

## ABSTRACT&amp;REFERENCES

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**SELF-ADMINISTRATION FORM OF  
PROFESSIONAL TEACHERS DEVELOPMENT  
WITHIN DEPARTMENTS OF MANAGEMENT OF  
POLISH HIGHER EDUCATIONAL INSTITUTIONS**

p. 4-8

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*Significant changes concerning new technologies and its use in all spheres of life characterize recent decades of the world society development. A modern citizen of Europe and the world cannot imagine his/her functioning in a society without digital technologies having become an integral part of communication, information and experience exchange and new knowledge acquisition. Nowadays the professional teachers' development is a topical problem within management departments of higher educational institutions in the Republic of Poland, since the requirements to it are reflected in the legal framework and documents of higher educational institutions. E-learning is becoming a very popular form of information gain and teachers competencies development considering large amount of responsibilities, performed by a teacher and taking into account the rapid development of information and communication technologies.*

*It should be noted that 57,1 % of the interviewed teachers indicated that they use e-learning in scientific and didactic, research and organizational activities and 42,9 % of teachers use e-learning as students receiving new information, new knowledge and improving professional competence. The same key figures were obtained asking questions about the use of information and communication technologies by teachers during classes: 57,1 % of teachers answered that they used it if necessary, 42,9 % of teachers reported the answer “yes”, no one chose the answer “no”.*

*Therefore, self-administration plays an important role in the process of professional development of the teachers' competence within management departments of polish higher educational institutions. Lifelong learning takes an important place in self-administration: courses, training, seminars, postgraduate education, self-education, blogging, websites, portfolio. The analysis of questionnaires of teachers and official sites of state polish higher educational institutions leads to the conclusion that at the present stage the teachers give a preference to digital technologies and e-learning in the process of raising their professional level. This regards to the fact that this form of education saves time, money, suggests various forms and ways of competences development, allows studying on the job. Both lecturers and students of higher education institutions of the Republic of*

*Poland note that self-management will be considered in the form of e-learning in the future as professional development*

**Keywords:** *blog, e-learning, professional development, self-education, self-administration, self-management, website*

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**MODEL OF FUNCTIONING OF PROFESSIONAL  
QUALITIES OF FUTURE NAVIGATORS IN THE  
PROCESS OF SPECIAL TRAINING**

p. 9-13

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*The article theoretically grounds the model of formation of professional qualities of future navigators in the process of professional training, presented by the purpose, theoretical-methodological, content-procedural and diagnostic blocks that distinctly reflect the directionality of the process of formation of professional qualities from the set aim till the final result. There are elucidated the destinations of separated elements (aim, tasks, principles, approaches, content of disciplines, forms methods and means of teaching, criteria, levels and results) in achieving the expected result.*

*The purpose block of the model provides determining aims and tasks of the process of formation of professional qualities of future navigators. The theoretical-methodological base of the process of formation of professional qualities are principles and approaches (competence, synergetic, system, axiological, activity, resource). The content-procedural block of the model includes a series of disciplines of the cycle of professional and practical training, which learning favors the formation of professional qualities of future navigators, covers forms, methods and means of teaching. The assessing-resulting block of the model determines criteria (motivational, cognitive, activity-behavior; reflexive), correspondent indicators, formation levels of professional qualities (low, middle, high). In particular, this block includes the result of the process (formation of professional qualities of future navigators), coordinated with the initial aim.*

*There are indicated the pedagogical conditions, necessary for realizing the developed model, namely:*

- 1) provision of the positive motivation of future navigators for formation of professional qualities in the process of learning disciplines of the cycle of professional and practical training;*
- 2) orientation of the content of disciplines of the cycle of professional and practical training on the formation of professional qualities of future navigators;*
- 3) provision of active repetitions of professional situations in the process of learning disciplines of the cycle of professional and practical training*

**Keywords:** *model, future navigators, professional qualities, pedagogical conditions, special training, formation*

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**ERASMUS + COORDINATOR AS A TUTOR AND MENTOR AT HIGHER EDUCATIONAL ESTABLISHMENTS OF UKRAINE UNDER THE CONDITIONS OF THE ACADEMIC MOBILITY INCREASE**

p. 14-18

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*The article analyzes the modern state of higher education in Ukraine, realization of academic mobility, discovers peculiarities of introducing tutoring and mentoring under Ukrainian realities. There was realized the comparative analysis of providing tutor and mentor activity in Ukraine and HEE in Ukraine and Europe. There were separated functions, realized by Erasmus + coordinators for providing tutor and mentor activity in Ukraine. Especially, there was grounded a necessity to introduce tutoring and mentoring in Ukrainian HEE. The key factors that influence a necessity of introducing tutoring and mentoring are: internationalization, increase of academic mobility, problems with refugees, new challenges in higher education and new requirements to providing its quality. The program Erasmus + is for today the most large-scale instrument of academic mobility realization in Europe. Just that is why tutors and mentors help students that study during one semester (credit mobility) or MA course (degree mobility) to realize their potential and to finish their study successfully at a partner HEE. At studying students that realize academic mobility get help from tutors at solving practical tasks, laboratory*

