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TECHNOLOGIES FOR PHD STUDENTS' TRANSVERSAL COMPETENCES FORMATION IN THE CONDITIONS OF THE OF THE EUROPEAN EDUCATION AREA DEVELOPMENT

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INTRODUCTION

In early 21st century, much attention is paid to the problems of training higher education applicants at the third (educational-scientific) level. Taking into account the gradual entry of Ukraine into the European education area, the problem of personality formation in the plane of his/her transversal competences, the free use of both professional skills (hard skills) and integral skills (soft skills) often becomes the subject of scientific discussions of educators and scientists. According to the state documents that regulate the content of higher education, the target orientations of PhD training should be expressed in the formation of transversal competences, which involves rethinking of the systemic and holistic result of professional training.

The modern educational process is based on the principles of sustainable development, the main goal of which is to meet the needs of the present without endangering the needs of future generations. The concept of education for sustainable development is a fundamentally new way of looking at education based on the correlation of socio-economic well-being with cultural and educational traditions and a positive attitude towards the environment. Going beyond the boundaries of acquired professional knowledge and skills is the leading task of education in the third millennium[1].

The priority direction of sustainable development is optimization of human life processes both in the natural provision of the environment and in a positive attitude in society. Globalization and modernization create a diverse and interconnected world. In order to adapt and function in modern society, an individual needs to master new technologies and process a significant amount of information. People also face collective challenges for society as a whole, such as the balance between economic growth and environmental sustainability, between wealth and social equality. In such

[1] UNESCO. Issues and trends in education for sustainable development. Paris : UNESCO Publishing, 2018. 271 p.

contexts, the competences that a society have to master in order to achieve its goal must be more generic[2].

In the scientific literature, the peculiarities of training higher education applicants of the third (educational-scientific) level for professional activity are substantiated in detail, but modern realities of social and economic spheres of modern society require a new approach. Considerable interest in the context of this research attract the studies of both domestic and foreign researchers, which are devoted to the consideration of the concept of "transversality" and the process of "transversal competences" formation in the system of training in higher education institutions, namely: European integration and the strategy of building educational systems (O. Kraievska[3]); O. Matviienko[4]); formation of transversal competences in the professional training of future specialists in the field of pedagogical education (L. Popova[5]); transversal competences: their meaning and learning processes of higher education applicants (M. J. Sá, S. Serpa[6]); students' transversal competences development at the University of Córdoba (R. M. Serrano, J. A. Romero, M. J. Bello, J. D. Pérez[7]); the impact of formal and joint assessment on the acquisition of transversal competences in higher education (D. Hortigüela Alcalá, Palacios A. Picos; V. López Pastor[8]); the contribution of transversal competences to the training of a specialist in educational

[2] OECD. Creating Effective Teaching and learning environmentsfirst results from TALIS. Paris : OECD, 2009. 310 p.

[3] Краєвська О. Освітня політика Європейського Союзу: становлення та механізми реалізації. *Вісник Львівського університету. Міжнародні відносини*. 2011. № 28. С. 53–65.

[4] Матвієнко О. В. Європейська інтеграція і стратегія розбудови освітніх систем. *Науковий вісник кафедри ЮНЕСКО КНЛУ. (LINGUAPAX–VIII). Мова, освіта, культура: наукові парадигми і сучасний світ*. 2003. № 7. С. 126–131.

[5] Попова Л. М. Екземпліфікація терміну «трансверсальність» у сучасному науковому просторі через призму підготовки майбутнього фахівця. *Інноваційна педагогіка*. 2022. № 48, 2. С. 165–169.

[6] Sá M. J., Serpa S. Transversal Competences: Their Importance and Learning Processes by Higher Education Students. Retrieved from https://www.mdpi.com/2227-7102/8/3/126/htm.

