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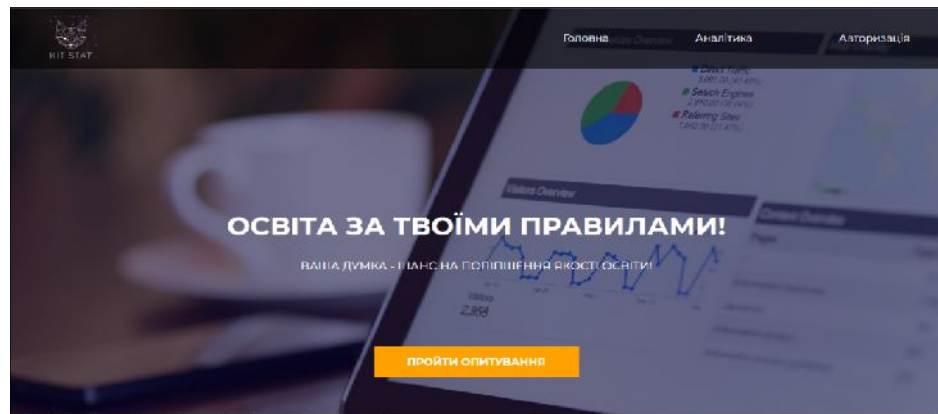


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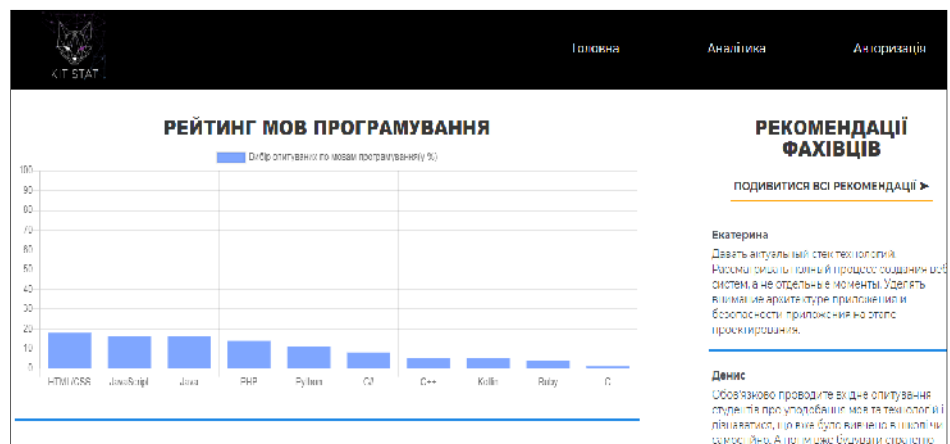
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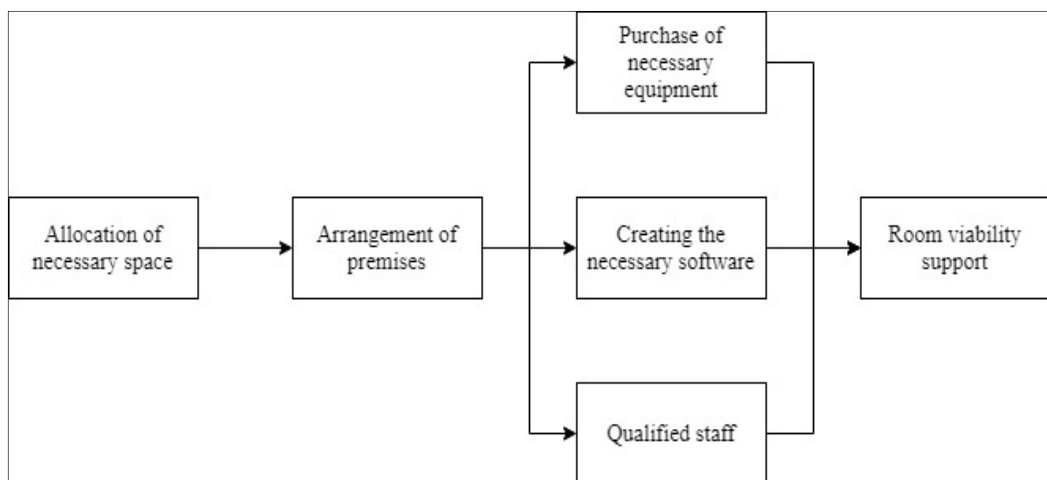
## APPLYING THE PRINCIPLES OF SMART LIBRARY TO THE ACTIVITIES OF THE SCIENTIFIC AND TECHNICAL LIBRARY

**A. Kharakhash, I. Zinchenko, A. Shershun**

An integral part of the human of the 21st century is information technology. Their introduction into various fields of activity is only a matter of time. One such area is the library. Currently, more and more universities want to convert them into smart libraries that meet standards.

Before talking about a Smart Library, we need to understand what it is. The main concept of a Smart Library is that it is fully automated. No employees inside, only visitors who get full access to all the functionality of the library.

Consider the technological component of a Smart Library. First of all, this is the presence of a self-service terminal and an electronic library card. Using the terminal, readers are able to independently take and return books. Also, in the space of a smart library, it is necessary to be able to display all the books that are in the reader's terminal and, if necessary, notify him of the need to return the book.



P 1. The transition to the smart library

The next important technological component is modern computers, graphic stations, and other tools suitable for students of various specialties to solve the tasks. In addition to jobs, it will be excellent to place recreation areas. From the existing smart libraries, one can single out the most popular technological implementations in these zones: VR zones, small cinema halls, and automated cafes.

The most common room formats are: coworking, event room, reading area, game areas, movie rooms. Consider the most fundamental of them.

1. Coworking. The very concept of coworking appeared about 30 years ago, but only now began to gain serious momentum. Coworking is an alternative to the usual offices, adjusted for the size of the premises. It is important to understand why

a similar format of premises should be present in smart libraries. Let's analyze an elementary situation. When creating a group project within the university, the question may arise about the meeting place. If 2-3 people participate in the project, then it will not be a problem to gather in a coffee shop or cafe. If the project has 5+ people, this is already becoming a problem. This is where coworking helps us. Also, the availability of computers and the necessary software will further ensure relevance and attendance.

2. Open reading area. First of all, you need to turn to statistics. The largest percentage of people reading books in Ukraine are students - 89%. 20% of students read books only a few times a year, and 32% express a desire to read more. This suggests that reading books remains an important activity for the reader. However, this desire must be supported. For this, it is necessary to create reading zones where students will have the opportunity to study literature. You must not forget about filling the database with relevant literature.

3. Specialty events and clubs. The bulk of readers in libraries are students from the so-called Z generation. One of the features of this generation is the desire to express oneself and be heard. For them, communication and feedback is important. However, for such things, they prefer social networks. Is it good or bad to judge them. But in the modern world it is also important to present any idea in the form of live communication. Here, various events, meetings, interest clubs will help us. In this format, it is easier for a person to either find his associates or hear the opposite thought and look at things from the other side.

The proposed Smart Library implementation options are not the final point of their improvement. In this study, only a small part of the tasks that need to be performed to create a Smart Library is mentioned.

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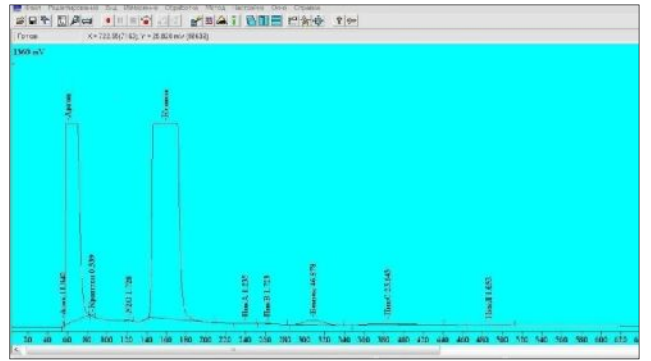
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**UDC 001.9****PLAGIARISM AS A MANIFESTATION OF ACADEMIC DISHONESTY****O. Kotuzaki, . Iorgachova., O. Makarova**

The development of modern technologies not only greatly expands the opportunities for research in all spheres of activity, but also facilitates the manifestation of such violations of academic ethics as plagiarism, fabrication, falsification, etc. Therefore, the issue of academic integrity has recently attracted the attention of scholars and educators, not only in Ukraine but around the world [1]. Violation of the principles of academic integrity is a series of incorrect actions by any participant in the scientific and educational process. Such manifestation of academic dishonesty as plagiarism, which can take many forms, e.g. using someone else's work or parts of it without indicating the source and other people's ideas and presenting them as their own, requires separate analysis. The problem of unfair scientific writing exists all over the world. Accordingly, various programs are being created to improve the quality of education, regulations, and laws that would prevent plagiarism and other such things. In Ukraine, in response to these day-to-day scientific, educational, and social problems, the Dissergate Initiative Group has been formed that brings together scientists, HEI teachers, and scientific associates of the NAS of Ukraine and strives to use the available forms and methods of public access to control plagiarism as a manifestation of systemic socio-scientific and educational illness [2]. Active work on creating the National Academic Text Repository, an effective tool for identifying plagiarism and a resource for information exchange between scholars, is ongoing. Its database will be a tool for examining academic texts for borrowing [3].

Higher education institutions, of course, should take care of their image in the academic field and in society and disallow cases of plagiarism, so they should be less and less tolerant of academic fraud such as plagiarism and monitor it more closely. Thus, the main priority of the Odessa National Academy of Food Technologies, which is recognized in Ukraine and abroad as a modern innovative scientific and educational center for training highly qualified personnel for food and processing industry enterprises, is the observance of academic integrity. The result was the adoption of the «Regulation for inspecting scientific works for plagiarism», which was designed to prevent plagiarism in the scientific, methodical, and educational works of pedagogical, scientific, and other employees of the academy, students, post-graduates, and doctoral students. The aforementioned Regulation defines the detection measures and responsibility for academic plagiarism and the ways to prevent it. Additionally, this Regulation provides a link to the Anti-Plagiarism Internet Service [StrikePlagiarism.com](http://StrikePlagiarism.com) for checking scientific papers for plagiarism. Adopting the principles of academic virtue is a rather difficult process, which involves not only delineating and fixing, but also conscious and free acceptance of these principles by all members of the academic community [4].

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The main task of higher education is to form creative specialists, capable of self-development, self-education, and innovation. In this respect, it should be acknowledged that adherence to the principles of academic virtue directly affects the youth of the higher education system in the country, what values are embedded in the institution of education, and what is the «secret success» in society. Is it hard work that helps to succeed both as an individual and the country as a whole, or is it deception, fraud and questionable cunning, which then become the norm of public relations and drag the country to the bottom [5]. An important motivational factor for a student should be a teacher who is bound to set an example for them as a professional, because the goals of teaching, learning, and research can only be achieved in an environment where ethical standards are respected and maintained. After all, generations of students who have grown up on plagiarism in scientific journals perceive the appropriation of a stranger as a norm of life and behavior and subsequently embody this in the forms of life, professional, and social behavior, which leads to the bankruptcy of all national state and public institutions and economic degradation. And if, in the future, such a student decides to become a scientist, it will be the inevitable collapse of science and education [2]. According to the students [6], to overcome the above problems, the teacher can and should help them open their creative potential and determine the prospects for their internal growth. Focusing on the personality of the student, one can offer a variety of individual tasks, topics, reports, and other types of creative work in order to allow students to develop tasks of varying degrees of complexity by themselves. The students must feel that they are doing something out of the ordinary, something that no one has ever done before them. Then they themselves would feel special. Additionally, the interest and involvement of the teacher in their assigned work often motivates students. This is because the mechanical relations according to the formula of «I give you the task and you fulfill it» are replaced by mutual cooperation and, accordingly, by the formation of a friendly and respectful attitude towards the teacher. As a result, with increasing requirements for work and increasing motivation, the quality of research and, accordingly, the educational level of students will also increase [6].

