PROBLEM-BASED TASKS AS A FACTOR IN THE DEVELOPMENT OF CRITICAL THINKING IN STUDENTS

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Abstract: The article presents an analysis of critical thinking as one of the most sought-after skills of specialists in various fields in the coming years. The necessity of fostering such type of reasoning is substantiated by the content of numerous scientific inquiries and regulatory documents governing the educational process. The study argues for the perspective of the development of critical thinking in the modern educational process in the aspect of shaping a personality capable of comprehensively analyzing life situations, finding solutions to problems, and tackling non-trivial tasks. The main characteristics of critical thinking, its components and conditions of development are clarified. Purposefulness, reflexivity, taking into account different approaches to explaining situations or solving problems, reasoned evaluation of them, formulating own position are defined as signs of critical thinking. The use of problematic situations in the educational process as a condition for the formation of critical thinking is characterized. Different types of problem tasks have been developed for shaping of student's critical thinking skills in the process of studying the discipline "Introduction to the specialty". The ability to think critically is recognized as an important skill of a modern specialist in any field.

Keywords: critical thinking; problematic task; analysis; reflexivity; evaluation; educational process.

1 Introduction

Authors of contemporary scientific research in the fields of pedagogy, psychology, and philosophy often operate with the concept of critical thinking. The development of this type of reasoning is discussed in a number of educational and methodological works of Ukrainian scientists ("*Development of Critical Thinking: Innovative Approaches for Children and Adults*" by N. Kharchenko [17], "*Critical Thinking and Philosophical Understanding of the World*" by S. Terno [31], "*Critical Thinking: Complex Educational and Methodological Support for the Academic Discipline*" by V. Pikhorovich [24], etc.). Analysis using the Google Books Ngram Viewer indicates that the usage of this term has been steadily increasing since the 1970s [14]. However, the definitions employed by researchers are not always identical, often influenced by the particularities of their respective scientific fields.

As indicated by the World Economic Forum, analytical and creative thinking will remain the most sought-after skills for employees in 2023 and will continue to be relevant for enhancing workers' qualifications in the next five years. Most companies consider analytical thinking the most crucial skill among others. Creative thinking, as the ability of employees to adapt to unstable workplaces, holds the second position, surpassing three self-effectiveness skills: resilience, flexibility, and agility; motivation and self-awareness; curiosity and lifelong learning [38]. Critical thinking was defined in the 2020 World Economic Forum report as a skill expected to be in demand by 2025 [39].

Therefore, the ability to think critically is recognized as one of the most important skills for workers across various fields in the coming years. Evidence of the priority of its development lies in the fact that critical thinking, as a competence, is stipulated by contemporary educational regulatory documents and professional programs. Furthermore, the ability to critically process information is considered a means to counter misinformation and a factor in the development of a democratic society [15, 29]. Hence, the necessity to clarify the specifics, essential features of the concept of critical thinking, and to develop tasks that promote its development in higher education students has necessitated the relevance of our research.

2 Literature Review

Numerous contemporary scientific investigations are devoted to the study of critical thinking and methodologies for developing such a skill. M. Boychenko, J. Bruner, D. Dewey, R. Ennis, M. Lipman, D. Moon, R. Paul, M. Scriven, R. Sternberg, A. Fisher, L. Terletska, T. Terno, O. Tiahlo, D. Halpern, O. Chuba, and others have explored this issue. For instance, an analysis of O. Tiahlo's works indicates the author's consistent study of critical thinking in the context of modern educational changes, combining deep theoretical analysis of the concept with the development of practical approaches to fostering this skill in higher education institutions [33-36]. M. Boichenko explored the social and institutional prerequisites for the emergence and development of critical thinking, arguing for its value and priority in contemporary democratic society [5]. V. Nadurak's research is dedicated to defining the characteristics of critical thinking as the ability to analyze the thought process according to criteria of rationality and establishing the necessary components for acquiring such a skill. The author described critical thinking as an interdisciplinary project, as its development requires the use of information from various fields of knowledge [21]. In the handbook "*Development of Critical Thinking: Innovative Approaches for Children and Adults*", N. Kharchenko systematized the features of critical thinking according to different authors' approaches, proposed thirty-five methods and techniques for developing this skill, as well as examples of training sessions and questionnaire tests for assessing students' critical thinking development. The concept of critical thinking is the subject of research by representatives of various scientific fields.

The aim of this article is to identify the main characteristics of critical thinking, to clarify the significance of this type of reasoning, why it is important to develop it in higher education institutions, and to investigate which types of tasks facilitate the development of critical thinking skills.

