

*Fundamentalisation of content of biological profile education in the direction of using educational potential of knowledge in the history of biological science contributes to: increasing the level of motivation, quality of students' knowledge, improving cognitive skills to compare and evaluate facts; formation of scientific outlook and natural-scientific style of thinking; independence and critical thinking, finding contradictions and ways of overcoming them; development of the need for historical reflection as well as students' prognostic skills; stimulating interest in studying biology and its history; formation of humanistic consciousness, moral qualities of students, ability to adapt their knowledge to changes in life situations; development of their erudition and general culture. The prospect of further research lies in the theoretical modernization of biological profile education, in the study of didactic capabilities of historical-scientific component of the content of education in the profile school as a means of self-realization of students in educational activities.*

*Key words: fundamentalisation, humanitarianization, content of education, profile education, principle of historicism, historical-scientific knowledge, natural-scientific picture of the world, world outlook.*

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## SMART TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES IN THE MASTER'S TRAINING PROCESS AT THE HIGHER EDUCATION INSTITUTION

*The article describes the current problems of foreign language teaching of professional direction students in master's training process at the higher educational institution in order to develop and improve their professional competence by means of internet technology. The article substantiates the necessity of using SMART technologies in teaching a foreign language of the professional direction, formulates the basic principles of their functioning and basic characteristics. Using the example of SMART technology tools (webinars, social networks, blogs, e-learning systems of foreign language teaching, SMART tutorials), the authors analyze the relevance and validity of their use from a didactic point of view, emphasize the need for continuous improvement of the learning process with their help.*

*Key words: modern technologies, SMART technologies, webinar, social networks, blogs, e-learning systems of foreign language teaching, SMART tutorial.*

Introduction. In modern educational conditions, the cognitive-communicative approach to teaching foreign languages of professional direction involves integration of interactive, including multimedia, technologies in master's training process at the higher education institution, which allows

more fully to use possible-visual and visual-auditory analyzers of students, thereby improving the quality of the ability to improve the material and the efficiency of its assimilation.

Widely used computer technologies, audio, video equipment, laptops, multimedia projectors, electronic boards, transform elements of the screen showing into an interactive object, having a complex effect on the perception of the user, including his emotional sphere.

Currently, the Internet offers extensive educational resources available online, from video to text and interactive applications. ICTs have become an integral part of our life and came in almost all areas of human communication. New technologies overcome borders and barriers, faster than it could be imagined. Their presence and use provide new opportunities and set new tasks to be solved.

Regarding to WWW access to authentic materials has become so easy nowadays. A huge amount of resources and languages are available for immediate use.

Analysis of relevant research. The problem of learning a foreign language to form students' professional competence through Internet technologies were considered by V. Bykov, L. Beletska, B. Gershunsky, V. Glushkov, V. Gorbenko, O. Dmitruk, V. Doroshenko, M. Zhaldak, M. Zgurovsky, I. Ziazun, M. Isakova, N. Koptyug, A. Kosovska, M. Levchuk, V. Lugovyi, B. Malinovsky, E. Mashbits, N. Morse, S. Nikolaenko, V. Oliinyk, I. Robert, V. Soldatkin, O. Spivakovskiy, M. Tomchuk, M. Shkil and others.

Implementation of interactive learning technologies considered by V. Kotov, X. Leimets, O. Infantry, O. Pometun, O. Savchenko, L. Tarasenko and others. To development and implementation of pedagogical technologies are devoted the studies of V. Bezpalko, M. Clarin, N. Kuzmina, B. Likhachev, V. Monakhova, G. Selevko, et al. These authors have paid much attention to the theoretical aspect of innovative technologies development and definition of their effectiveness in the context of information society.

Although, according to the British Educational Communications and Technology Agency (BECTA) report, smart boards are a beneficial tool of presentation that can be used to replace traditional and modern classroom resources (such as the blackboard, flipchart, OHP, maps, images, graphs, books, calculators and players); and that give one-click access to teachers to a bank of resources that would otherwise take years to collect and much space to store (BECTA, 2007).