Obviously, plagiarism is an urgent problem and a serious violation of the principles of academic integrity, which is a type of moral code for teachers, students, and researchers, because the absence of plagiarism in the publication is respectful to the researchers who have carried out scientific work and a sign of professionalism. Belief in the integrity of scientific work must be the basis of academic life.

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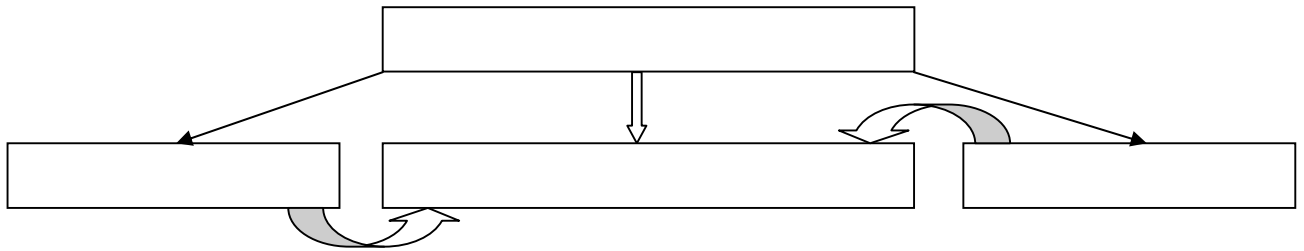
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## INFORMATION ENSURING OF SMART EDUCATION TECHNOLOGY

V. Larshin

### 1. Problem statement

To the present, manufacturing has been recognized as a skillful function which is implemented in a workshop. Manufacturing is no longer merely machining or fabrication. Moreover, manufacturing systems are covering everything from order receipt through the product shipment. There is no need to assert (this is clear from the very beginning) that all the stages of this complex integrated manufacturing system will be successfully implemented with the presence and active creative participation of relevant highly qualified specialists (high class specialists). Finally, all of the manufacturing subsystems need such professionals. In this regard, there is a need to open educational institutions in the form of primary, secondary and higher education. Thus, the requirements for the education system stem from the needs of society and the individual in this society. In this regard, great (and over time increasing) importance is attached to improving the efficiency of higher education technologies.



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This report deals with conception, principles, and procedures of smart education in modern society in connection with the well-known “sustainable development” tendency in the world of «Industry 4.0».

**2. The main purpose of presentation** is to explain the essence of the proposed «technological» approach to the theory and practice of the educational process in universities as well as to reflect the main features of the modern stage of higher education development.

**3. Presentation of the main material**

The report shows that the educational process in a university is the purposeful sequence of pedagogical operations which is determined, directed and ensured by the accompanying informational support of educational tasks. Information technologies of stationary, correspondence and distance learning are the basis for building the structure and content of both specific academic disciplines and individual specialties. The literature analysis on the issues of philosophy and theory of education in universities has shown that improving the quality of education and the development of its new forms is a steady trend of recent times. To some extent, this is confirmed by the emergence of appropriate structures at the local (departments for ensuring the quality of education at universities) and state (the National Agency for Quality Assurance in Higher Education) levels. We have witnessed the Bologna education system with its corresponding pros and cons. We are currently facing a new challenge associated with a paradigm shift in education. The essence of the new education paradigm is to replace the knowledge-based approach with the so-called competency-based approach. The paper proposes a new «technological» approach to the strategy and tactics of the higher education pedagogical system development within the framework of the well-known trend of «sustainable development» in accordance with which such new concepts as the pedagogical system, pedagogical operations and their components are introduced. It predetermines the methodology for constructing curriculum programs and teaching technology. It is shown that the curriculum of the academic discipline (course) is complex hierarchical system which depends on the individual initial training of students. Moreover, the methodology for constructing a hierarchical academic discipline also determines the method of its assessment when controlling the quality of both the academic discipline (course) and specialized educational department in which this discipline (course) is created.

The features of recently adopted student-centered (student-oriented) education technology are reflected in accordance with which the share of selective disciplines (courses) is increased, and traditional academic programs of disciplines (courses) - curricula - take the form of the so-called syllabus. The interrelation of the research and educational activities of the teacher should be reflected in the developed curriculum of the course. It is proposed to evaluate the quality of both this curriculum and the activities of the corresponding profile department according to the criteria of consistency, problemativeness and activity of the course.

We have witnessed the Bologna education system with its respective pros and cons. At the moment, we are facing a new challenge associated with a paradigm shift

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in education. The essence of the new paradigm is to replace the knowledge-based approach (information knowledge ability skill) with a competency-based approach (qualification, competence, professional skills). In other words, now instead of education, a new system is being introduced to fill people with certain competencies. It may be suspected that education itself is being abolished. This is the first part of the report.

The next part is about the ratio of virtual and real learning to know whether it possible to provide effective virtual (for example, distance) education. The answer to this question is suggested to look for from the corresponding analogy that occurs when considering the production flow of information and the flow of materials. It is known that the most elements of these two flows are the same excepting one of the most important. This exceptional element is the implementation stage where new unpredictable information appears. This new unpredictable information is the feedback of the educational system.

The proposed teaching technology preserves the principle of unity of teaching and upbringing (nurture) of students. Teaching forms a system of knowledge about the objects, phenomena and processes of the surrounding world. Upbringing forms the learner itself, giving him new qualities which, in turn, have a positive impact on the learning process. Moreover, the capital truths of teaching coincide with the capital truths of upbringing, since they have common roots - the culture and customs of behavior of people in society. The complexity of the unified process of teaching - and-upbringing is a well-known reason for the emergence and development of special science - pedagogy. In turn, the theoretical foundations of pedagogy are considered in two interrelated directions, to wit: didactics and the theory of upbringing. The theoretical basis of pedagogy is considered in two interrelated directions: didactics and the theory of upbringing. Didactics is divided into three areas: principles, forms and teaching methods.

Today e-learning has emerged as essential feature of the modern university teaching and is considered to be a specific-relevant performance criterion for universities. The other side is the so-called interactive computer aided learning based on information and communication technologies in university curricula, student team learning, distance learning, etc.

The last but not the least part of the report is about the ratio between the educational process in a higher education institution and the scientific one. This, in turn, increases the requirements for the scientific work in universities, since the quality of such work has become worse in recent years. University science suffers from diseases such as sophistry, eclecticism, profanation, plagiarism, nepotism, harmful influence of official position, etc. Old and worn out laboratory equipment of universities lead to invalid scientific results. As a result, the quality of the educational process at the university is deteriorating. There is a generalization (and simplification) of academic disciplines with a tendency to emasculate their essence. To some extent, these shortcomings are compensated by the fact that the «research

university status» has been strengthened and requirements for its granting have been also reinforced.

#### **4. Conclusions and the prospects for further development**

1. Analysis of the literature on philosophy and learning theory in universities showed that improving the quality of education and the development of its new forms is a stable trend of recent times in e-learning, distance learning, student team learning, etc. To some extent, this is confirmed by the emergence of appropriate structures at the local (department of quality assurance at universities) and state (the National Agency for Quality Assurance in Higher Education in Ukraine) levels.

2. A new «technological» approach to the strategy and tactics of the development of the higher education system (within the framework of the tendency of «sustainable development») is proposed, according to which such new concepts as the pedagogical system, pedagogical operations and their components are introduced, which together predetermines the methodology of building programs of academic disciplines and teaching technology.

3. It is shown that the curriculum of an academic discipline is complex hierarchical system with elements which are at different levels of subordination (in accordance with the tree of goals) and depend on the individual initial training of students. Moreover, the method of constructing a hierarchical discipline predetermines the method of its evaluation in quality control both the discipline and the profiling department where this discipline was created.

4. A feature of recently adopted student-centered teaching technology, according to which the share of selective academic disciplines has increased due to a decrease in the share of traditional high-tech academic disciplines, is that the curriculum takes the form of the so-called syllabus.

5. The interrelation of research and educational activity of the teacher, which is reflected in the developed curriculum of the course, is shown. The quality of the curriculum is assessed according to the criteria of consistency, problematicity and activity of the course.

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**THE METHOD OF ECOLOGY-ENERGY ANALYSIS AS THE FINAL STAGE OF THE THESIS ON DEGREE BACHELOR OR MASTER FOR SPECIALTIES 141 «ELECTRICAL ENERGETICS, ELECTRICAL ENGINEERING AND ELECTROMECHANICS» AND 144 «HEAT POWER ENGENDERING»**

**O. Khliyeva, V. Zhelezny, A. Doroshenko**

Nowadays the technological progress in the industry is focused on energy saving. Moreover, the requirements of the Kyoto Protocol (dedicated to the greenhouse gas emission (GHG) reduction) and its amendments should be considered at designing all types of powerful systems. It is well known that the main part of the GHG anthropogenic emission is occurred by the fossil fuels burning on power plants. Thus, any equipment or system with high electricity or fossil fuel consumption contributes to a large amount of greenhouse gas emission (indirect from electricity consumption and direct at fossil fuel consumption).

The manufacturers are used different ways to reduce energy consumption at designing and producing equipment. Depending on the type and purpose of the equipment, the various schematic solutions, additional apparatus for the utilization of heat and low-potential energy, enhance the thermal insulation quality, modernization of equipment design, etc. can be considered and applied. But such improvement often leads to an increase in energy and material expenditures at considered system manufacturing. Therefore, the manufacturing indirect contribution to total GHG emission also increases. Taking into account this fact it can be concluded that low electricity or fossil fuel consumption of considered system are not always

environmentally friendly. Thus, by authors opinion, the life cycle analysis using the energy and environmental indicators (ecology-energy analysis) is needed for choosing the direction of powerful equipment and systems modernization with the purpose of their energy efficiency enhancement.

It is very important to perform ecology-energy analysis of systems using renewable energy sources at estimation possibilities of their implementation in industry. The power inputs at such systems manufacturing may be no produced by considered systems during their life cycle.

In this regard, the students (bachelor and master degree) for specialties «Heat power engendering» and «Electrical energetics, electrical engineering, and electromechanics» (specialization «Alternative and Renewable Sources of Energy») should be able to perform ecology-energy analysis of the possibilities of implementation powerful systems into the industry. Moreover, it seems most appropriate to perform the mentioned analysis at the final stage of the qualification study within the bachelor's and master's thesis.

