, which depends on its didactic goals, content and actions of the actors in the educational process. There are different interpretations of the teaching method concept in the theory and methods of physical education. This research considers *physical education teaching* as a set of teacher's actions that enable theoretical and practical activities of students and, as a result, allow them to develop physical and professional qualities.

In most countries, teaching forms are almost identical to those in Ukraine. This refers to *lectures, seminars and workshops* aimed at providing future teachers with coaching and teaching experience and developing their pedagogical skills.

A lecture is the main form of higher education teaching. However, it is indeed crucial to modify the traditional system of ready-made transmission of knowledge, which is still widespread in Ukraine. In this regard, quite noteworthy are innovative aspects of the lecture-based system abroad.

In foreign HEIs, students can choose whose lectures they wish to attend. In Ukrainian universities, an individual educational trajectory allows students to choose optional educational courses which are in line with professional standards adopted abroad. The main requirements for lectures include their problem- and discussion-related nature, as well as the use of multimedia software. An important innovation is the use of video lectures accessible to those students who cannot attend lectures at the appointed time.

In the USA, they also practice micro-teaching. The latter lies in creating different pedagogical situations with all components of teaching and learning. For example, students conduct 10-15-minute lessons for small groups of other students; they record lessons and, subsequently, analyze and discuss them. Thus, micro-teaching can be seen as a form of teaching that models particular pedagogical activities. Interestingly, micro-teaching emerged in the United States in the early 1960s. Since 1968, it has been incorporated in teacher training programmes. Micro-teaching usually relies on professionally-oriented tasks and, therefore, contributes to specialist training.

In Germany, seminars are the leading form of teaching starting from the 5th semester. The main goal of seminars is to teach students to think,

formulate their points of view and reasonably defend them. Seminars may be accompanied by reports (up to 5) that are essentially similar to term papers. Assessment mostly involves a stable number of pass-fail tests. There are only two exams: the intermediate exam after the 4th semester and the state exam (qualification certification). Importantly, seminars include both theoretical and practical training. Emphasis is also placed on *real-life projects* (under the supervision of teachers) and *workshops*. Depending on teaching forms, the number of students varies significantly: tutorials (Seminaristischer Unterricht) - a maximum of 35 students; projects (Projekt) - 15 students; workshops (Übung) - 20 students; seminars (Seminar) - 15 students (Sysoeva & Kozak, 2017).

Research-based seminars are quite common in Austria. Students' task is to prepare reports (20-25 pages). The main goal of such seminars is to teach future teachers to express their opinions freely and be able to defend them (Avsheniuk et al., 2017, p. 9). Consequently, seminars as a form of teaching rely on the scientific background and motivate future physical education teachers to research health-related topics. However, given the innovative forms of lectures and seminars, one can agree with Sysoeva & Kozak (2017) that "previously, lectures and seminars were considered as the main way of transmitting information; their main purpose today is to increase students' interest in the subject-specific field and familiarize them with its basic principles and areas of independent work" (p. 105). At the same time, extracurricular activities, which previously played an auxiliary role in the preparation for lectures and seminars, are now regarded as the main form of the educational process (Sysoeva & Kozak, 2017).

Besides, Ukraine should be able to develop and implement national, cultural and tourism aspects of physical education teachers' training.

Therefore, one should pay special attention to exemplary practices of some Western European and Asian countries. In Switzerland, professional training of future physical education teachers may include such activities as diving, hockey, skiing, cross-country skiing, snowboarding, canoe/sailing, group fitness, basic windsurfing, sailing base yachts, sailing base yachts CST play, windsurfing and biking (Klein et al., 2011). Given Chinese traditions, physical education in the country aims to preserve the historically established forms of physical education (e.g., Tai-dichuan, Qigong, Chaojin) (Bashavets, 2016, p. 106). Thus, each country has its own approach to organizing physical education in HEIs. Nevertheless, students' full development is a priority everywhere (Bashavets, 2016, p. 107).

In the UK, they "arrange" the educational process relying on national traditions with appropriate names of their own cultural and praxeological phenomena. An example of this would be "*sandwich courses*".