[7] Serrano R. M., Romero J. A., Bello M. J., Pérez J. D. Student Training in Transversal Competences at the University of Cordoba. *Eur. Educ. Res. J*. 2011. No 10. P. 34–52.

[8] Hortigüela Alcalá D., Palacios Picos A., López Pastor V. The Impact of Formative and Shared or Co-Assessment on the Acquisition of Transversal Competences in Higher Education. *Assess. Eval. High. Educ*. 2019. No 44. P. 933–945.

sciences (C. Langa[9]); research motivation of phd students under martial law: challenges and ways of improvement (M. Boichenko[10]) and others.

1. Technologies for PhD students' transversal competences formation in classroom conditions

Note that there is a broad range of classifications of transversal competences in the scientific literature. In particular, in the UNESCO document "Assessment of transversal competencies: policy and practice", such competences include: critical and innovative thinking (creativity, entrepreneurship, resourcefulness, reflective thinking, informed decision-making); interpersonal skills (communication, organizational, teamwork, cooperation, sociability, collegiality, empathy, compassion); intrapersonal skills (awareness, persistence, self-motivation, compassion, integrity, self-respect); global citizenship (awareness, tolerance, openness, responsibility, respect for diversity, ethical understanding, intercultural understanding, ability to resolve conflicts, democratic participation, respect for the environment, national identity, sense of belonging); media and information literacy (ability to receive and analyze information using ICT, ability to critically evaluate information and media content, ethical use of ICT); physical health, religious values (appreciation of a healthy lifestyle, respect for religious values)[11].

Detailed systematization of transversal competences is presented in the "Catalogue of Transversal Competences Key for Employability", which covers: intercultural skills and global awareness, flexibility and adaptability, strategic and innovative thinking, organizational and time management skills, ability to make decisions, teamwork skills, empathy/ability to build relationship, ability to solve problems, learning orientation, negotiation skills, leadership, ability to collect and process information[12].

We will present the leading technologies for PhD students' transversal competencies formation in the conditions of creating a European educational environment.

Collaborative learning technology. Collaborative learning is defined as a joint organization of learning in which students with different abilities and

[9] Langa C. The contribution of transversal competences to the training of the educational sciences specialist. *Procedia Soc. Behav. Sci*. 2015. No 180. P. 7–12.

[10] Boichenko M. Research motivation of PhD students under martial law: challenges and ways of improvement. *Studies in Comparative Education*. 2023. No 2. P. 5–11.

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[12] *Catalogue of Transversal Competences Key for Employability*. Retrieved from: https://www.keystart2work.eu/images/docs/o2-catalogue/O2_Catalogue_EN.pdf

interests work together in small groups to complete a project or solve a problem. Unlike cooperative learning, in which each student is responsible for his own part of the work, in collaborative learning all team members work together to solve a common problem. Forms and methods of collaborative learning for PhD students can be an interview, a round table, the use of dialogic situations, a focus list, structured problem solving, questionnaires, paired annotation of an article, role-playing, solving a problem situation, case method. Summarizing the above, it can be argued that collaborative learning contributes to the development of critical thinking, ability to purposefully generate new ideas, cooperation skills, self-realization and self-improvement[13].

Flipped classroom technology. The "Flipped class" learning model is a type of blended learning, the main feature of which is that homework for students is work in an online environment: viewing video learning materials or information resources to learn new material or consolidate what has already been learned. Instead, in the classroom, under the guidance and with the help of the teacher, children perform practical tasks related to the topic they learned at home.

As a result of scientific sources analysis on the investigated problem, we determined and characterized the types of flipped classes[14].

The following types are found in the practice of foreign teachers:

The Standard Inverted Classroom. Applicants of higher education of the third (educational-scientific) level receive homework, which involves watching video lectures, familiarization with materials related to the topic of the next lesson, during which theoretical knowledge is applied in practice, and teachers have additional time for individual work with each PhD student.