3 Materials and methods

The implementation of the stated purpose was made possible by using the following research methods: content analysis of scientific literature, systematization of the obtained information, identification of the main characteristics of critical thinking and ways of its development, development of a system of tasks for the fostering this type of reasoning to conduct practical sessions in the course "Introduction to the Specialty", and assignments for independent extracurricular work.

4 Results and Discussion

It is natural that the concepts of thinking and critical thinking were initially the subject of philosophical inquiry. It can be argued that such type of reasoning (critical) was initiated in the dialogues of Socrates, and his famous phrase "I know that I know nothing" indicates the philosopher's understanding of the objectivity of human thought and awareness of its general laws.

The followers of Socrates, including Plato and Aristotle, believed that continuous reasoning, such as establishing cause-and-effect relationships, enables the understanding of life's profound meanings.

The development of the European tradition of critical thinking was continued by F. Bacon, who believed that to achieve objective knowledge, one must rid oneself of so-called idols (peculiar prejudices: idols of the tribe, cave, marketplace, and theater) [3]. R. Descartes developed a method of critical thinking based on well-founded assumptions. I. Kant described the main methods of thinking – analysis and synthesis [16]. G.Hegel

formulated the idea of thinking as the foundation of all existence and the laws of dialectics as the path to knowledge.

A modern approach to critical thinking, termed reflective thinking, was initiated by the American philosopher and psychologist John Dewey. In his work "*How We Think*" [7], the author provides the following definition of the mentioned concept: "active, persistent, and careful consideration of beliefs or anticipated form of knowledge in light of the grounds that condition them and the further conclusions to which they lead" [7].

R. Ennis considers critical thinking to be reflective, focused on "deciding what to believe or do" [10 A. Fisher contrasts critical thinking with "unreflective or passive thinking, which occurs when someone makes hasty conclusions, accepts certain evidence, claims, or decisions 'on faith', without truly reflecting on them" [12].

M. Scriven and R. Paul define critical thinking as "intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered or generated by observation, experience, reflection, reasoning, or communication, as a guide to belief and action" [28]. Other known definitions of critical thinking include metacognition [37] or the process of "thinking about thinking" [13].

Therefore, the philosophical understanding of critical thinking primarily entails recognizing one's own thinking as a process of evaluating information through specific methods, thus rendering such reasoning controlled and requiring self-organization.

In contrast, the psychological tradition focuses on the functioning process of critical thinking and the skills of critical thinking in the context of its practical application. For instance, psychologist R. Sternberg considered critical thinking as "cognitive processes, strategies, notions that people use to solve problems, make decisions, and acquire new concepts" [29]. The researcher identified three types of critical thinking skills: metacomponents, performance components, and knowledge acquisition components.

The psychological approach also involves defining the specifics of the behavior and actions of individuals who think critically. D. Moon notes that critical thinking is the ability to "perceive a wide range of information obtained from various sources, process this information creatively and logically, critique it, analyze, and draw reasoned conclusions that can be confirmed and argued. The opposite is prejudice and unfounded judgments" [20]. Sometimes researchers characterize critical thinking as both an ability and an attitude: on one hand, in terms of performing certain logical operations by an individual, and on the other hand, from the perspective of the objectivity of statements [18].

Therefore, in psychology, critical thinking is interpreted as purposeful, independent, and reflective thinking. The use of its specific components is often determined by the professional context.

Pedagogical research is primarily dedicated to studying how to cultivate critical thinking skills in learners and, more broadly, in individuals who think critically. For teaching critical thinking, Bloom's taxonomy is often used, which consists of six hierarchical levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. The six categories in the taxonomy are interconnected step by step from the lower level (knowledge) to the higher level (evaluation), from simple to complex, from definite to abstract, which implies the use of criteria such as logical accuracy and coherence for judgment [4].

In pedagogy, critical thinking focuses on the individual development of reasoning abilities, which can be expressed in specific skills. The task of education is to cultivate such skills.

L. Tsui defines critical thinking as the ability of students to identify problems, formulate hypotheses, find important connections, evaluate evidence, and draw conclusions.

M. Papastephanou and C. Angelis [23] interpret critical thinking as reflective thinking during problem-solving situations in various disciplines. It is characteristic of an individual as the ability to solve problems.