For these purposes, the proposed in [1-3] method for calculation of the Total Equivalent Greenhouse Gases Emission (TEGHGE) for the life cycle of the analyzed system (equipment) can be used.

$$\begin{aligned} \text{TEGHGE}_{\text{eq}} = & \beta \sum \left( e_{\text{GDP}} \cdot (c_i^{\text{eq}} + c_i^{\text{eq}, \text{disp}}) + e^{\text{h.l.}} \cdot T_i^{\text{h.l.}} \right) + e_{\text{GDP}} \cdot \beta \cdot \tau \sum c_i^{\text{eq}} (k_{\text{dep}} + k_{\text{rep}}) + \\ & + e_{\text{GDP}} \cdot \beta \cdot \tau \sum (c_j \cdot G_j \cdot n) + \sum (m_k \cdot \text{GWP}_k \cdot n) + \sum (m_k^{\text{eq}} \cdot \text{GWP}_k \cdot (1 - \alpha)) + \\ & + \beta \cdot e^{\text{h.l.}} \cdot T^{\text{h.l.}} + e_{\text{GDP}} \cdot \beta \cdot c^{\text{pr. disp}} \cdot n \cdot \tau \end{aligned}$$

where  $\beta$  is an average indirect emission factor for a certain region (country), kgCO<sub>2</sub>e/kW·h;  $e_{\text{GDP}}$  is an energy intensity of GDP, kW·h/hrn;  $c_i^{\text{eq}}$  is a cost of  $i$ -element (equipment) of the considered system, hrn;  $k_{\text{dep}}$  and  $k_{\text{rep}}$  are the coefficients, considering the annual expenses (from investment) required for the depreciation and repairing of the system elements, year<sup>-1</sup>;  $\tau$  is the operation life of the equipment of the considered system, years;  $c_i^{\text{eq}, \text{disp}}$  is a cost of the disposal of the  $i$ -element (equipment) of the considered system, hrn;  $e^{\text{h.l.}}$  is an energy equivalent for human labor, kW·h/man-hour;  $T_i^{\text{h.l.}}$  is labor expenditures for the production of the  $i$ -element (equipment), man-hour;  $c_j$  is a cost of the production of the  $j$ -type raw material, half-finished material, energy resources needed for the manufacturing of the product in the considered system, hrn per unit of raw material;  $G_j$  is the consumption of the  $j$ -type raw material, material, half-finished material, energy resources, etc., during manufacturing of the unit of product;  $n$  is the yearly capacity of the plant, quantity of the product per year;  $m_k$  is a mass of  $k$ -type GHG that emits during manufacturing of the unit of product, kg per unit of product;  $\text{GWP}_k$  is a GWP of  $k$ -type GHG, kg of CO<sub>2</sub>e per kg of GHG;  $m_k^{\text{eq}}$  is a mass of the  $k$ -type greenhouse gas in the equipment at the moment of its disposal, kg;  $\alpha$  is a fraction of the disposed greenhouse gas at the disposed of the equipment;  $T^{\text{h.l.}}$  is labor expenditures that are necessary for the manufacturing of the products, man-hours per year;  $c^{\text{pr. disp}}$  is the cost of the product

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disposal, hrn.

The proposed method can be adapted to the analysis of any powerful technological equipment or system that considered in student's qualification studies (thesis on degree bachelor or master). The proposed method can be used at the final stage of the carrying out of qualification studies together with techno-economic analysis of considered in thesis equipment or system.

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Average CPU, HDD Free Space і т. д. параметрів, наприклад, Load

можна подати вигляді  
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t - , n -

параметрів, що вимірюються

ивань за певні

$[t_1; t_2]$

$$S = \int_{t_1}^{t_2} |X'(t)| dt$$

к функція дискретна, то формула

$$S = \sum_{t_1}^{t_2-1} |x(t+1) - x(t)| \tag{1}$$

огою нейрон  
 $Y = F(X)$ , де Y -  
 цна, але її можна

X -

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[http //www.compr.ru](http://www.compr.ru)
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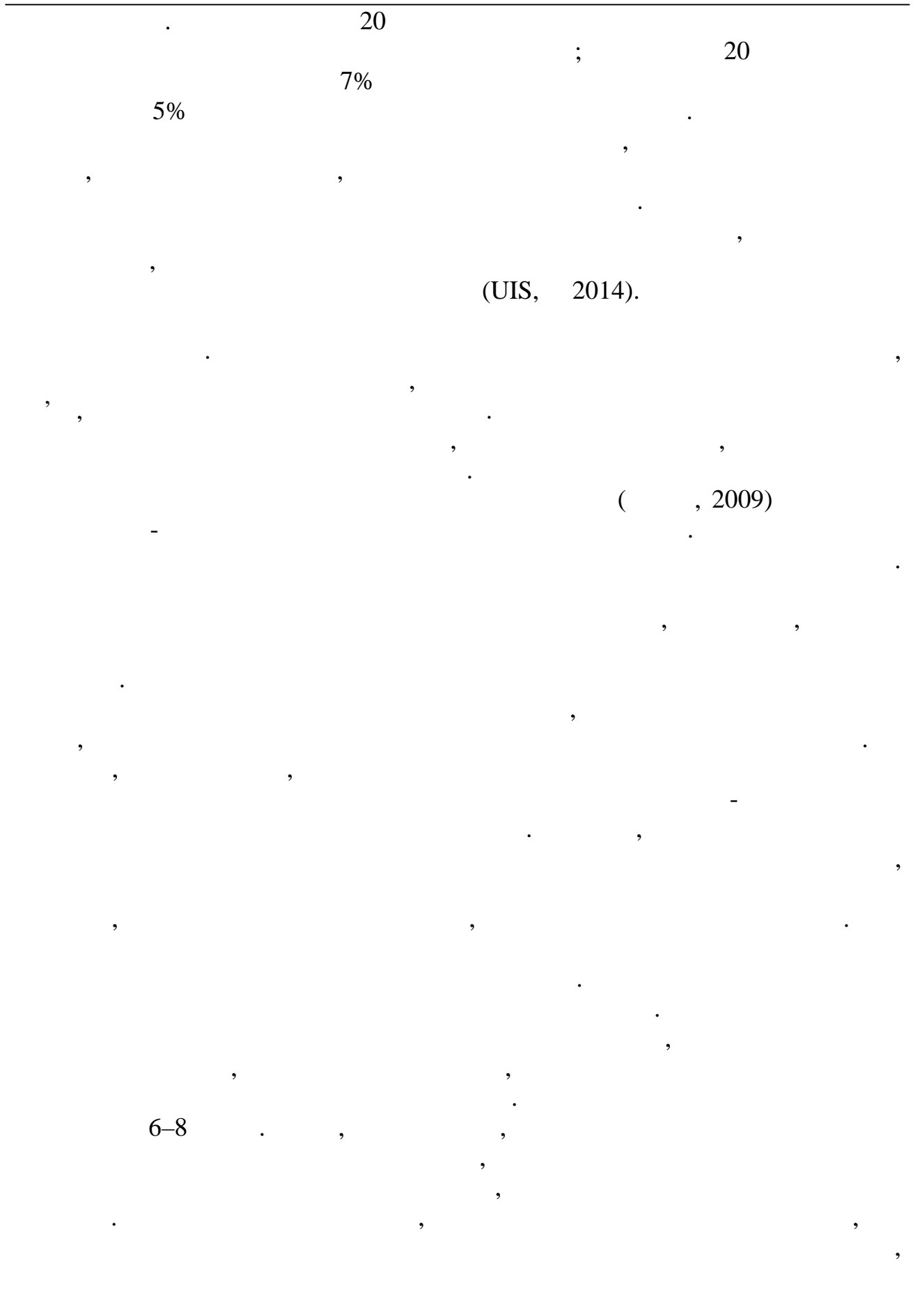
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«Business & Academic English»

: «Development Prospects in Engineering in Ukraine», «Achievements in Information Technologies», «A Researcher's Responsibility» .







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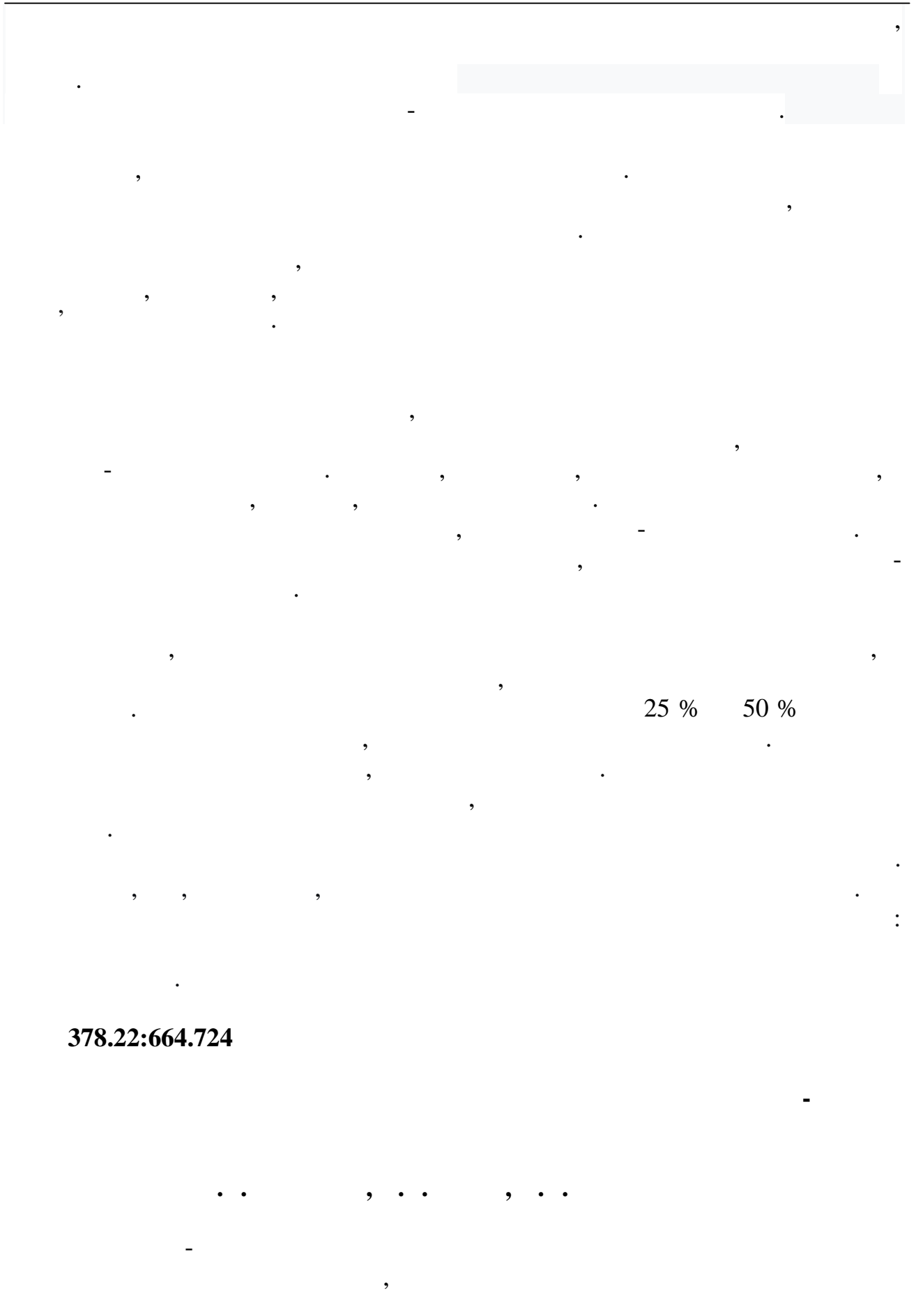
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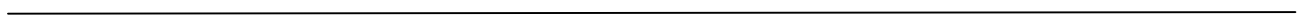
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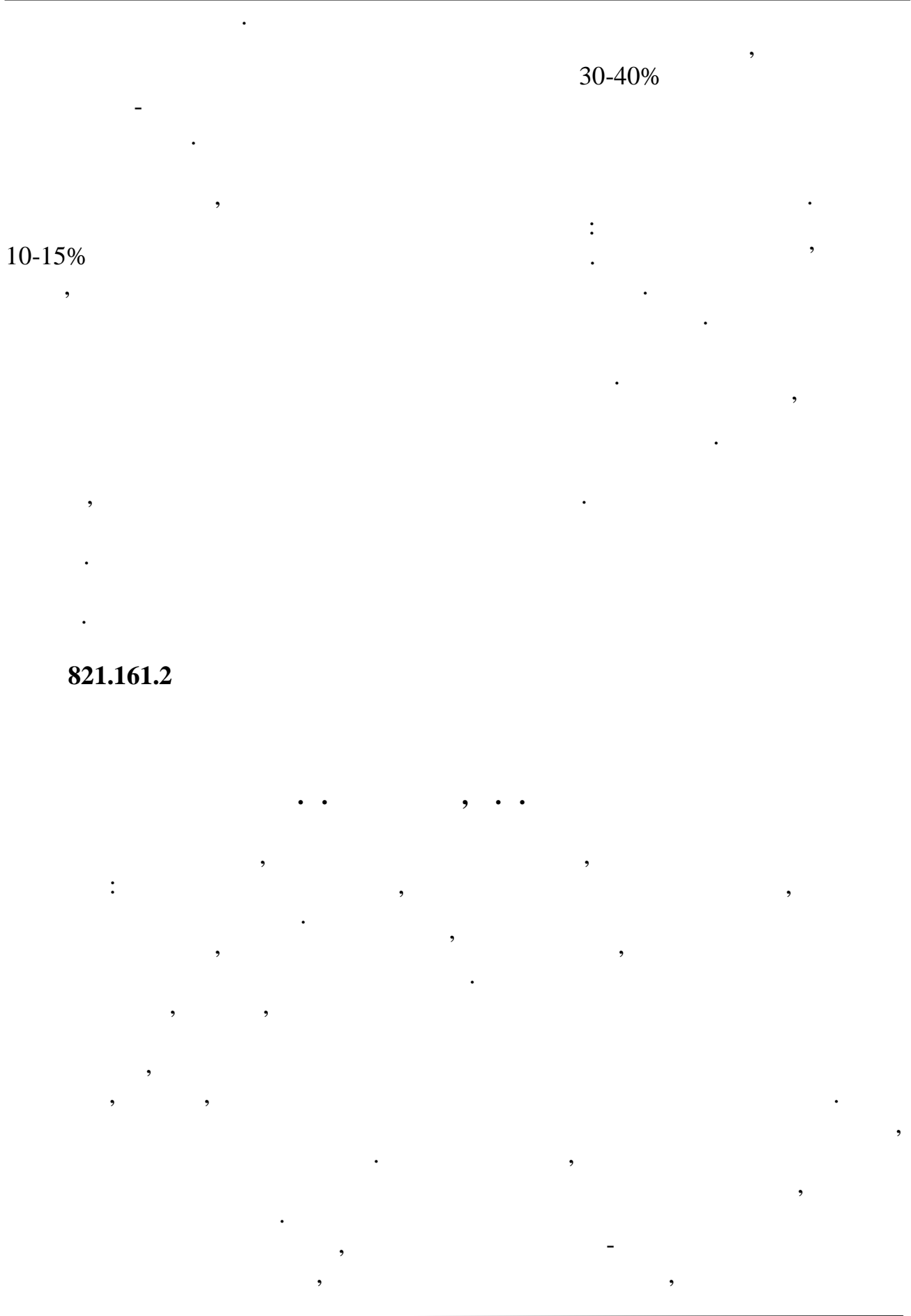
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### 378.011.3