Lewin, Somekh and Steadman state that smart boards make classes more visual and lively with their touch-screen characteristics, the ability of students and teachers to interfere, change and record things and their other features such as sound, video and animations, colors, images, and zooming in or out (Lewin, Somekh and Steadman, 2008).

SMART Technologies report also states that smart boards increase active student involvement in the learning process and their interaction with the course, encourage them to learn and support different learning styles (SMART Technologies, 2006).

Kennewell and Beauchamp argue that smart boards ensure more eye contact between students and teachers and thus ease classroom management, make learning fun, enhance involvement and enrich the environment (Kennewell and Beauchamp, 2007).

Cogill emphasizes that training is necessary if smart boards are to be used effectively in education, and that overuse can put students off learning (Cogil, 2001).

Thus, the issues of the SMART technologies in the context of foreign languages teaching in master's training process at the higher education institution are becoming relevant nowadays.

The aim of the article. To analyze the use of ICTs in teaching foreign languages of professional direction in master's training process at the higher education institution. Consequently, there is a need for a comprehensive research analysis of SMART technologies in the context of the foreign languages teaching in master's training process at the higher education institution.

Research Methods: Solving the highlighted aim, a set of methods of scientific research adequate to them were used, theoretical: a comparative analysis of the scientific definitions of modern ICT technologies, for example SMART technologies in master's training process, a systematic analysis of SMART technologies while foreign languages teaching in master's training process at the higher education institution; empirical: analysis of SMART-technologies while foreign languages teaching in master's training process at the higher education institution.

Results. The discipline "The Foreign Language of Professional Direction" is different from many other academic disciplines in that it requires trained and practical skills, and theoretical knowledge. It affects both hardware and software, which is used in teaching as well as teaching methods used in master's training process at the higher education institution.

Acquisition of new skills, new "literacy" (technical, spiritual, critical, linguistic and cultural) takes a very important role in the adoption, development and use of ICT in teaching foreign languages of professional direction in master's training process. Successful introduction and application of new technical means are closely connected and directly dependent on the preparation of the master, and special efforts are required to create programs, demonstrating advantages of using ICT in the master's training process at the higher education institution (Blood, 2002).

However, the availability of new technologies does not lead to automaterial change of the notion “teaching culture”, opportunities for its transformation are provided.

The attitude of teachers towards new technologies and relevant concepts for their use and organization training determine whether the desired outcomes are achieved or not and is it possible to change the “teaching culture”.

The main reasons for using SMART technologies while foreign languages teaching in master’s training process at the higher education institution:

- being in an authentic language environment;
- access to extensive sources of information and personal language options;
- opportunities for communication with the outside world;
- student-centered approach to learning;
- development of the student’s ability to work independently;
- greater variety of educational content;
- new conditions for self-education and the creation of audi-visual learning paths;
- teachers and students can teach and organize a teaching course, which allows to influence the choice of educational content;
- eliminate the inherent limitations of traditional method, taking education and teaching beyond audience;
- facilitate student communication with each other and with the teacher using ICT (Min & Siegel, 2011).

Applying ICT effectively a teacher should have idea of each student’s individual educational problems; make an informed decision choosing technology to use verification of the accuracy of proposed information content that develop effective methods search and be able to spend computer research confidently and competently use standard software criticism and conduct the information research.

Active material use, posted in the open demanding resources, creates a new motivation obtaining knowledge that, in turn, becomes available to more people. Maximum knowledge availability is the main feature of the new education development strategies – smart education. Smart education is flexible interactive learning environment using free access content all over the world. Smart education develops conditions for a high level of educational achievements, appropriate to opportunities and the needs of the modern world, allows students to adapt to a rapidly changing environment. It is a student-oriented training system, which is significant but increases master’s opportunities of the 21 century, moving away from unified to individual learning, from standard knowledge to diversify knowledge, improving creative thinking.