The Discussion-Oriented Flipped Classroom. Higher education applicants of the third (educational-scientific) level are tasked with watching certain videos or materials from Internet resources. And the teacher organizes a discussion of the received information during the lesson.

The Demonstration-Focused Flipped Classroom. This form will be effective for those academic disciplines that require the demonstration of materials, conducting visual experiments. The teacher demonstrates the

[13] Нестеренко І. Б. Колаборативне навчання в процесі формування комунікативної компетентності при підготовці вчителів іноземних мов. Взято з: https://dspace.udpu.edu.ua/bitstream/123456789/12389/1/%D0%9D%D0%B5%D1%81%D1%82%D0%B5%D1%80%D0%B5%D0%BD%D0%BA%D0%BE_%D1%81%D1%82%D0%B0%D1%82%D1%82%D1%8F.pdf

[14] Черноіван І. Технологія «перевернутого класу» у підготовці майбутніх учителів. Взято з: https://phm.cuspu.edu.ua/nauka/konferentsii/fizyka-tekhnolohii-navchannia/70-2015/teoriia-ta-metodyka-tekhnolohichnoi-osvity/253-tekhnolohiya-perevernutoho-klasu-u-pidhotovtsi-maybutnikh-uchyteliv.html

necessary activity, and the PhD students perceive and analyze it, and then perform certain actions at their own pace – in the way that is convenient for them.

The Faux-Flipped Classroom. The use of this form will be appropriate in the event that you cannot be sure that the PhD students will definitely prepare at home. Such a model allows graduate students to watch a video in class and then complete the corresponding tasks. And the teacher can be sure that all PhD students are ready to perform practical tasks and, moving from one PhD student to another, provide them with individual consultations.

The Group-Based Flipped Classroom. This model encourages PhD students to learn from each other, explain each other's answers, provides effective ways of obtaining information, conducting scientific research, etc. How to use it? Before the lesson, PhD students should, at their own request or on the recommendation of the teacher, form groups and familiarize themselves with the relevant materials. And in class, work together on a certain scientific problem.

The Virtual Flipped Classroom. It is possible to organize the work of graduate students in such a way that the entire learning process takes place remotely: the teacher offers children material to review, issues practical tasks, consults online, conducts tests and assigns final grades. The main thing is to start studying the relevant material by working out the theory on his own, as this is done according to the principles of the "Flipped Class".

Flipping the Teacher. The teacher does not necessarily have to do all the work – prepare or search for materials, form practical tasks, advise, check works. Certain types of work can be performed by PhD students, and the teacher will monitor how the learning process will be organized, how information will be presented, and will provide assistance if necessary.

The "635" method is one of the variants of the brainstorming. The number 635 means that 6 participants are involved in the solution of the problem, each of them expresses 3 ideas, which are then successively analyzed 5 times and supplemented by the participants. The method was developed by Alex Osborne in 1953 and is based on the assumption that one of the main obstacles to the birth of new ideas is the "fear of evaluation": people often do not express interesting and unusual ideas out loud for fear of meeting with a skeptical or even hostile attitude towards them from supervisors or colleagues[15].

The classic technique of brainstorming, proposed by Osborn, is based on two principles – "suspension of passing judgment on an idea" and "quality is born from quantity". This approach involves application of

[15] Метод 635 та його застосування в умовах сьогодення. Взято з: https://www.docsity.com/ru/metod-635-ta-yogo-zastosuvannya-v-umovah-sogodennya/8623381/

several rules. Criticism is excluded: at the stage of generating ideas, any criticism of the authors of ideas (both their own and others) is not allowed. Those working in interactive groups should be free from the fear of being judged on the ideas they offer. The free flight of imagination is welcome: people should try to unleash their imagination as much as possible. It is allowed to express any, even absurd or fantastic ideas. There are no ideas so silly or impractical that they cannot be expressed out loud. There should be a lot of ideas: each participant in the session is asked to submit as many ideas as possible. At the second stage, the ideas are discussed, evaluated and those that are recognized as the most correct are selected. The final verdict on the issue can be passed by express or implied vote. At the final stage, the best solution is selected based on expert evaluations.