*works. Mentors help to adapt to living conditions, traditions of another country, language. Only complex tutorship provides the harmonic development and success of a student, realizing the principle of student-centered study. A situation as to implementing tutoring and mentoring differs depending on a country. Success of a University today depends also on realization of academic mobility and desire of foreign students to study at one or another HEE. This article separated the main functions, realized by Erasmus + for providing tutor and mentor activity: informational (communication about possibilities of exchange, necessary information), communicative (setting a dialogue between all participants of mobility), organizational (preparation of necessary documentation), educational (instructions as to behavior abroad), psychological (determination of psychological features of each person and individual peculiarities for providing comfort conditions of staying abroad). The article grounds a possibility of introducing tutoring and mentoring at HEE of Ukraine, based on the experience of foreign ones*

**Keywords:** Erasmus, tutor, mentor, academic mobility, reformation of higher education, internationalization, rating

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#### CONTENT AND STRUCTURE OF THE SELF-EDUCATIONAL COMPETENCE OF STUDENTS IN PROFESSIONAL AND TECHNICAL EDUCATION INSTITUTIONS

p. 18-22

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*Various approaches to understanding the essence of self-education make it possible to determine that self-education is based on the knowledge, skills, abilities and methods of learning activities acquired in the process of learning, manifested as an independent cognitive activity carried out by those who study.*

*The article outlines the main approaches to the essence of self-education, identifies the essential characteristics of self-education (goals of self-education, management of self-education, peculiarities of activity, conditions for the implementation of self-education) and components of self-education, defines the concept of “self-educational competence” – an integrated personality characteristic that includes knowledge, skills, and experience of self-education, personal qualities that manifest themselves in the need, ability and readiness to implement a certain type of activity aimed at achieving personal, professional and social self-realization of a person, is characterized by personal and professional values that determine the readiness and ability of an individual to carry out self-education activities successfully, describes the main components of the process of forming self-educational competence of future qualified workers. It was emphasized that the main criteria of the effectiveness of the process of self-education is the formation of the intellectual sphere of the individual, his/her readiness*

*for self-education, professionalization, self-regulation, subjectivity and socialization.*

*The structure of self-education competence of future skilled workers of the machine-building industry is presented, in which the components are represented, which are grouped into two blocks: variative (molding) and invariant. In turn, the variative consists of five interrelated components: needs-motivational, orientational-cognitive, operational-activity, reflexive-estimating, and organizational-volitional. Their characteristics are presented.*

*The structural components of self-educational competence are guidelines, which determine the direction of further scientific research, vectors of the substantiation of theoretical and methodological aspects of the development of self-educational competence of a future skilled worker*

**Keywords:** self-education competence, self-education, content and structure of self-educational competence, future skilled worker

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## PREPARATION OF FUTURE HIGHER SCHOOL TEACHERS TO DESIGNING OF PROFESSIONALLY-ORIENTED TEACHING TECHNOLOGIES

p. 23-27

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*The article reveals the main components of the process of designing professionally-oriented learning technologies. Different approaches to the design of teaching technology through its stages are analyzed; consideration in the process of designing the features of the type of technology being designed; definition and further designing of a set of actions of the teacher within the limits of technologies, etc. Taking into account the tendencies of updating and modernizing the educational process, the conceptual framework for the training of future high school teachers to designing professionally-oriented technologies is based on an understanding of professionally oriented learning technology as a system of forms, methods, techniques and means aimed at guaranteeing the achievement of the objectives of professional training and bringing it as close as possible to the conditions of professional activity, ensuring the formation of a competitive labor market specialist. Designing professionally-oriented learning technologies takes place in accordance with the principles of system integrity; diagnostic, differentiated purposefulness; stimulating and motivating a positive attitude of students towards learning; flexible algorithm and variability of training; professional expediency; synergistic information support of training. System in the design process is provided by a combination of such components of professionally-oriented learning technology: targeted, informative, procedural-activity, diagnostic-corrective. The prevailing conditions for the use of professionally-oriented learning technologies are the creation of an appropriate educational environment for a higher education institution, where the introduction of the specified didactic system is in place, as well as the provision of a positive psycho-emotional climate in the process of professional training, systematic implementation of the subject of subjective interaction between students and teachers; active stimulation of students for self-education, self-training, self-development; an individualized choice of the type of professionally-oriented learning technology; application of innovative professional-oriented pedagogical tools for professional training*