Smart education requires development of online communities, social networks where teachers can share educational content. Smart education allows passing from passive content to the active, interactive, online, allows

creating conditions of synchronized knowledge delivery, that ensures such knowledge quality which will satisfy students. Smart Education Concept requires creation of new training courses that should be media, relevant, motivating students, flexible, integrated, constantly renewed (Dill, 2008).

To optimize teaching foreign languages in master's training process at the higher education institution various media and smart technologies like webinars, blogs and social networks are used.

Technological gadgets are the easiest way of reaching information and they have taken their place among the most commonly used educational materials at the higher education institution. Where we once used overhead projectors, videos, TV sets, and radios in the education sector, these have undoubtedly been replaced by computers, projectors and smart boards. Smart boards are defined as an educational tool that allows teachers and students to use their knowledge with skills, repeat, interact with knowledge and respond to instruction. The components of a smart board system are a computer, a projector and a panel with active surface that acts like a blackboard. Connected to a computer, the smart board and projector are used in conjunction with a smart board software. This software allows the use of many ready-made drawings, formulas, images, maps and shapes during class (Dill, 2008). Smart boards offer many facilities such as presentations, viewing videos and graphics, as well as the opportunity to retrieve what was on the board later (Smith et al., 2005).

As Lewin stated, smart boards have the advantages of presenting learning resources and knowledge, explaining concepts and ideas, and facilitating interaction and activities in the instructional process. They thus support the instructional process, draw students' attention and increase their motivation (Lewin, 2008).

Foreign language webinars are probably the most effective and the cheapest way of interinternational communication. Organization of such workshops does not require any special knowledge using internet technologies.

A webinar is a synthesis of words "web" and "workshop"; this is an online seminar which provides the teacher (tutor) the ability to transfer information and tasks, and the participants – to receive new knowledge with the help of a virtual classroom where they can hear and see each other anywhere in the world. Such seminars have all interaction signs.

The webinar starts with web applications. This alternative dialogue format with students using modern smart technology allows to drive distance learning and to organize video-online conferences. Using a new communication format increases interest of a young audience to classes and attendance (Dill, 2008).

The technical side of webinars includes creation of registration forms for listeners. It is important to provide uninterrupted broadcast of the webinar prepare, a "work table of a speaker", PowerPoint-presentations, install sound and video.

It is necessary to ensure the connection between a speaker and participants as well between listeners. Also "chat" (including "private chat") or microphone can be used. A report title so that latecomers could listen and watch the recording should be installed.

Among the webinars benefits the most significant are the following:

1. Webinar, unlike the most types of web conferences, where most of the time the speaker leads the speech, uses interaction. Listeners are actively involved in the learning process, immediately eliminating arising under attention.

2. At the end of the online workshop listeners get a record that can be used for fastening and dissemination of received formations.

3. Sometimes audio and video recordings, received during the webinars are put out with text description, which allow to get acquainted with text off viewing. Not everyone has Internet speed for comfortably watching videos. Moreover, some listeners perceive textual information better than visual.

4. Lack of living expenses for accomodation, travelling, food; minimum materials for the educational process: needed only a computer, speakers with a micphone and the Internet.

5. Webinars save a lot of time, because participants do not need to go to the webinar venue.

6. Lack of borders: the participant can be at home, in the office, in another country.

To be objective, also the problems, which participants may meet, during webinars are the following:

1. For a webinar listener, should be of sufficient level of self-discipline and conditions under which is not distracted.

2. The quality of the provided Internet may also be a problem. High Speed Faceless Smart Internet can help to remove problem under stable connection characteristics.

3. For many people, the main webinars drawback is the lack of "lively" teacher and student communication promotes audience approchement in an "informal" setting.

4. Webinar – a fairly new tool used for conferences and trainings, and many researchers used to work with a live audience, feel awkward in front of computer screen, which may result to reducing the classes quality.