In 1987, M. Lipman founded the Institute for Critical Thinking at Montclair State College in the USA. The researcher proposed using scientific methods in schools to investigate problem situations in order to teach learners to think independently, as individual processing is crucial. Lipman developed the concept of education as inquiry, emphasizing the need to combine two educational goals: knowledge transmission and conducting research to establish truth. In the context of this concept, the author considers critical thinking as a relevant need of contemporary individuals, as this skill enables the correct resolution of various problems in human interactions, everyday life, as well as in professional or scientific activities [19].

Contemporary pedagogical research encompasses various aspects of fostering critical thinking in education seekers. For instance, O. Chuba, considering its fundamental characteristics (independence and individuality), formulates principles for developing the foundations of critical thinking: positing and challenging assumptions; checking factual accuracy and logical consistency; considering context; exploring alternatives [6].

In some scientific investigations, authors argue for the necessity of fostering the skill of critical thinking as one of the so-called "soft skills", enabling the nurturing of a fully developed individual capable of lifelong learning and successful self-realization in various professions [39]. It has also been proven that achieving a high level of critical thinking development is possible through the use of problem-based and collaborative learning methods in the educational process [2].

As stated by O. Tiahlo, the factors for solving non-trivial problems include criticism and creativity. Critical reasoning involves possessing the key skill of hypothesizing, as the presence of a problem is associated with formulating hypotheses regarding its solution [34]. The researcher notes that in the educational process, it is necessary to foster critical thinking as one of the components of higher-order thinking. He also identifies the cognitive skills central to critical thinking, based on expert conclusions provided by P. Facione. The most important skills for critical thinking are primarily analysis, evaluation, and inference (N > 95%), as well as interpretation, explanation, and self-regulation, which involve self-monitoring and self-correction (N > 87%) [33].

S. Terno formulates tasks for developing the critical thinking of education seekers as follows: "creating problem situations in the learning process; offering non-trivial problem tasks; acquainting students with the principles, strategies, and procedures of critical thinking; regularly creating choice situations (problem-based methods); organizing dialogue during problem-solving (interactive forms of teaching); providing for the written expression of students' reflections; and finally, allowing for mistakes and modeling error correction situations. Under these conditions, students' thinking skills will acquire awareness, independence, reflectiveness, justification, controllability, and self-organization, thus developing second-order (or higher-order) thinking, which is referred to as critical thinking" [31].

Over the past decades, the term 'critical thinking' has been widely used both in scientific research and in a number of documents regulating the content of the educational process. For example, one of the skills declared in the document "New Ukrainian School: Conceptual Foundations of Secondary School Reform" as necessary for studying various disciplines is critical thinking. According to the purpose of the New Ukrainian School, the graduate of the new school is "an integrated personality, fully developed, capable of critical thinking" [22]. In the State Standard of Basic Secondary Education, one of the

cross-cutting skills for all key competencies is defined as the "ability to think critically and systematically, manifested in identifying main characteristics of phenomena, events, ideas, their interconnections, the ability to analyze and evaluate the evidence and weight of arguments in judgments, consider opposing views and counterarguments, distinguish facts, their interpretations, recognize attempts to manipulate data, using various resources and methods to assess the quality of evidence, reliability of sources, and credibility of information" [27].

The description of the sixth level of the National Qualifications Framework (bachelor's degree) entails the following content for the component "knowledge": "conceptual scientific and practical knowledge, critical comprehension of theories, principles, methods, and concepts in the field of professional activity and/or education" [1]. In the draft standard of higher education for the specialty 014 Secondary Education at the first (bachelor's) level of higher education, the formulation of professional competence includes the "ability… to foster critical thinking in students". One of the program outcomes for the specialty 014.01 Secondary Education (Ukrainian Language and Literature) sounds as follows: "PRO 10. *Demonstrates critical thinking*, creatively applies various theories and experiences (Ukrainian, international) in addressing social and professional tasks, understands the linguistic-literary context, and implements it in the educational process" [24].

As we can see, the consistent development of critical thinking in modern educational processes enables the formation of individuals capable of analyzing life situations comprehensively, finding solutions to problems and non-trivial tasks, and resisting misinformation. In today's information society, such a type of thinking is highly demanded, since in the era of rapidly changing technologies, a person needs constant improvement, first of all, in thinking.

Therefore, considering the prospects of developing critical thinking, researching ways to foster it in higher education institutions is quite relevant.