The "Jigsaw" technique is a method of organizing classes, in which all students depend on each other. It was developed by social psychologist and professor Elliot Aronson in 1971. Its essence is that the teacher divides the audience into groups, and the task into parts, which PhD students must put together as a puzzle. There is a positive dependence on each other, as well as collective responsibility[16].

We are convinced that this technique is an effective way to study the material. More importantly, the puzzle process encourages active listening, participation, and empathy, giving each group member a meaningful role in the academic activity.

"Metaplan". The metaplan method is a little-known tool of discussion that contains elements of brainstorming, analysis of cases and games. In modern institutions of higher education of Ukraine, it is almost not used, although it is indispensable for solving complex tasks in the practice of entrepreneurship, because in its essence it is a method of direct collective creativity, which provides an impetus to the diversification of the work group (organization). The essence of the discussion in question envisages development during the discussion of the problem of the poster called "metaplan"[17].

The metaplan method can be used in small groups (5–6 people) and in large audiences (20–40 people). However, if the number of participants is small and their interest (motivation) is insufficient, the effectiveness of the

[16] Технологія Cooperative Learning за методом Jigsaw. Взято з: https://sccf01bb77e935f48.jimcontent.com/download/version/1472588721/module/10818068591/nameA1ooperative%20Learning%20%D0%B7%D0%B0%20%D0%BC%D0%B5%D1%82%D0%BE%D0%B4%D0%BE%D0%BC%20Jigsaw.pdf

[17] Сучасні методи навчання: досвід закордонних педагогів. Взято з: https://osvitanova.com.ua/posts/2724-suchasni-metody-navchannia-dosvid-zakordonnykh-pedahohiv

class decreases, because the appropriate level of concentration of the mental energy of the group members is not reached.

Organization of work. A certain problem is chosen. Participants are united in groups. In these groups, they give answers to questions related to this problem in 4 positions:

1. The real state of affairs.
2. How should it be?
3. Why is it really like this, and not how it should be?
4. Proposals.

The task is performed on a poster according to the scheme (each group fills in all four fields):

Problem	
The real state of affairs	How should it be?
Why is it really like this, and not how it should be?	Proposals

2. Technologies for PhD students' transversal competences formation by means of distance learning

Formation of PhD students' transversal competences by means of distance learning is ensured by creation and active functioning of the following environments in the modern conditions of the educational process:

− network (creating connections, relationships between students and resources through the use of ICT, Internet services to achieve educational goals);

− interactive (an environment that is based on web technologies and supports structured interaction between members of the educational community – an interconnected, structured set of web pages, groups in social networks);

− virtual learning environment (information resources that are consistent with the processes of communication and activity, forming integrity, are integrated into a single system that supports and directs meaningful independent learning);

− distance learning environment (schematized model of the pedagogical process with the construction of training courses based on network technologies;

− modular dynamic object-oriented learning environment (software complex for organizing online learning using distance technologies on the Moodle platform).

Therefore, let's move on to distance learning technologies that can be used in the process of forming transversal competences.

Web quest – an educational site on the Internet or a telecommunications project that is combined with the educational process and integrated into the activities of students at various stages of educational-scientific work. Currently, the web quest is a symbiosis of educational, research work and game. Students of the third educational-scientific level can perform various roles during the web quest. Note that for this purpose, technical means of education are used: audio and video equipment, recordings of conferences, lectures, and dissertation defenses[18].

The web quest allows creating conditions for both individual and collective work, which enables identification of skills and the ability to work independently. We believe that this stimulates motivation for further educational and research activities, promotes development of creative abilities and inclinations, motivates formation of research skills, ability to work independently with scientific sources and Internet resources, expands the worldview, promotes personal responsibility for the performance of one's duties.