**Keywords:** *teacher of higher education, professional-oriented technology, teaching technology, designing of educational technologies*

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**RESEARCH OF QUALITY INDICATORS / RESULTS OF EDUCATIONAL ACTIVITIES OF GENERAL EDUCATION UNIVERSITY IN UKRAINE**

p. 27-31

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*The analysis of the system of indicators / criteria for assessing the quality / effectiveness of educational activities of institutions of general secondary education in different regions of Ukraine is carried out. Interpretation of the results of the study consisted of the main indicators of the assessment of the quality / effectiveness of educational activities of the institutions of general secondary education. The results of the conducted survey on the main indicators of the quality / performance evaluation of educational institutions of general secondary education were presented, which were grouped according to the four main quality criteria, namely: indicators characterizing the general criterion for assessing the quality of educational activities of institutions of general secondary education on the openness and accessibility of information about institutions; indicators characterizing the general criterion for assessing the quality of educational activities of institutions of general secondary education, regarding the comfort of conditions in which educational activities are carried out; indicators characterizing the general criterion for assessing the quality of educational activities of general educational institutions, on the benevolence, courtesy and competence of pedagogical workers; indicators characterizing the general criterion for assessing the quality of educational activities of institutions of general secondary education, as to satisfaction with the quality of educational activities of the school.*

*Graphically presented results of the survey - typical responses to the opinion polls of teachers / school leaders on the criteria / indicators for assessing the quality of the school work, are identified as the most significant ones, taking into account the effectiveness and forecasting of the development of institutions of general secondary education in Ukraine.*

*The analysis of the relationship between the criteria of the effectiveness / quality of educational activities and the optimization of the school functioning is realized, taking into account the tendencies and requirements of modern education development in the context of Ukraine's European integration, namely: the prognostic aspect – for choosing the best option for making a managerial decision; the evaluation aspect – to assess the ongoing / planned events, build a forecast for the development of the school; the control aspect – for the coordination of the work of institutions of general secondary education, the development of normative acts; motivational aspect – to assess the level of intellectual development, further motivation and self-education of all participants in the educational process; cognitive-activity aspect – to assess the depth of integration of*

*knowledge and professional experience, forecasting the future development of the school*

**Keywords:** *educational activity, indicators of quality / performance evaluation, level of quality, competence, benevolence, comfort*

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**STANDARDIZATION OF VOCATIONAL EDUCATION ON THE BASIS OF COMPETENCY APPROACH**

p. 32-35

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*The article summarizes some aspects of the competence approach in vocational education, substantiates the definition of “standardization of vocational education”; The content, stages and results of standardization of vocational education are defined. There are four interrelated, successive stages of achieving the appropriate levels of quality of training specialists.*

*The theoretical search found that if the standardization of vocational education should be considered not only as “the procedure for the development and approval of the standard”, but also as an officially established procedure for the implementation of its provisions and adhere to the requirements for the competent training of graduates at the stages of goal-setting, selection and structuring of the content of education, mastering students, students competencies, assessing competency achievements of students, students and graduates (in particular, independent), then there is a possibility to substantially increase the quality of the functioning of vocational education, in particular, professional advance.*

*An experimental study was conducted to find out the actual state of training of junior college and technical colleges in the agrarian, construction and engineering sectors. The study found that 61.3 % of teachers regularly use educational qualifications, a training program for a junior specialist in the development of educational documents; 23,3 % only when preparing a working curriculum; 9.1 % – use these documents extremely rarely; 6.3 % of teachers of colleges and colleges do not use at all.*

*The study of the level of readiness for the standardization of vocational education demonstrated the following tendency: the high level of readiness for standardization of education on a competent basis was only 10.8 % in agrarian educational institutions, 17.5 % in machine-building and 48 % in colleges and technical schools in the construction industry.*

*It is concluded that the current state of training of junior specialists in the agrarian, construction and engineering sectors*

*is characterized by a system of organizational destructive factors that determine the urgent need to develop a set of measures to rationalize the standardization of education*