Despite the fact that the issue of developing critical thinking skills remains quite relevant, as noted by S. Terno, the characteristics of such thinking are not always clearly defined by the authors of some publications. The researcher points out that a comprehensive theoretical characterization of the concept of *critical thinking* enables the clarification of such questions as: describing its main characteristics; identifying instances of using critical thinking and the conditions that facilitate it; characterizing the stages of such thinking [31]. Only by characterizing these components can we implement a methodology for teaching critical thinking.

In defining the properties of critical thinking, we start with the assertion that the key element in its development is the problem-oriented nature of education. A problem always necessitates the search for solutions, hence critical thinking is open to doubt, flexible, non-dogmatic approach, and involves considering various, often conflicting, perspectives, articulating assumptions, seeking evidence, and self-correction. Such reasoning is capable of constant improvement in the process of seeking new ways to understand reality.

Components of critical thinking include the ability to consider context and the breadth of factual information, as well as to utilize evaluation as a method of cognition, consisting of certain actions: defining the object of evaluation, purpose (grounds); selecting criteria; comparing the object under study with the chosen criteria; establishing the degree of correspondence of the object under study to the chosen criteria; formulating an evaluative judgment regarding the object and its justification. Each of the mentioned mental actions requires the application of thinking operations such as analysis, synthesis, comparison, classification, abstraction, generalization, and systematization.

Given the above, critical thinking is necessary when solving unconventional practical tasks for which existing knowledge and skills are insufficient.

The conditions under which such reasoning is possible include creating problem situations in the educational process, where there is a need to make choices, argue, and evaluate. Under such conditions, there is no template for solving the problem, so education seekers think unconventionally, thus acquiring new knowledge and experience in solving tasks during this thinking process.

Critical thinking is a skill required and demanded by employers of a modern specialist in any field. Developing this type of reasoning enables individuals to quickly navigate through constant technological changes, career transitions, and the increasing volume of information. Educational programs for training professionals in pedagogical specialties include the cultivation of critical thinking skills among learners. Therefore, instructors of the designated educational components continuously consider the need to develop this skill in the process of studying various disciplines. To ensure that this work is systematic, problem questions are used during lectures, problem-based lectures are conducted, various types of problem-solving tasks are created for practical sessions, and independent extracurricular work for education seekers is organized.

Bachelor's degree curricula in various fields include the discipline "Introduction to Specialty", which typically serves as an introductory course aimed at familiarizing first-year students with the specifics of their chosen speciality, determining the directions of their future educational activities, and practically acquainting them with the forms and content of critical thinking development work. The educational component "Introduction to Specialty" for the specialty 014 Secondary Education (Ukrainian Language and Literature) lays the foundations of pedagogical and linguistic training for education seekers. The theoretical content of the course covers information about the basics of the future profession, about specific educational needs embodied in the professional standard of a secondary school teacher, about the specifics of the teacher's professional activities, about the essence of language (origin, functions, structure, laws of development, and functioning), as well as knowledge from the theory of literature (nature, specificity, general laws of development of literary art, basic laws of creativity). The deepening of acquired knowledge will occur through the study of a series of disciplines in the cycle of professional training disciplines.

For teaching the specified educational component, we employ various problem tasks, the solution of which involves the application of critical thinking, thereby facilitating the development of this skill in education seekers. Firstly, it is important to note that the concept of a problem is used in accordance with the definition provided in the "Philosophical Encyclopedic Dictionary": "a class of tasks that require practical solution in non-standard conditions, or a heuristic situation connected with ambiguity, the possibility of alternative solutions. In particular, in solving a problem, there cannot be a predetermined method; it is found in the process of work" [27]. Accordingly, such characteristics are inherent in problem tasks.

To understand the specifics of the formulation and use of such tasks, we will describe their specific examples performed by students of the specialty 014 Secondary education (Ukrainian language and literature) during practical session.

The first content module of the course "Introduction to the specialty" is devoted to acquainting students with the specifics of the professional activity of a teacher of secondary education institution, the trajectory of educational training of teachers in higher education institutions, as well as with a range of regulatory documents that govern these types of activities. In addition, the syllabus of the educational component includes acquainting education seekers with the rules of academic integrity in educational and scientific activities. The aforementioned topics are associated with processing a significant amount of theoretical material (such as educational programs, professional standards, programs for certain disciplines for secondary education institutions, etc.), which, however, needs to be critically analyzed for later use in their

professional activities. The content and structure of the aforementioned documents are constantly changing in accordance with the current educational and ideological issues, so it is important to develop an approach to their analysis and critical evaluation.