It becomes obvious that the web quest with the help of information resources of the Internet effectively solves many problems of practical content and enables formation of the following abilities: the use of information technologies for the purpose of solving professional problems; self-learning and self-organization; the ability to find not the single, but multiple ways to solve a problem situation.

Digital scribing. Scribing is visualization of information using graphic symbols that simply and clearly reflect its content and internal connections. Scribing is an innovative type of video content that can capture the audience's attention, provide them with additional information and highlight the main aspects of the topic[19].

Scribing is a modern presentation technique in which the speaker's speech is illustrated "on the fly" with drawings on a white board (or a sheet of paper), which was invented by the British artist Andrew Park for the British Association for the Dissemination of Scientific Knowledge.

During scribing, there is a kind of "parallel passage effect", when we both hear and see approximately the same thing, while the graphic sequence is fixed at the key moments of the audio sequence. Currently, scribing is an innovative technology that can be used to attract listeners' attention, provide them with additional information and highlight the main points of a speech.

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[18] Савченко Л. Використання веб-квест технологій у вищий школі при підготовці майбутніх фахівців. *Педагогіка вищої та середньої школи*. 2017. № 1 (50). С. 67–74.

[19] Нагорняк С. Скрайбінг як продуктивний та інтерактивний засіб для візуалізації інформації. *Актуальні питання гуманітарних наук.* 2022. Вип 55, том 2. С. 238–245.

Scribing is a representation of drawings, a transformation of things into visual images. Scribing as a separate job began to be talked about relatively recently. In the West, visual thinking as an industry has been developing since the 70's. One of the first who guessed to use scribing as a productive and interactive tool for conceptualizing information used by students and teachers at school was the American teacher Paul Bogush. It was he who refuted the long-learned educational motto "Read a paragraph from the textbook – answer the questions" by proving the effectiveness of using a scribe presentation in the educational process. A real breakthrough in the educational web space was also Ken Robinson's writing about changes in the educational paradigm.

There are two main types of scribing: facilitation and video scribing. Scribing facilitation is translation of information from a verbal form into a visual one and recording it in real time. The teacher's work in class while explaining new material with chalk in hand is an example of scribing-facilitation. The advantages of video scribing are that the video clip can be used many times, this type of activity is of particular interest to performers.

Video scribing is a dynamic type of scribing based on illustrations and diagrams used in the video series. Thus, scribing can be presented in the form of static diagrams, graphs, scribe-pictures, scribe-stories (comics), simple inscriptions made in a special style.

Video scribing can be used to create information products such as announcements, advertisements, book trailers, virtual exhibitions, etc., to effectively complement various events. The advantage of video scribing is that the video clip can be used many times, so this type of activity is of particular interest.

The first type of scribing products can be video presentations of your specialty, video presentations of new educational programs.

The next type of scribing product is a video instruction, for example, a video scribe for graduate students "Choosing academic disciplines", "Writing an article", etc. A special mention should be made of the series of video scribes for popularizing, for example, graduate studies in various specialties. That is, the technology of video scribing is effective for the implementation of the marketing strategy of the University.

The use of videos of scribing technology to popularize educational programs and projects remains a debatable issue, because researchers pay much attention in their scientific works to video scribing as an interactive learning tool. The collected and analyzed material allows to direct scientists to investigate scribing as an effective promotional technology as well.

You can also distinguish several of the most common types of video scribing – drawn scribing, application scribing and online scribing.

Drawn scribing is a classic type of scribing. The artist (scriber) depicts pictures, icons, schemes, diagrams in the frame, writes down keywords. This happens in parallel with the text that sounds behind the frame.

Application scribing – ready-made images corresponding to the voiced text that are superimposed or pasted on an arbitrary background in the frame. Magnetic scribing is a type of appliqué, the only difference is that ready-made images are attached with magnets to a magnetic presentation board.