## THE DEVELOPMENT OF PROFESSIONAL COMPETENCE OF FUTURE PHILOLOGISTS IN THE INSTITUTIONS OF HIGHER EDUCATION

S. Perova

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The fundamental principles of updating higher education from the perspective of a new educational philosophy are directly related to the modern world requirements for a specialist in any field. Taking into account modern European and world guidelines is the key to the success of future specialists training and the formation of the comprehensive worldview of a person who can adapt and pursue his/her career not only in Ukraine, but also abroad.

The implementation of competence-based approach in the education system is due to 1) the globalization of the economy, the priority of which today is the shift of emphasis from the principle of adaptability to the principle of the competence of the graduates of the educational institutions, 2) the requirements of the Council of

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Europe, the local education authorities that look and wait for the implementation of competencies and competence-based approach.

According to the Standard of higher education for the speciality 035 «Philology» of the first bachelor's level, the aims of training in higher education institutions are to train specialists who are able to solve complex specialized tasks and practical problems in the field of Philology, characterized by complexity and uncertainty of conditions, in activities related to the analysis, creation (in particular translation) and evaluation of written and oral texts of various genres and styles, the organization of successful communication in different languages in particular.

The organization of the pedagogical process of professional training of a modern specialist, in particular a philologist, should be aimed primarily at the formation and development of his professional competence - the criterion for the quality of training of graduates of the institutions of higher education.

The professional competence of a philologist is an integral characteristic that determines the ability to solve professional problems and typical professional tasks that arise in real situations of professional, pedagogical activity, using knowledge, professional and life experience, values and inclinations.

Professional competence of the philologist should be shown during the solution of professional tasks. This concept is multidimensional and dynamic, it cannot be definitively defined in advance for the entire period of the future philologist's professional career, since the rapid development of society, the introduction of new requirements for the profession requires correction of the structure of his/her professional competence.

One of the tools for developing of the professional competence of future philologists, in our opinion, is the development of the portfolio «Competence in Use». Its purpose is to maintain motivation to study, strive for the higher level of knowledge, increase the ability of students to self-assessment of learning results, and plan future professional careers.

Its application in the educational process provides the additional opportunity to envisage realistically and assess the results of a person's work while analyzing the portfolio of each student. Portfolio technology is actively used in European and American higher education institutions as a means of recording students' academic and social achievements, building careers, and developing competencies.

The technology of working with a portfolio involves the following stages:

1. Motivation: each student should be aware that the portfolio performs accumulative and modeling functions, reflects the dynamics of the student's development and self-development results; helps to reflect on a person's academic work and establish links between the previous and new knowledge; is a criterion of readiness for future professional activities; is the subject of discussion and the factor of self-assessment (assessment) of work results during an exam or a test.

2. Defining the type of portfolio. The following types of portfolios are known:

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- According to the goal that reflects the result for which the portfolio is compiled, there are a portfolio-property (collected for yourself) and a portfolio-report (collected for the teacher).

- According to the content there are such types: portfolio of accomplishments (results of student work on blocks of educational material, decorated with all available means); reflective portfolio (materials on self-assessment of achievement of goals, peculiarities of promotion and quality results of a person's training activities, the analysis of peculiarities of work with different sources of information, feelings, thoughts, impressions, etc.); thematic portfolio (materials that demonstrate the student's work within a particular theme or module).

3. Term of the report and work with the portfolio: in the classroom, during the independent work, home preparation.

4. Sections and categories: their number and subject matter are determined in each case. The content of the category is determined by its name, the volume - by the name of the material that it includes, the structure and design - by the individual characteristics of a student. Within the sections, the certain categories can be allocated in order to systematize the material and form the structure of the section.

As part of our research, we offer the following structure of the student portfolio of the future philologist «Competence in Use» focused on the development of key competencies:

I. Introduction: goals and purpose of the portfolio, its structure, and a memo about the features of working with it.

II. My passport: photo, brief autobiography, copies of documents about the previous education.

III. My achievements:

a. My training: the ways and means that the student uses to get prepared for the disciplines, their analysis and selection of the most rational; assessments (final) in the disciplines; dynamics of the development of training levels in the disciplines of the curriculum.

b. Language biography: development of foreign language communicative competence, speech skills that are necessary for the future profession.

c. Scientific activity: a list of scientific articles, works of the student; independently compiled annotations of scientific papers, monographs, textbooks used in the study of disciplines.

d. Cross-Cultural experience: the description of a person's experience in cross-cultural communication, experience of traveling abroad, studying in other countries; knowledge of other cultures; experience of using the knowledge acquired in the institution of higher education to find a person's place in the cross-cultural environment.

e. My dossier: a list of the best works, projects in disciplines, comments and reviews of teachers and classmates, certificates, acquired competencies, participation in public life.

f. Perspective: self-assessment, strong and weak traits of character; vision of professional future; the prospect of using knowledge of disciplines and acquired competencies in later life.

IV. My conclusions: generalization; emphasis on acquired competencies; life experience.

Students-philologists made their own portfolio according to the presented scheme. The presentation, quantity and volume of information, design ideas belonged to the authors of the portfolio. The criteria for evaluating the portfolio were discussed and determined together with the students.

The following categories were assessed through:

- a) the presence of the suggested categories and conclusions - 9 points;
- b) the usage of research methods - 3 points;
- c) the creative nature of the portfolio - 2 points;
- d) the design quality - 2 points;
- e) the presentation quality - 4 points.

The analysis of the usage of such forms of work with the future philologists during the study of the disciplines in the institutions of higher education suggests that the portfolio is an integral tool for the system of professional training of students with the ability to accumulate practical experience, to design a learning trajectory for life. We can state that the portfolio is the organic tool for the development of professional competence of students due to the ability to accumulate practical experience, independently design the trajectory of learning during life, and we can recommend using this educational technology to work with students of all specialities of the institutions of higher education.

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**378.147****TO THE CONVERGENCE OF EDUCATION AND BUSINESS****O. Cherednichenko**

Today's business environment is undergoing significant changes due to the rapid development of society and requires new or improved employees' skills. This has a direct impact on the approaches and requirements for education and professional experience. Training of competitive specialists who are quick and efficient in the conditions of modern changes, able to use the latest innovative technologies and to create different innovations becomes important and in demand. In addition, all enterprises are interested in increasing the production and sales of manufactured products, expanding its range, improving quality, which leads to a combination of business, education and science in the formation of a specialist.

As a result of low population growth due to low fertility rates and high mortality rates, increased emigration, there is a loss of labor resources, which affects the development of the economy of Ukraine in general and industries in particular.

The largest age group among employees of domestic enterprises are persons aged 45-54 years, which make up 26.4 % of the total number of employees. The share of employees under 25 is 4.7 %, over 60 and over 10 %.

In Ukraine, traditionally high educational qualification potential of employees: 57.7% of employees have higher education, another 21.5 % - vocational and only 4.5 % have a level of education below the overall average. Among women, the proportion of people with tertiary education is 64.7 %, and for men - 49.7 %.

The number of employees employed in the production of food, beverages and tobacco has been declining for a long time. In 2011, there were 462.3 thousand people employed in this industry, in 2018 - 278.6 thousand people, and in May 2019 there were 291 thousand people. The manpower of the food industry represented approximately 15.1 % of the labor force of the entire industry and 22.4 % of the manpower of the processing industry in 2018; approximately 15.7 % of the total industrial workforce in June 2019.