Such courses involve practical work experience in addition to academic study. It allows students to apply their knowledge in practice and enhance professional competence at the same time. Sandwich courses are also common in France.

In the case of Ukraine, it is important to diversify the lecture-based system in terms of optional courses, provide students with the possibility to choose a lecturer, introduce micro-teaching and research-based seminars. To incorporate the components of Ukrainian national identity in the educational process, relevant experts should cooperate with culturologists, specialists in authentic sports and tourist organizations.

5. Studying the Experience of Teaching Practice and Internships Abroad

Teaching practice and internships play an important part in professional training of future physical education teachers in all the countries. Recently, Ukraine has adopted the New Teacher Development Concept (2018) and plans to expand practical training of future teachers to at least 30 ECTS credits within undergraduate and graduate programmes after completing a one-year teaching internship as a trainee teacher. In this regard, it is indeed relevant to study equivalent experience abroad and implement the most effective practices in Ukraine.

US universities allocate 14 weeks to teaching practice. Concerning teacher colleges, such practice is included in all courses. Teaching practice programme usually involves observing teaching, discussions and student teaching (from one to a series of lessons). Novice teachers must complete an annual internship at their place of employment after graduation (Bain, 2004).

In Germany, teaching practice is scheduled for 24 months and is considered completed after passing the second state exam (Gaiduk, 2013). The first 12 months of teaching practice include student teaching (8 hours per week), supervised teaching practice (10 hours per week), seminars (10 hours per week). Besides, trainee teachers must attend seminars at different schools twice a week. For three other days, they are engaged in teaching, practicing and observing teaching at the chosen school. The next 12 months of teaching practice include student teaching (15 hours per week), observing teaching (3 hours per week), seminars (10 hours per week). After completing such practice, trainee teachers must take the second state exam (Gaiduk, 2013, pp. 14-15).

In the UK, teaching internships of future physical education teachers are allocated fourteen weeks. They traditionally involve observing teaching and supervised teaching. Besides, graduates must complete an annual internship at their place of employment after graduation (Dzhurinsky, 2015).

Besides, all UK universities promote the interaction between students and tutors. It is tutors who help students to achieve good cooperation with their teachers and solve various problems (e.g., details on the timetable; studying and working; choosing forms and methods of teaching and learning; handling certain household issues). Importantly, tutoring relies on a partnership between the tutor and the student. Thus, one can conclude that HEIs abroad pay considerable attention to the psychological aspect of professional training (VanLehn, 2006).

In Switzerland, teaching internships take place in the 5th semester and usually last from 4 to 5 months. As noted by Kozhanova et al. (2018), bachelor's degrees are much focused on practice which allows students to gain valuable experience outside lectures and seminars (p. 47). In Austria, future physical education teachers must complete a year-long internship after graduating (Dereka, 2016b, p. 43).

Therefore, teaching practice of future physical education teachers is indeed systemic. Traditionally, it includes observing teaching and student teaching and lasts from 3.5 to 5 months. Upon graduation, a one-year internship at the workplace is envisaged. The authors of the article believe that a German model of teaching internship is the most practice-oriented one. It is scheduled for two years and combines observing teaching, student teaching and supervised teaching. Quite noteworthy is tutoring, especially in the aspect of mentoring programmes. It allows students to realize the true value of continuing professional development after graduation.

6. Choosing Teaching Forms and Methods within Professional Training of Future Physical Education Teachers

In Europe and the USA, the problem of choosing approaches and general methodical priorities remains open. In the USA, the choice of forms and methods of teaching and learning is determined by the extent of implementation by universities of personality-oriented, prognostic and reflexive approaches to teacher education. At the same time, emphasis is placed on the interaction between theoretical and practical aspects of academic subjects, as well as on the development of students' practical skills (Dereka, 2016a). It must be noted that multilevel training of physical education teachers in US universities is characterized by differentiation and individualization of teaching and learning, practical focus, variability of practical methods, interdisciplinarity (Dereka, 2016a, p. 73). Importantly, such training involves profound preliminary preparation and intensive self-study. US universities pay much attention to business games since they

reorient theoretical knowledge to practice. However, in the context of physical education, business games should be organized under the following principle: the minimum of resource costs to obtain the maximum result for given conditions and requirements” (Kuznetsov et al., 2019, p. 5).