Online scribing – when creating this type of scribing, special programs and online services are used, such as PowToon, VideoScribe and others. With their help, videos can be created according to ready-made templates, but the free capabilities of these services are limited.

First of all, it should be noted that introduction of digital scribing enables development and presentation of any business game, the content of which allows to consolidate and deepen knowledge.

Multimedia longread provides for an opportunity to combine text stories with animated graphics, photo galleries, incredible aerial video. Longread is a term that came from the American media. This word refers to huge text materials on websites[20].

Micro-learning – using short learning videos, micro-learning breaks information into small, manageable chunks instead of long, continuous learning activities. But the duration (from 1 to 15 minutes) is only one factor. The second factor is that each individual learning module is small in size and is characterized by simplicity, purposefulness, structure and is focused around one learning goal (one linguistic phenomenon). Over time, graduate students make their own connections between individual modules and decide in which order to review them and how one topic relates to another. The micro-learning method is especially relevant during the online format, as the module can contain such media forms as a video, a text fragment, a podcast, and is convenient during training involving technical means such as laptops, tablets, smartphones and Internet resources.

During the organization of micro-learning, the teacher can use various tools. The Internet contains many possibilities. PLICKERS, SLIDO, and MENTIMETER are interaction tools that provide knowledge testing, gamification elements, and feedback. KAHOOT, WOOCLAP, QUIZZIZ help create any type of interactive content, conduct brainstorming, test knowledge after a lecture or webinar in the form of a game. With graphics tools like CANVA, TIMELINE JS, and MINDMEISTER, you can quickly create infographics, mind maps, flash cards, posters, cards, and so on. Thus, microlearning is a modern, innovative learning strategy that allows content

[20] Лешко У. Лонгрід як форма сучасної мультимедійної журналістики. *Вісник Львівського університету. Серія Журналістика*. 2020. Випуск 48. С. 180–188.

to be taught in small, highly condensed chunks centered around a single learning goal. This technology cannot be called a universal trend, however, it can play an important role in motivating and involving students in active learning, increasing the percentage of information remembered by long-term memory. In conditions of an acute shortage of time, the use of this form of education is gaining popularity, as it allows the target audience to participate in the learning process at a convenient time using an available device[21].

A promising technology for ensuring collective interaction in the distance learning process is a webinar. However, the concept of "webinar" needs to be clarified, since the terms "video conference", "web conference", "virtual class" are often used as synonyms for this concept.

The concept of "virtual class" can be considered in two main aspects. First, a virtual class is a community of two or more people (students and teachers) who, in accordance with jointly chosen goals, carry out educational activities. Secondly, a virtual class is a software environment (2D or 3D) that implements several elements of synchronous or asynchronous interaction at once[22].

Video conferencing enables geographically distant users to see and hear each other, as well as to transmit other information. Among video conferences, a special class is distinguished – telepresence systems, which provide ultra-high-quality transmission of audio and video information, but their use requires expensive equipment. It should be noted that the functionality of modern video conferencing systems also supports screen sharing, text chat, etc.

Webinar is an information and communication technology of learning, which involves conducting interactive classes in a synchronous virtual classroom, which provides functionality for remote collaborative (joint) learning.

Thus, webinars are implemented using special software platforms. As a rule, the platform consists of two parts: a software application for organizing a webinar and virtual class software, which unites all participants in a single information environment and provides for the necessary functionality.

Thus, the webinar platform is a complete software and technical solution, which makes it possible to organize and conduct a webinar with a certain completeness of functionality. Each webinar participant fulfills his/her role, which defines the interface of the virtual class and the right to use functions

[21] Бугайчук К. Л. Мікронавчання: поняття, особливості, переваги. *Дистанційне навчання – старт із сьогодення в майбутнє* : зб. наук.-метод. пр. III Всеукр. наук.-практ. конф. з міжнар. участю (м. Харків, 20 квіт. 2017 р.). Харків, 2017. С. 28.