**Keywords:** vocational education, competency approach, standardization of vocational education, junior specialist

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**STRUCTURED SYSTEM ANALYSIS OF DETERMINATION OF MODERN KEY COMPETENCES IN THE WORLD**

p. 36-42

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*There were analyzed Normative documents of the interstate structures (UNESCO, UNICEF, UNDP, the International Department of Standards) and non-profit international organizations and foundations (the Roman Club, the 21st Century Partnership, the Center for the Redesign of Educational Programs, the Institute for Business Ethics, the World Education Forum, the Students' Training School Oxford University and the British Nesta Foundation for the Development of Innovations), developed over the last decades, the world experience in identifying competencies was outlined. The content of the terms "competence", "key competencies" in order to determine the categorical apparatus and the terminology of the research was specified. The results of long-term research of competencies in 100 countries of the world were presented in order to identify and select the key ones, and their comparative analysis of 2015 and 2020 was presented by analysts and experts of Worldwide Economic Forum. The data of the conducted research testify that the competence in the complex solution of problems remains as a priority in the modern world space. Critical thinking and creativity should ensure the selection of information, its correct rethinking; contribute to the fullest disclosure of talents and capacity building. The system-structural scheme of analysis of the definition of key competencies in the world by interstate structures and non-profit international organizations and foundations was created. Global problems of the educational crisis rise were characterized and requirements of society for specialists were defined. Foreign practice of solving modern problems and formulating the requirements for the 21st century education was characterized, essential characteristics of updated key competencies for further implementation of international norms into the educational process of domestic educational institutions were revealed. It was proved that for successful implementation of competences in educational programs and plans it is necessary to determine their general set within educational institutions depending on the branches of knowledge and specialization and provide educators and academic staff with necessary scientific, methodological and methodical tools, develop their ability to self-education and making a career and a new way of teaching others*

**Keywords:** competence, key competencies, interstate structures, non-profit organizations, efficiency of education systems

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## USE OF PODCASTING TO DEVELOP LISTENING SKILLS IN UNDERGRADUATE STUDENTS

p. 43-46

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*This paper addresses the issue of the use of podcasts in teaching listening skills to university students. Podcasts as new technology tools aim to help English learners to increase listening comprehension, providing them with authentic and motivating materials. The authors describe didactic characteristics and taxonomy of podcasts; prove using podcasts as one of interactive means to support learning process in developing listening skills. The aims of listening competence formation to first-year students are defined. By the end of the first year*

students are to acquire Level B2 according to Common European Framework of Reference for Languages. This means that they can comprehend large statements; follow the reasoning on contemporary topics; understand news, programs and films in literary language. Podcasts have three levels of difficulty and provide a transition from Level B1 to B2 and therefore can be applied to develop listening skills to first-year students. The main stages of developing students' listening skills are specified. In the pre-listening stage students are prepared to listen to the podcast using their background knowledge. The while-listening stage is aimed at listening for gist, listening for details, making inferences and summarizing. In the post-listening stage the listeners are taken beyond the podcast content and set tasks which contribute to integrating other language skills. Examples of exercises which correspond to these three stages are provided. The process of listening applies "top-down" and "bottom-up" strategies. The "top-down" strategy focuses on listeners' background knowledge, which activates the listener's expectation of the podcast and helps predict its content. The text is the key point in the "bottom-up" strategy, the purpose of which is to decode the information coming from the bottom. This model explains how information that comes in the form of audio signals is transformed. A balanced approach to choosing "top-down" or "bottom-up" strategy within the stages improves the process of forming competencies in listening to first-year students

**Keywords:** podcast, taxonomy of podcasts, listening skills, listening strategies, stages, set of exercises

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## THE FORMATION OF KNOWLEDGE ON TOXICANTS AS THE COMPONENTS OF CHEMICAL SAFETY FOR FUTURE DOCTORS DURING THEIR STUDIES OF BIOORGANIC CHEMISTRY AND BIOCHEMISTRY

p. 47-52

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*Chemical safety of treating chemical substances is key problems that unite the international community. Realization of the modern model of chemical safety provides the coordinated work of legal, economic, ecological-hygienic, prophylactic and educational components. A doctor of XXI century must have knowledge about modern approaches to classification of dangers and marking chemical substances, be able to ground toxicological properties and molecular mechanisms of the effect of toxicants, estimate risks as to using chemical substances of inorganic and*