Still, one might wonder about the most optimal degree of intensity, regulation and effectiveness of physical training. In Ukraine, methods of physical education teaching are mostly aimed at developing students’ motor skills. Abroad, physical training is not that leading. As noted by Grinchenko (2014), physical education in European countries seeks to expand students’ interests in leisure and recreation activities. Involving students in physical activity, one can teach them the rules of fair play, encourage them to respect the opponent, spectators, judges, nurture their tactile and muscular perception and strengthen their social responsibility related to personal contribution to the team’s performance (Grinchenko, 2014, p. 41).

The authors of the article suggest using a compromise approach. The latter lies in motivating future physical education teachers towards recreational, health-promoting and sports activities, as well as developing their knowledge of pedagogy, relevant legal framework, theories and methods of physical education, health and healthy lifestyle.

The prevalence of axiological approaches to developing valueological, social and other competencies leads to a discussion on methods of assessing future teachers’ knowledge. As shown by different studies, such methods are rather diverse in foreign practice. In Norway, according to Kvasnytsya (2019), “students’ performance assessment is done with testing throughout the academic year and includes a broad range of assessment methods: examination (verbal, written, distance), weekly tasks, compulsory reporting, student presentations, thematic research, group projects, seminars” (p. 73). In Germany, professional training of future physical education teachers is built on modules, each of which ends with different tests (sport- or practice-oriented, written or oral). As noted by Gaiduk (2013), the examination board determines the number, type and scope of these tests no later than two weeks before the start of classes. This information should be included in the module catalogue (Gaiduk, 2013, p. 13).

In the USA, all graduates in physical education who plan to work in school should complete certification requirements. The US teacher licensing and certification process is based on the tests developed under the Interstate Teacher Assessment and Support Consortium (INTASC) and the National Board for Professional Teaching Standards (NBPTS), which assess basic skills, general knowledge, subject matter knowledge, pedagogical knowledge and subject-specific pedagogical knowledge (Dereka, 2016a, p. 72).

In HEIs in Japan, physical education scores are calculated based on attendance, quality of theoretical knowledge, levels of motor skills and physical fitness. After that, it is possible to divide students into groups following their skills (Bashavets, 2016, p. 107).

One can see that emphasis is placed on key competencies of students. Foreign HEIs widely use business and role-playing games, presentations, case studies, simulations, verbal and written educational texts. Much focus is on discussions since such activity allows students to express their positions concerning the problem being studied. Thus, professional training of future physical education teachers relies on play-based, competitive and interactive teaching methods, aimed at increasing students' interest in physical activity and developing their teamwork skills.

7. Conclusions

Thus, the conclusions are the following:

1. Lectures, seminars, workshops, teaching practice and internships, all of which have peculiarities related to national and territorial differences, remain the main forms of professional training of future physical education teachers in different countries. Currently, these forms of teaching are undergoing certain changes under the influence of innovations. It refers to the introduction of video lectures, visualization lectures, project-based seminars.

2. Axiological approaches are gradually replacing athletic and physical skills. At the same time, individualization prevails over group activities. Accordingly, in Ukraine, assessment methods should be modified and aimed at measuring students' physical and theoretical-methodical competencies, rather than checking their motor skills, taking into account existing standards, personal qualities and intentions. Besides, it is important to individualize and personalize methods of teaching and assessment so that future physical education teachers can organize the educational process effectively.

3. The most common methods of physical education training aim to develop future teachers' motor skills. In the above-mentioned foreign countries, emphasis is placed on testing, group projects, case studies, business and role-playing games, presentations and simulations. Independent work of students relies on interactive methods so that future teachers can realize the importance of profound preliminary training, as well as shape a values-based attitude towards teacher training as a whole.

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