[22] Литвинова С. Г. Віртуальний клас для організації індивідуального навчання учнів. Взято з: https://lib.iitta.gov.ua/201/1/230-233.pdf

that can be transferred to other participants. There are usually three roles in a webinar: presenter, moderator and listener.

So, the main didactic opportunities provided by the use of webinar technology are: comprehensive provision of pedagogical interaction that is close to real; work in small groups or pairs (additional virtual rooms); presentation of educational content in various formats; assessment of learners' educational achievements. The indicated didactic possibilities and functional features give reasons to recommend the use of webinars in the educational process of the HEI, in particular within the framework of the classroom system (for example, for pedagogical interaction with students and teachers), implementation of distance education and extracurricular learning. It is advisable to use this technology for the implementation and protection of educational telecommunication projects by students; conducting lessons by outstanding teachers; consultations on various subjects; preparing students for the Olympiads; distance learning of students who are temporarily unable to attend education institution, etc.

"Open-space". Organizing events using Open-Space technology makes it possible to increase the productivity of round tables, meetings, and conferences quickly, simply, and inexpensively. But also, Open-Space Technology is a creative method of conducting dialogue/discussions in groups of 8 to 1000 people, which is used for strategic development, finding solutions in problem situations, team development, working in "interest groups", which will ensure development of creative, professional thinking and cognitive motivation in PhD students.

CONCLUSIONS

Therefore, a professional who possesses transversal competences is an innovative type of a specialist who can easily adapt to any work environment and adapt to changes in society. Accordingly, the analysis of the above-mentioned features of transversal competences meets the requirements of the formation of the modern educational process. Transversal competences are now necessary both in the work environment and in personal life. However, their importance is significantly increased due to the significant development of society, which can now be observed all over the world.

Thus, formation of transversal competences in the training system of PhD candidates is aimed at formation and improvement of the level of research competence, involves regular improvement throughout life; adaptation to new technologies and pedagogical innovations; taking into account the possibilities of social networks; satisfaction of individual educational and professional needs is taken into account (analytical, communicative, intercultural, social, digital contexts subject to close interaction), etc. The professional ability of the future doctor of philosophy

to perfectly master the necessary research tools acquires actual importance in the conditions of competition on the modern international labor market.

Prospects for further research in this direction may be modernization of educational and scientific programs and improvement of the mechanism of measurement and assessment of transversal competences in institutions of higher education based on a comprehensive interdisciplinary approach.

SUMMARY

The study identified and characterized the leading technologies for the formation of transversal competences of PhD students in the conditions of the creation of the European education area. Among such competences, we singled out the technologies for the formation of these competences in the classroom and by means of distance learning. Technologies for the formation of transversal competences of PhD students in the classroom environment include Collaborative Learning Technology, Flipped Classroom Technology, Method "635", "Jigsaw" Technique and "Metaplan". Web quest, digital scribing, multimedia longread, micro-learning, webinar, "Open-space" are identified among the technologies of transversal competence formation of PhD students by means of distance learning.

It has been proved that one of the ways to the formation of a complete system of transversal competences is introduction of various technologies aimed at improving existing methods and reducing the time for acquiring competences. It was established that in the process of choosing a pedagogical technology for the formation of transversal competences, it is necessary to rely on the following criteria: methodological, that is, compliance of organizational forms, didactic methods and tools with methodological foundations; subject, that is, taking into account the psychological and pedagogical characteristics of the subject of study – the PhD student; optimization criteria. It is argued that in the context of training PhD students for the formation of transversal competences, all components of professional growth – theoretical, practical and occupation-specific – need to be reconsidered. In the aspect of training higher education applicants of the third (educational-scientific) level, formation of transversal competences is of primary importance in view of the need for synthetic integration of end-to-end (universal) competence and professionally determined (occupation-specific) preparation for performing professional functions.

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