To summarize, it should be noted that webinar technology turned out to be one of the most convenient and economical solutions for education, including foreign languages. This is a technology that allows seeing and hearing each other, sharing data and an interactive process, as close as possible to the general distance to real life communication.

Webinars are demonstration tools, effectively used for organizing remote foreign languages teaching in master's training process at the higher education institution. A convenient way to display information in any format,

including images and video, giving the opportunity to put on and hear the interlocutor. Due to this, it should be stated that any technology is full alternative to traditional classroom activities.

In today's world, social networks and internet blogs got very wide use. Practically each user is now registered at least in one of the existing social networks or leads some blog. This is especially true in relation to youth (students-master's), many of them have their "pages" in several networks and can run multiple blogs.

Usually in a teaching environment there is a negative attitude to social networks and blogs, there is opinion of the negative impact on learning process and about the harm which is done to the children and adolescents' psyche etc. Therefore, the problems that arise when using Internet cannot be denied.

However, when using a social network in the learning process, personal student motivation in social networks and blogs should be performed.

Any discipline teacher can use blogs in magister training process. They can be used not only as a group for placing some material, but also as a means of communication between a teacher and a student, as well as between the students themselves. When using blogs in the learning process must be considered following features of this product. First, the entries have a linear structure, and for seeing the main text or an interesting comment it is necessary to review all messages. Secondly, while writing any blog, the main material or commentary, one should remember that it is available for participants view. Thirdly, unlike social networks, a blog has a limited set of functions that can be used in the process of learning. But, despite this, blogs use in the teacher environment becomes popular innovative learning process (Sunkur et al., 2011).

Speaking about the possibility of using-social networks while foreign languages teaching in master's training process at the higher education institution it should be noted that the most appropriate "assistant" among various social networks is, according to the authors, Facebook network.

So, what are the functions of this social network Facebook in master's training process at the higher education institution?

In Facebook, the effective community groups can be created for foreign languages teaching in master's training process. Creating such community group opens up a lot of opportunities for teachings within a given social network:

1. In order to increase interest students to the foreign languages learning in the created group, video and audio materials (both scientific and foreigners) can be uploaded, which are played online with one "click" both in class and at home. Materials can be laid out by a tutor and students, which in turn can help "young" and "adults" share experience and knowledge.

During classes, you can conduct watching video materials with the following general vocabulary and grammar analysis, as well as a discussion within auditory lessons and online.

In addition, there is the possibility to post comments below the video material that allows the teacher, for example, to indicate important language points to which the student needs to pay attention while viewing.

2. "Facebook" there is a function message forwarding online. This function provides the possibility of dialogue in which one or more participants of the group, including students, and teacher can communicate.

3. There is also a forum option. A teacher or student create discussion topic in which group can leave their comments.

4. Function "create photo album" is an indispensable learning online helper social network. It provides an opportunity to spread the necessary printed materials scanned in the form of photographs or pictures that groups can view and leave their comments.

While using this social network is always present: answer for message, comment on a video-material or message.

In general, the set of functions and opportunities of this social network reminds a lot of electronic programm successfully used in teaching process. It is clear that the Internet with its developing segments like blogs, social Networks, Forums, is an essential an integral part of modern foreign languages teaching in master's training process at the higher education institution. While being used correctly motivation and social networks can become a good assistant in foreign languages learning process.

Conclusions. In conclusion, according to experts, using SMART technologies in teaching foreign languages increases: new, affordable, user-friendly technical equipment when helps overcome reluctance in the audience, teachers' interaction and cooperation within different countries leads to opened educational resources, and the so-called opened training "blended learning", which does not depend on time and place of its holding, allows removing from passive use of ready programs to self-provided programs, specific groups or individual students.

Perspectives of the further research. The further research requires experimental research on the effectiveness of using SMART technologies in teaching foreign languages in the master's training process at the higher education institution.

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## АНОТАЦІЯ

**Глива Яна, Довгополова Ганна.** SMART-технології викладання іноземних мов у процесі навчання в магістратурі в закладі вищої освіти.