Personnel policy of the company always takes into account that time is a special and valuable non-renewable resource that cannot be bought, borrowed, put into storage. Therefore, it is necessary to take care in advance of attracting the appropriate qualification workforce and in the required number, especially if the permanent workers are not sufficiently timely to perform the work. To this end, it is becoming increasingly important for employers to cooperate with educational institutions of various degrees to form the necessary specialist and minimize the differences between educational and production processes due to the specifics of the food production industry. After all, under-utilization of the labor force, the level of

remuneration of permanent employees is reduced, which is one of the main factors of staff turnover at the enterprise. It is also a reason for the enterprise not to receive significant volumes of production, which is reflected in the effective performance indicators [1].

Unfortunately, the qualifications of university graduates do not always meet the needs of employers. Often, entrants choose educational programs that do not always match the desired profession and the needs of the national economy in the long term. The current imbalance in the Ukrainian labor market can adjust the constructive dialogue and cooperation between higher education and the business environment.

To achieve the goal of the enterprise are business processes that are in one way or another serviced by staff. Therefore, improving the efficiency of the personnel of the company is one of the most important issues in the organization of production, which is very closely related to educational skills.

With the aim of convergence of education and business environment, improving the quality of the educational process, passing practical classes, industrial and educational practices, conducting research and future employment of students at NUBiP of Ukraine, they are constantly expanding partnerships with enterprises operating in different spheres of the country's economy. In particular, such as: Agromars Complex LLC, Wimm-Bill-Dann Ukraine JSC, Mironovsky Bakery PJSC, ASHAN hypermarket, Silpo network, Bayer and Kernel companies and more. In addition, the latest Master's program "Agrocebets" in the training of generalists, who will understand the basics of agro-technology, will be guided in the tools of management, business process management, as well as acquire skills for personal performance [2]. For this purpose direct communication, personal assistance and curation of a recognized professional of different spheres of business are introduced; 6 months internship directly with the employer with the possibility of further employment, etc.

Therefore, the partnership between business and universities and the development of entrepreneurship plays an important role in this matter: for students to formulate their goals, to see their future profession, whether they have properly chosen their path.

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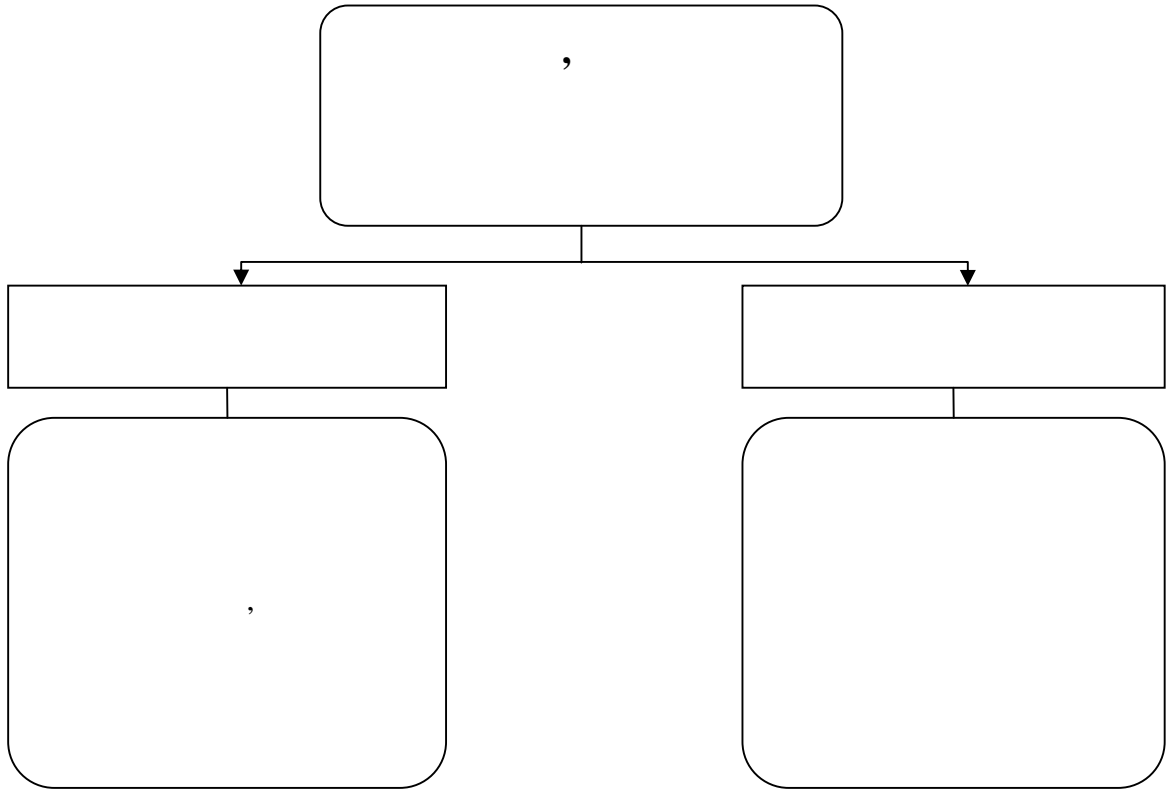
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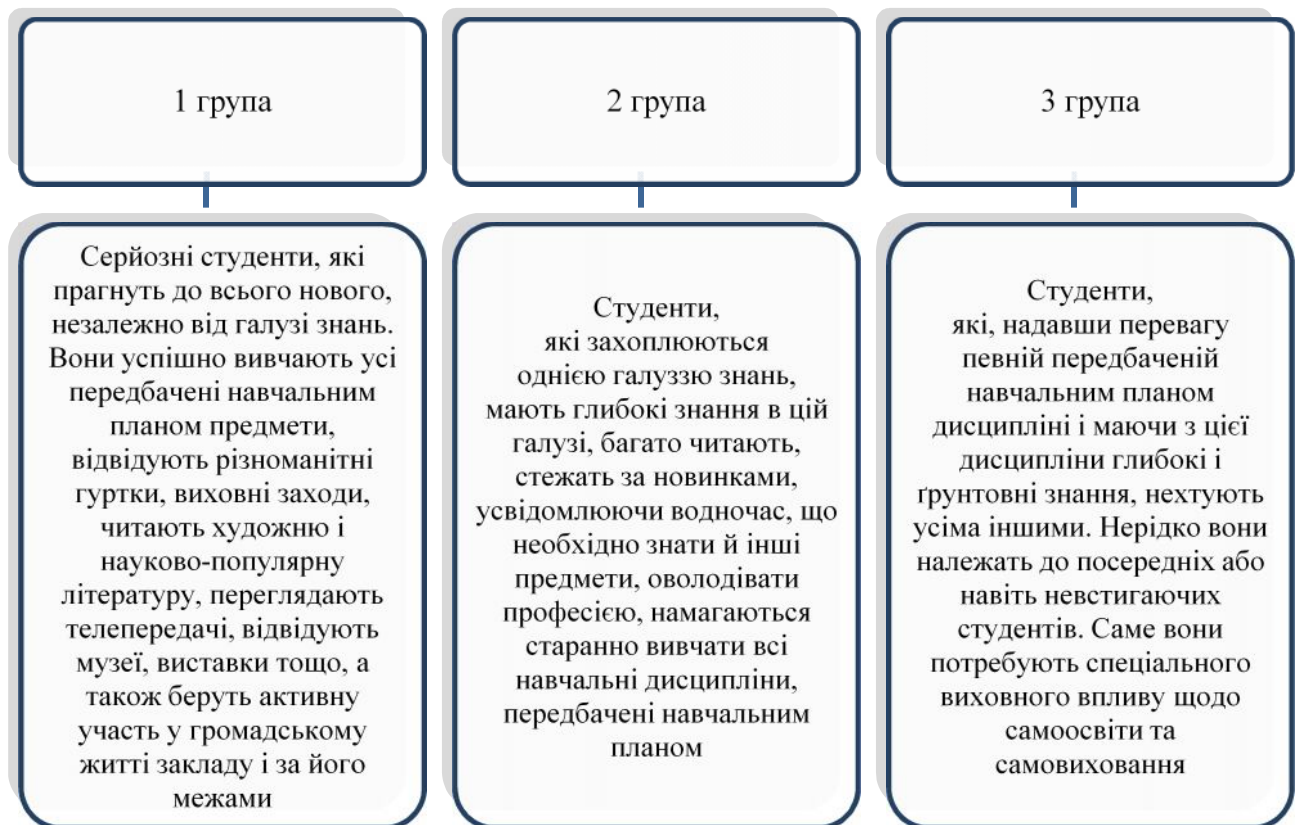
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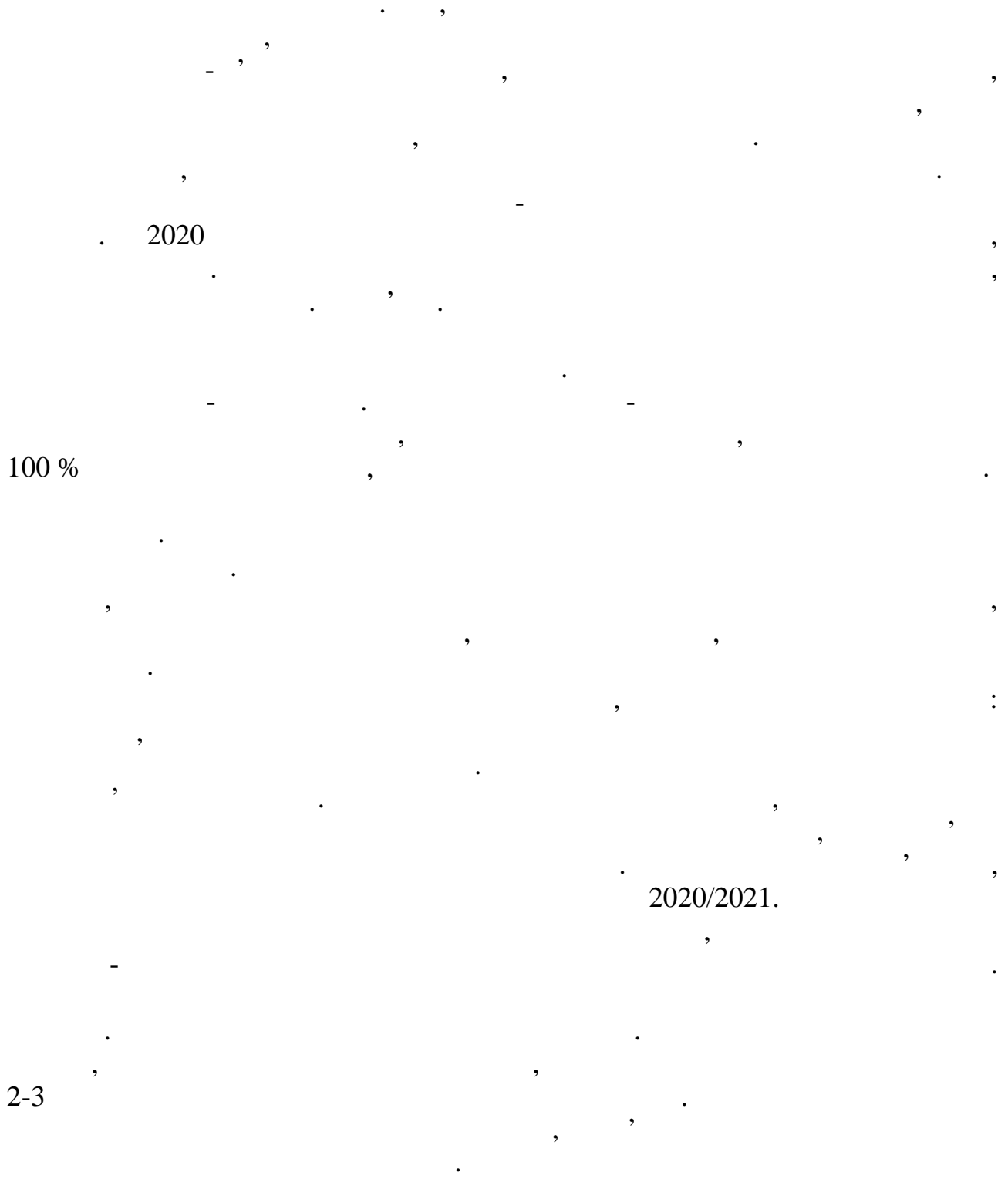
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Знання іноземних мов

- Міжнародна співпраця: участь в міжнародних проектах, стажування.
- Викладання для іноземних громадян.
- Написання наукових публікацій у міжнародних виданнях.
- Досягнення відповідності вимогам МОНУ.