organic nature, give medical care to persons, who suffered as a result of the influence of chemical compounds. The paper theoretically grounds methodical approaches to formation of knowledge about inorganic toxicants as a component of chemical safety in future doctors at studying bioorganic and biological chemistry. There is presented the analysis of the learning program on biological chemistry, and it was established, that formation of knowledge about inorganic toxicants as a component of chemical safety can be realized at studying such topics as enzymes, bases of bioenergetics, metabolism of amino acids, bases of molecular genetics, biochemistry of human nutrition, biochemistry of blood and liver. It was proved, that "Biochemistry of the liver" is a generalizing section as to problems of chemical safety in the course of bioorganic and biological chemistry. The structural-logic scheme of formation of knowledge about dangerous chemical substances is described. There was realized the purposeful pedagogical influence as formation of knowledge about organic and inorganic toxicants as components of chemical safety, in the course of "Bioorganic and biological chemistry" at studying the topic "Investigation of processes of biotransformation of xenobiotics and endogenous toxins. Microsomal oxidation by cytochrome P-450". There were developed two video-collections "Modern approaches to classification and marking of chemical substances", "Biotransformation of xenobiotics and endogenous toxins" and cases "Toxicants in the context of chemical safety". The developed materials were probated in the course of biological chemistry at training future doctors in the National medical university, named after O. O. Bogomolets

**Keywords:** toxicants, chemical safety, Safety Symbols, future doctor, xenobiotics, biological chemistry

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LEGAL EDUCATION OF STUDENT YOUTH:  
HISTORICAL AND PEDAGOGICAL ASPECT

p. 53-57

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*The article is devoted to the urgent modern problem – legal education of student youth. It analyzes key normative acts, influenced the scientific-legal picture of the world.*

*There was reviewed the scientific literature and revealed views of scientists on preconditions of the development of legal education of student youth in 1990–2015. There was characterized the genesis of legal education and psychological-pedagogical problems of forming legal culture. The typical features of reforms in the educational process, changes in curriculums, appearance of new disciplines were separated and described.*

*The author presented the general characteristic of social organizations that play an important role in forming legal education of youth. Typical features of legal education in the educational process in 1990–2015 were separated and described. The study is based on the analysis of pedagogical thought and normative-legal base of the studied period. Based on the retrospective analysis, there were separated conventional stages of formation of legal education of student youth, structural elements of legal education.*

*The author traced the process of consulting-methodical support of the Ministry of education in providing the ideological component.*

*Attention is paid to discourse elements of the development of legal education and its conventional periods and results of the integrated analysis of pedagogical activity. Historical preconditions of the development of legal education were analyzed.*

*The author traced the establishment of the normative-legal base, where peculiarities of the educational process, recommendations as to teaching historical-legal disciplines, ideological direction of the educational process were noted. The author traced shortcomings and imperfections of these methods.*

*Main preconditions of the development of legal education of student youth during XX–XXI century were revealed. The analysis of scientific sources allowed to reveal peculiarities of the development process of legal education during XX–XXI century.*

*Prospects of the development of legal education, impossible without qualitative reflection of the genesis of key events during XX–XXI century, were analyzed*

**Keywords:** legal education, student youth, educational process, normative acts

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SCIENTIFIC AND METHODOLOGICAL SUPPORT FOR THE DEVELOPMENT OF DIGITAL COMPETENCE OF PRIMARY CLASSES TEACHERS

p. 57-62

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*The problem of scientific and methodological support of professional development of a teacher as a multifunctional scientific category is considered, on the basis of the analysis of scientific sources.*

*The essence and peculiarities of scientific and methodological support of development of digital competence of primary school teachers are covered. The subjects of scientific and methodological support and pedagogical, organizational and technological conditions of its realization are determined.*

*Two groups of functions of scientific and methodological support of development of digital competence of primary school teachers are distinguished and described. The first group of functions provides organization of a supporting process, and the second - facilitates self-study through an individual educational trajectory.*

*The process of teaching and methodical support of the digital competence of primary school teachers is considered as a structural and content unity of formal education (advanced training courses), non-formal education (scientific methodological work in the intercourse period) and informational education (self-education of the teacher) throughout all professional activities.*

*The methodical products developed in the course of scientific and methodological support of development of the digital competence of primary school teachers in the conditions of the project activity are briefly described: the program of the special course "Development of the digital competence of the teacher of elementary school classes of the New Ukrainian school", the program of the selective training module "Digital competence of the teacher of the New Ukrainian school", training program "Model of training "1 student to 1 computer".*

*The developed scientific and methodological support for the development of the digital competence of primary school teachers builds the system of involving teachers in the process of active use of digital technologies in their pedagogical practice and awakening their creative potential and readiness for independent activity in the informational and educational environment*

**Keywords:** *scientific and methodological support, professional development, digital competence, informal education, postgraduate education*

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