*У статті описано сучасні проблеми викладання іноземної мови за професійним спрямуванням для магістрів закладу вищої освіти з метою розвитку та вдосконалення їх професійної компетентності за допомогою Інтернет-технологій. Зазначено, що викладання іноземної мови за професійним спрямуванням має здійснюватися за допомогою сучасних Інтернет-технологій, що підвищують мотивацію та пізнавальну активність магістрів, усувають психологічний бар'єр у процесі використання іноземної мови як засобу спілкування в закладі вищої освіти.*

*У статті представлений огляд сучасних наукових підходів до розуміння сутності поняття «Smart education», показані переваги концепції smart-освіти. Виокремлено погляди науковців на використання SMART-технологій у процесі викладання іноземної мови за професійним спрямуванням для магістрів закладу вищої освіти.*

*Доведено, що використання SMART-технологій створює нові можливості для системи освіти. Розкрито можливості еволюційної трансформації та переходу smart-освіти на новий рівень – SMART-суспільства. Відзначається, що у SMART-суспільстві відбувається перехід від традиційної моделі навчання до e-learning, а потім – до SMART-освіти.*

*У статті обґрунтовано необхідність використання SMART-технологій у навчанні іноземної мови за професійним спрямуванням, сформульовано основні принципи її функціонування та основні характеристики. На прикладі інструментів SMART-технологій (вебінари, соціальні мережі, блоги, системи електронного викладання іноземної мови, навчальні програми SMART) проаналізовано актуальність та обґрунтованість їх використання з дидактичної точки зору, наголошено на необхідності постійного вдосконалення процесу викладання за їх допомогою. Зазначено, що регульована система SMART-технологій допомагає опанувати іноземну мову за професійним спрямуванням у сучасних умовах закладу вищої освіти.*

**Ключові слова:** сучасні технології, SMART-технології, вебінар, соціальні мережі, блоги, системи електронного викладання іноземної мови, SMART-підручник.

## РЕЗЮМЕ

**Глива Яна, Довгополова Анна.** SMART-технологии в преподавании иностранных языков в процессе обучения в магистратуре в высшем учебном заведении.

*В статье указано, что преподавание иностранного языка профессиональной направленности должно осуществляться с помощью современных Интернет-*

*технологий в заведении высшего образования. В статье обоснована необходимость использования SMART-технологий в обучении иностранному языку профессионального направления, сформулированы основные принципы ее функционирования и основные характеристики. На примере инструментов SMART-технологий (вебинары, социальные сети, блоги, системы электронного преподавания иностранного языка, учебные программы SMART) проанализированы актуальность и обоснованность их использования с дидактической точки зрения, отмечена необходимость постоянного совершенствования процесса преподавания с их помощью.*

**Ключевые слова:** *современные технологии, SMART-технологии, вебинар, социальные сети, блоги, системы электронного преподавания иностранных языков, SMART-учебник.*

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## **РОЗВ'ЯЗАННЯ ПРОФЕСІЙНО-ПРИКЛАДНИХ ЗАДАЧ У ФОРМУВАННІ МАТЕМАТИЧНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ФАХІВЦІВ ТЕХНІЧНОГО ПРОФІЛЮ**

*У статті представлено обґрунтування необхідності впровадження в процес навчання професійно-прикладних задач як одного з найбільш дієвих шляхів реалізації практичної (фахової) спрямованості класичної математичної підготовки в частині формування найважливішої операційно-технологічної складової математичної компетентності майбутніх фахівців технічного профілю. Наведено попарний розгляд класичних типових задач та професійно-орієнтованих задач, що мають в основі один і той самий теоретичний матеріал із вступу до розділу «Випадкові процеси». Проаналізовані задачі та запропоновані для розгляду завдання є запозиченими зі створеного авторами банку задач, зміст яких відповідає фрагментам реальних технічних проблем.*

**Ключові слова:** *математична компетентність, операційно-технологічна складова математичної компетентності, вимоги до професійно-прикладних задач.*