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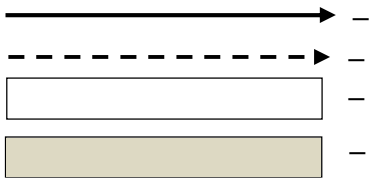
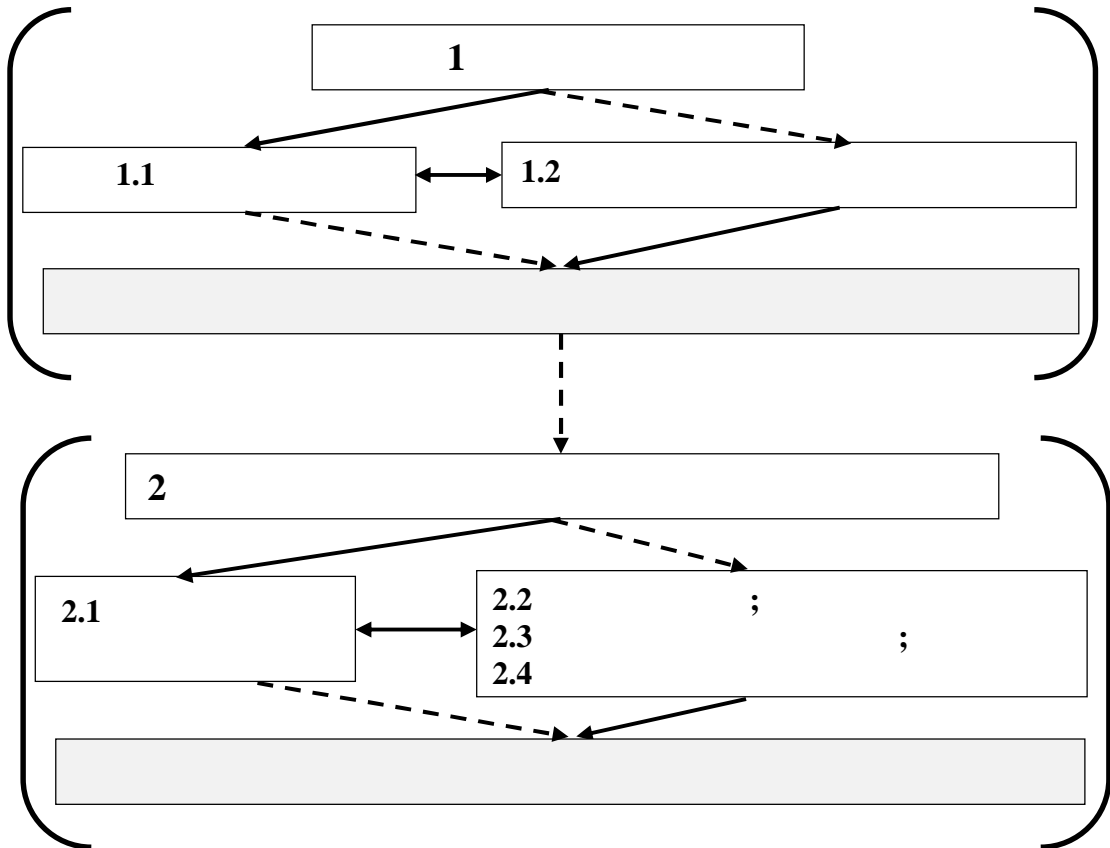
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## EDUCATION INFORMATION MODEL

**N. Lishchenko**

### Learning Outcomes

The following considerations and beliefs were developed in conjunction with prof. L.I. Volchkevich who was a known leading expert in pedagogy. Firstly, education is not aimed at training personnel, but personalities - the country's future elite. Secondly, training should not focus on group, but on individual teaching methods. Currently, it looks like an "individual approach to students in a collective learning environment". Thirdly, the final learning outcomes are only (and first of all)

expressed in the categories of knowledge, being able to create and/or implement, and skill (fig. 1).

*Knowledge* is the generalized experience of people in the form of facts, rules, conclusions, patterns, ideas, theories that science owns. *Being able to create/implement* (hereinafter «being able to») is the ability to perform certain actions on the basis of acquired knowledge. *Skill* (habit) is the being able to create and/or implement which is brought to automatism.

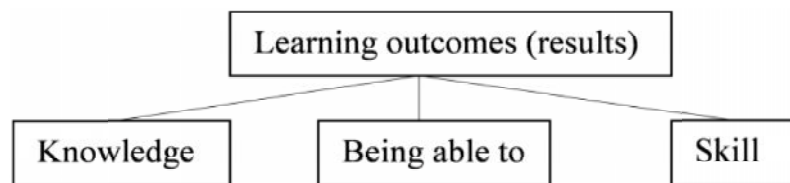


Figure 1. Learning outcomes (results)

### **System Representation and Assessment of the Course.**

The main accounting unit of the educational process is an *academic discipline* (academic subject, course, etc., hereinafter the course).

Each discipline should be considered as a knowledge system, i.e. as a coherent whole, composed of a number of components - sections and topics. An academic discipline (course) is a pedagogically substantiated information model of the relevant science. If the discipline is defined as a system, then the specialty's curriculum will be a subsystem, and sections (themes, modules) of the discipline will be subsystems. Any section or topic (a module in the credit-and-module-system) of the academic discipline should represent clearly defined subsystems, composed, in turn, from a number of interrelated notions and definitions.

The evaluation criterion is a systemic relationship between previous engineering (training) disciplines (courses) and special disciplines that are part of the specialty curriculum. A professionally prepared discipline can be compared with a strong polygonal pyramid, based on previous engineering disciplines (fig. 2).

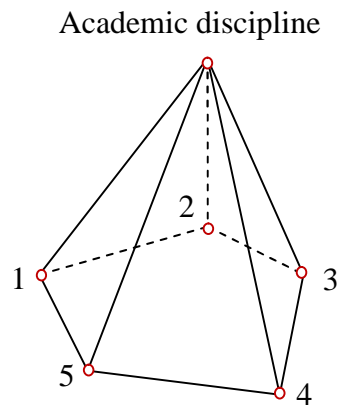


Figure 2. Structure of connections of the current (provided) academic discipline with the previous (providing) engineering disciplines (1-5)

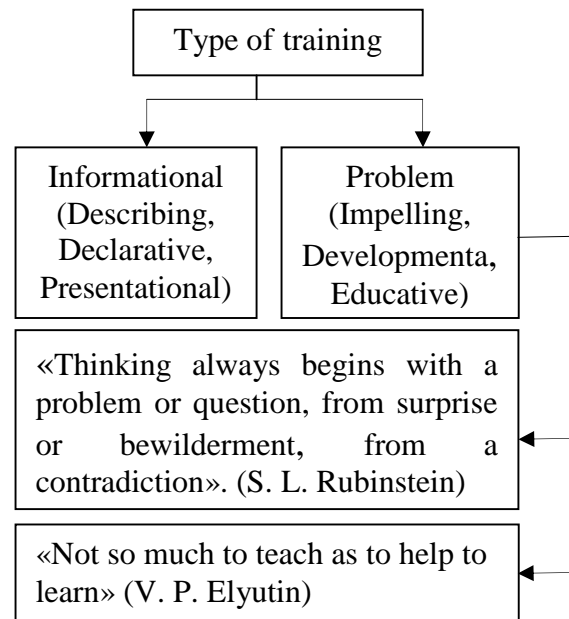


Figure 3. Type and characteristic of training

If the number of previous disciplines used in the course is 5-6, then the assessment (in terms of the system representation) should be «good». A similar pyramid (as fig. 2) there should be a mutual relationship between general scientific and profiling departments of the university. This mutual relationship, as a sign of the system representation and learning sequence is mentioned in the work.

### The Course Activity

A course in academic discipline should include following structural elements: systematics (general part); special knowledge (theories, ideas, laws, principles of this science); analysis as a «being able to» (or skill) (fig. 1, fig. 2); synthesis as a skill (methods of calculation and design).

If the active part of the course (analysis, synthesis, methods of calculation and design) is at least 40 %, then the assessment (in terms of activity) should be «good» (according to prof. L.I. Volchkevich). When choosing the type of education for a creative person preference should be given to problem learning (fig. 3). The activity of the course to be taught can be confirmed by the presence of such methods of scientific research as analysis and synthesis (fig. 4).

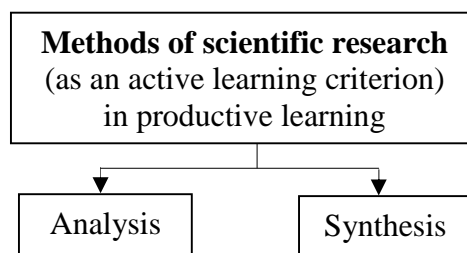


Figure 4. Unity of educational and scientific activities in education

### Student's Independent Work



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The student's independent work is a form of training in which knowledge is acquired by the student himself under the methodological guidance of the teacher. In senior courses, this work should be aimed at creative disclosure of personality, which begins with the student bench. The university contains the following types of student activities: preparation for lectures, seminars, laboratory work and practical exercises, tests (module controls), exams. This work also includes writing essays, term papers and dissertations (projects). By the degree of creativity, the student's independent work is divided into the following types: according to the model; reconstructive-variable; heuristic (partially search): creative research.

At the stage of student's independent work it makes sense to transfer the experience of the supervisor with graduate students to students. This requires the interest of both the student and the teacher in the systematization and acquisition of knowledge, which is possible if the student is involved in the sphere of scientific interests of his supervisor.

### **Conclusions:**

1. Analysis of the literature on philosophy and theory of education in universities showed that improving the quality of education and the development of its new forms is a stable trend of recent times in e-learning, distance learning, student team learning, etc. To some extent, this is confirmed by the emergence of appropriate structures at the local (department of quality assurance at universities) and state (the National Agency for Quality Assurance in Higher Education) levels.

2. A new «technological» approach to the strategy and tactics of the development of the higher education system (within the framework of the trend of «sustainable development») is proposed, according to which such new concepts as the pedagogical system, pedagogical operations and their components are introduced, which together predetermines the methodology of building programs of academic disciplines and teaching technology.

3. It is shown that the curriculum of an academic discipline is complex hierarchical system with elements which are at different levels of subordination (in accordance with the tree of goals) and depend on the individual initial training of students. Moreover, the method of constructing a hierarchical discipline predetermines the method of its evaluation in quality control, both the discipline and the profiling department where this discipline was created.

4. A feature of recently adopted student-centered teaching technology, according to which the share of selective academic disciplines has increased due to a decrease in the share of traditional high-tech academic disciplines, is that the curriculum takes the form of the so-called syllabus.

5. The interrelation of research and educational activity of the teacher which is reflected in the developed curriculum of the course is shown. The quality of the curriculum is assessed according to the criteria of consistency, problematic and activity of the course.

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## **E-LEARNING**

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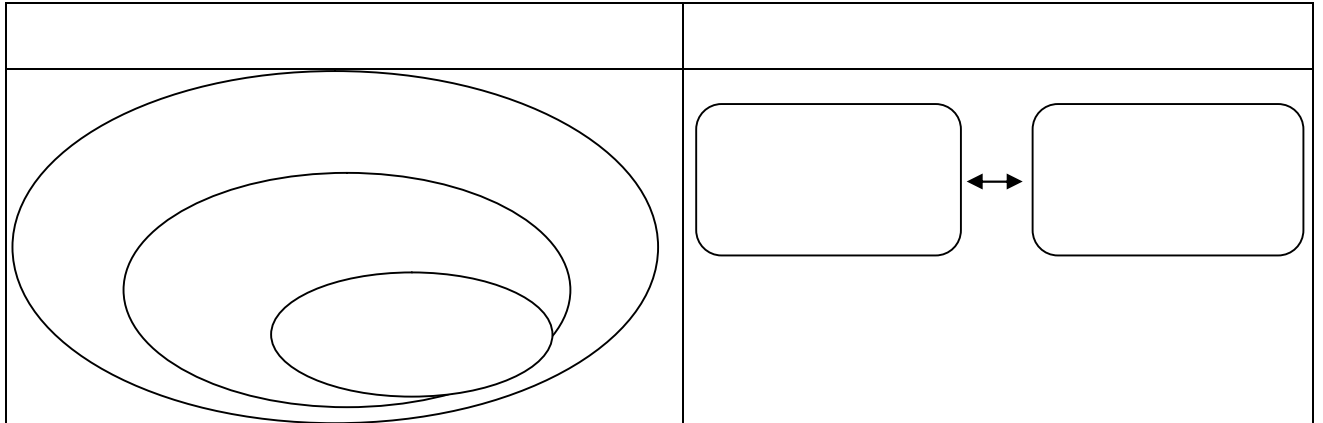
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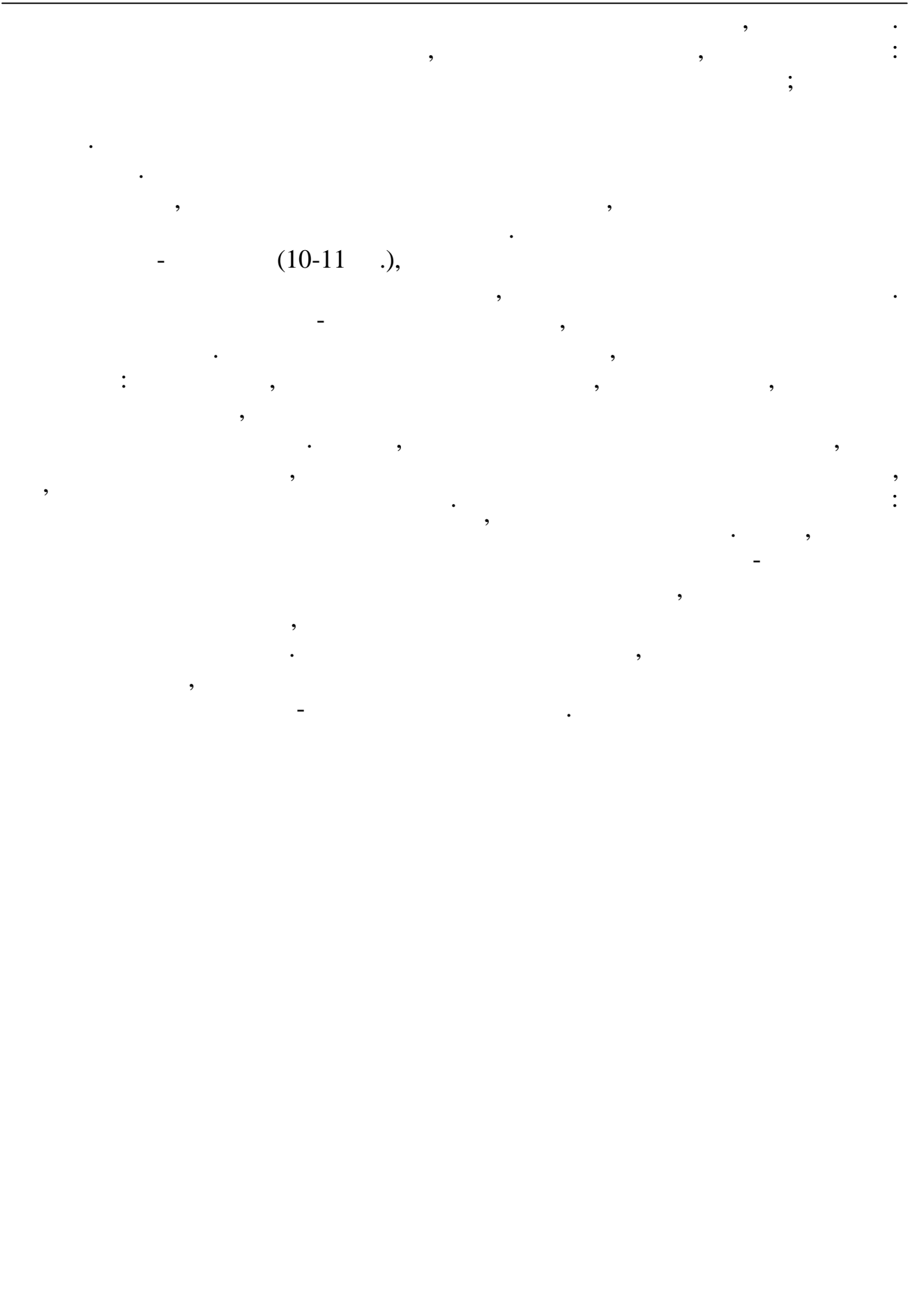
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Facebook ( 900 000 000 ) Twitter ( 255 000 000 ), Google Plus+ ( 100 000 000 ) 310 000 000 ), LinkedIn ( 120 000 000 ), Instagram

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## **DISTANCE LEARNING - ACTUAL AREA OF STUDENTS' INDEPENDENT WORK DEVELOPMENT**

**A. Kats, L. Dmitrenko, G. Stankevich**

Recently, with the development of information technology, distance (or online) education is becoming more and more widespread in the world. Leading universities and business schools in the world offer this form of education widely.

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Distance education has a number of positive differences from regular learning. In the case of distance learning, the student does not need to visit university, that is far from home - in another city, in another country. It extends the choice of university and allows to save considerable amount of money to the student. Distance learning allows the university to increase the number of students with almost no restrictions.

In addition, distance education provides almost complete independence of the student from the strict rules of the educational process. The student plans his daily schedule by himself based on the requirements of the university. All training is done remotely - using modern computer technologies. Therefore, this form of training is very comfortable for working and family people. That is, distance learning can take place at any time, without leaving home or workplace. You can maintain regular contact with the teacher and other students, perform tasks on an individual schedule with maximum comfort for students and teachers.

Currently, the organizational and pedagogical opportunities of distance learning are realized through all available virtual telecommunication services, such as e-mail, messengers, WEB conferences, etc.

ONAFT has established a Center for Distance Learning, which allows you to independently study the subjects taught at the university, based on the Moodle system (an acronym for Modular Object-Oriented Dynamic Learning Environment) - a platform created to integrating educators, administrators and students into one reliable and secure system of a personalized learning environment. The system provides:

- the bulk of the material to be learned;
- the interaction of students and teachers in the learning process;
- the opportunity to work independently on the material learning;
- assessment of their knowledge and skills acquired in the learning process.

All necessary materials, that are taught at the Technology of grain storage Department were laid out to distance learning site according to the curriculum.

Students of specialty 181 «Food Technologies» of the professional direction «Technologies of grain storage and processing» study «Technology of storage and drying of grain» discipline (6th semester), program of which consists of the three content modules, one of which is Elevator Technology. The knowledge and skills acquired by the student in studying this course will be used in the relevant special disciplines in the final stages of profession training, in the work on course and diploma projects, and in practical activity in the enterprise.

For the introduction of the winter remote module from the «Technology of the elevator industry» section, a full synopsis of lectures, a list of recommended literature, a list of questions to the modular control work, methodological instructions for laboratory work and individual assignment (IA) were posted in advance on the ONAFT distance learning site.

Using the Moodle system, students were given access to the lecture texts, which allowed them to have a complete understanding of the whole course content. Regarding to the methodological guidelines of the IA implementation during the

winter distance module, students saved time and paid more attention to preparation for laboratory work, for the current and final control of knowledge and for the performance of independent work. If during the work on the mentioned material or during the IA performance there were questions or unclear moments, students had the opportunity to communicate with the teacher by personal messages, forum, chat.

During the winter distance module, lecturers worked with students online, systematically entered the ONAFT distance learning site, monitored students' visits, how they processed the presented material and performed individual tasks. Questions were answered both in the distance learning system and using e-mail.

At the first lecture in the second semester, the knowledge control of the winter distance module materials was conducted. Each student was able to get 15 points, which are included to the rating of the discipline in the «Technology of the elevator industry» section.

Such methodological features of distance learning have shown high results and considerable efficiency - almost all students have visited the distance learning site, worked out the specified topics of lectures and completed an individual task. According to the control results, the average student achievement was almost 86 % and the quality of study during the winter distance module – 57 %.

In our opinion, distance learning increases the efficiency of independent work, students are not «taught» already, but they are «studying». According to the words of the ancient Greek philosopher Plutarch: «The mind is not a vessel that needs filling, but wood that needs igniting». The development of distance learning will continue and improve with the development of Internet technologies and the improvement of distance learning methods.

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online, (contact teaching) distance). (teaching by distance). : a) ( ( ); ) ( ); ) ( ). , , - ) . « » « » . , , , , , , , , ( ). « », « » [2, 21]. : • , ( ) ; • ( ); • « » ( « » ) ; • ( ) ; • ; • ; • ( ). , . - . ,

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**378.018.43**

**1. Moodle**  
Moodle

**2. ATutor**

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**3. - -**

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## 5. Forma LMS

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3. . - : , 2005. - 326 .  
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**378.018.43**

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37.018.43:[615.15-057.85:378.046-021.66]:614.46

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**378.018.43:[378.4:61](477.64-25)**

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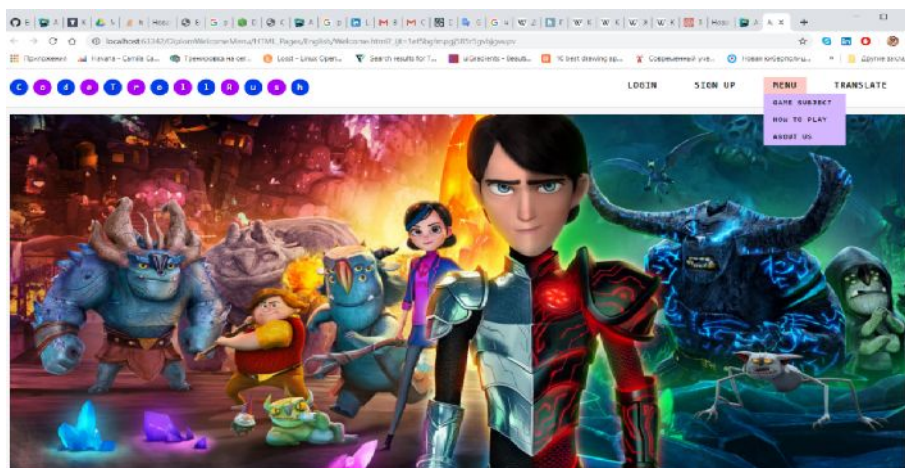
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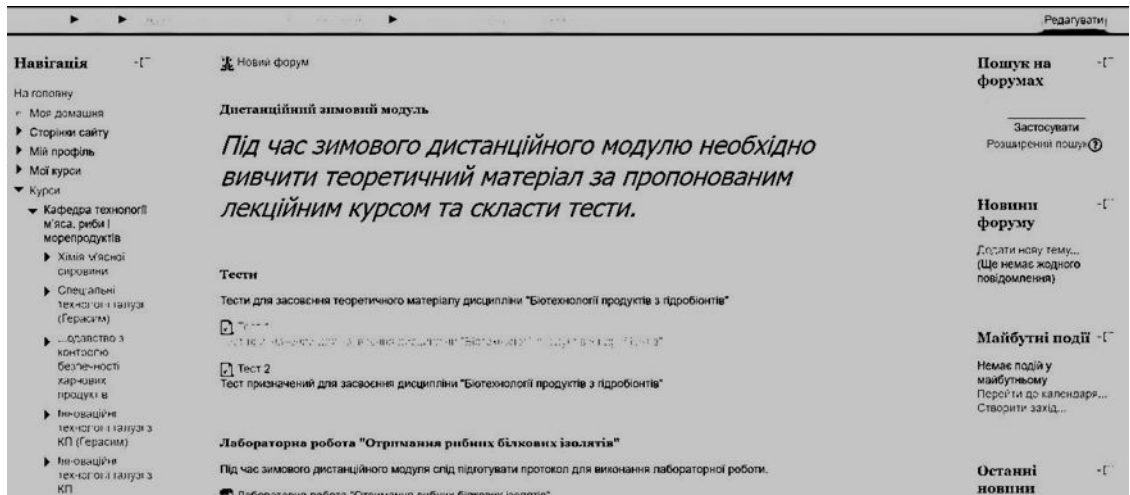
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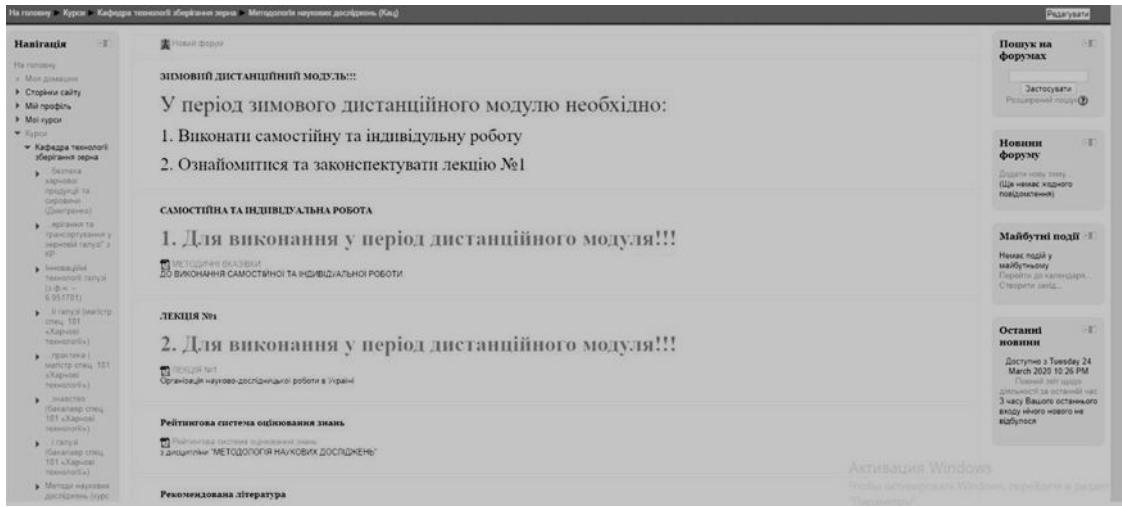
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На головну > Курси > Кафедра безпеки життєдіяльності > ...пліни \*Охорона праці та цивільний захист (Фесенко) > Керування оцінками > Журнал оцінок Редагувати

Навігація Журнал оцінок

На головну  
 > Моя домашня  
 > Сторінки сайту  
 > Мій профіль  
 > Мої курси  
 > Курси  
 > Кафедра безпеки життєдіяльності  
 > ...охорони праці - Змістовний модуль №2 (Мирошніченко)  
 > ...діяльності - Змістовний модуль № 1

Доступні групи: 35<sup>+</sup> (19 рік)

**Журнал оцінок**

Прізвище ↑ Ім'я	Електронна пошта	Охорона праці в галузі - ... <input checked="" type="checkbox"/> Тести до ЛР ОПГ № 1 ...	<input checked="" type="checkbox"/> Тести до ЛР ОПГ № 2 ...	<input checked="" type="checkbox"/> Тести до ЛР ОПГ № 3 ...
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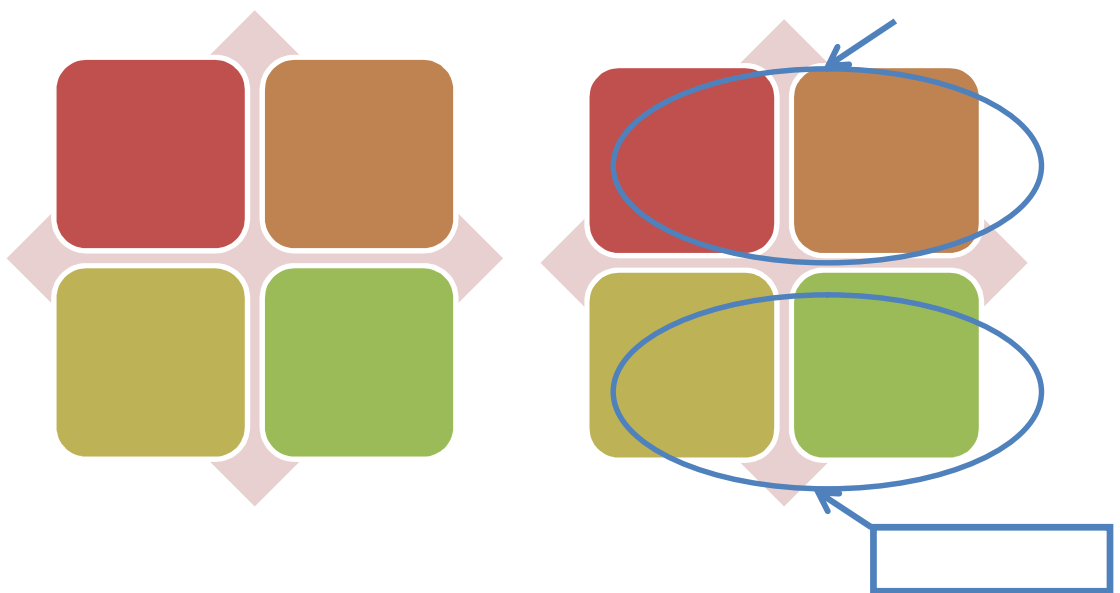
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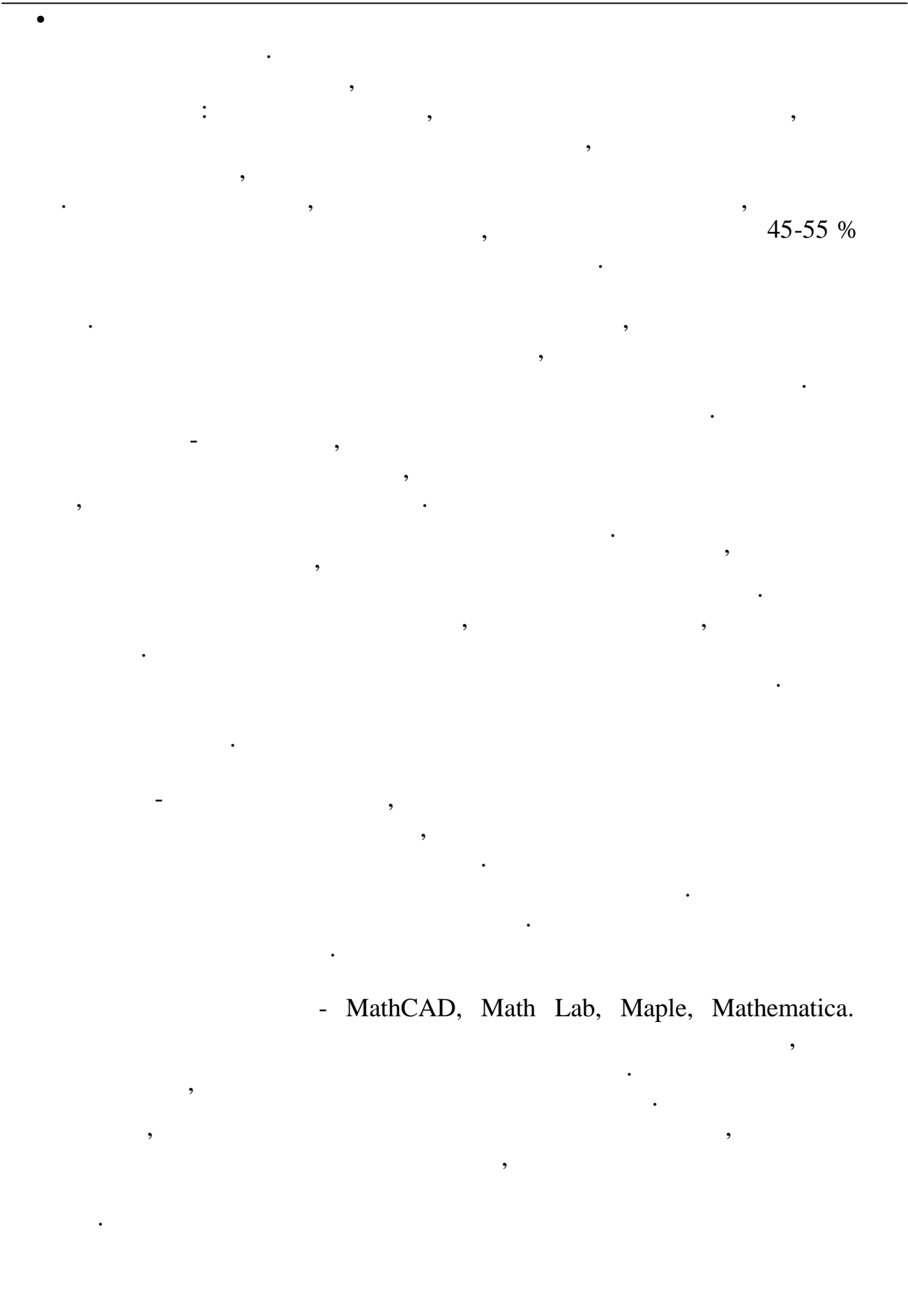
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- MathCAD, Math Lab, Maple, Mathematica.

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