For instance, while getting acquainted with the conceptual foundations of reforming modern education in the "New Ukrainian School", education seekers process the corresponding document of the Ministry of Education and Science of Ukraine [22] in order to find out the reasons and conditions of such reform, as well as to become acquainted with the formula of the new school. Characterizing the proposed document, its compilers note that its content was revised after publication for broad discussion, thus supplemented with consideration of societal demands and constructive criticism. Therefore, we have the proposed solution to the educational problem of shaping a competitive graduate in the form of the formula of the new school, which comprises nine components. To comprehend this information, education seekers undertake a problem-based task:

1. Propose your own solution to the problem of shaping a competitive graduate of a secondary education institution as a formula, distinct or partially distinct from the one provided:

Each education seeker performs the task independently, and the results are demonstrated during practical sessions. Since critical thinking is connected with evaluation as a method of cognition, we propose to take certain actions while solving the task:

1) clarify which criteria the authors of the document used to determine the competitiveness of a graduate from a secondary education institution (criterion - the basis for evaluation, definition, or classification of something; measure) [8]);
2) identify the criteria for determining the competitiveness of a graduate that you believe are most necessary, formulate them, and justify your opinion;
3) consult with individuals whom you consider successful to determine the specific traits that helped them achieve high results in education or professional activities; identify the skills most in demand by employers;
4) compare the obtained responses with your own reflections, establish their correspondence to the chosen criteria; if necessary, consider this in formulating the criteria;
5) present your solution to the problem of shaping a competitive graduate from a secondary education institution during a practical session, illustrating it by providing information schematically.

While studying the topic "Trajectory of Training a Language and Literature Teacher in Higher Education Institutions", education seekers first create presentations about their choice of specialty 014 Secondary Education (Ukrainian Language and Literature), their own expectations regarding education and future professional activities. Then they get acquainted with the content and structure of the chosen educational-professional program and the corresponding curriculum. Afterward, they undertake the following problem-based task:

1. Process the curriculum of specialty 014 Secondary education (Ukrainian language and literature), posted on the university's website. Determine its structural components, list of educational components, duration and sequence of their study, anticipated types of educational and production practices, information about elective educational components.
2. Analyze the content of the educational and professional program of the bachelor's level of higher education in the specialty 014 Secondary education (Ukrainian language and literature): purpose, orientation, features of the program, list of competencies and program learning outcomes, structural and logical scheme of the educational program.
3. Formulate your own proposals for the orientation and features of the educational and professional program, the list of educational components and other components that, in your opinion, need to be improved. Create a structural and logical diagram of the program, taking into account the changes you proposed. Justify their relevance.

While completing such tasks, students apply various cognitive operations (analysis, synthesis, comparison, systematization, etc.) and critically evaluate the information provided to them for processing.

During the study of the topic "State Standard of Basic Secondary Education", education seekers are acquainted with the changes resulting from the restructuring of the structure and content of modern school education. The State Standard of Basic Secondary Education envisages certain innovations, for example: the allocation of an adaptation cycle (grades 5-6) and a cycle of basic subject teaching (grades 7-9); allocation of nine educational areas and determination of their purpose, general outcomes, competency potential, mandatory learning outcomes; options for implementing educational areas in a typical curriculum; recommendations regarding the minimum and maximum number of instructional hours for each area and overall, as defined in the basic curricula.

For a critical understanding of this information, students can be asked to complete the following problem-based tasks:

1. Determine the possible implementation options for the language and literature educational field based on the model programs already proposed by the authoring teams. Justify each of the proposed options: a) studying Ukrainian language, Ukrainian literature, world literature, and foreign language; b) studying Ukrainian language, integrated literature courses, and foreign language; c) integrated language and literature course and foreign language. Explain how questions regarding the distribution of hours and staffing should be addressed in each case.
2. Analyze the existing options for implementing the language and literature educational field. Propose your own version of creating an interdisciplinary or intersectoral course. Justify your choice (relevance: what competencies, soft skills, skills will be formed; practical value (where the formed skills can be used); why it will be more interesting than studying each discipline separately). Suggest a logic for teaching several topics. Explain how questions regarding the distribution of hours and staffing should be addressed in this context.
3. Analyze the curriculum of your specialty. What integrated course would you suggest adding to the list of educational components? Justify your choice (relevance: what competencies, soft skills, abilities it will form; practical value (where the formed skills can be used); why it will be more interesting than studying each discipline separately). Suggest a logic for teaching several topics.

The development of critical thinking, in our opinion, is facilitated by the form of conducting practical sessions such as debates. In preparation for the discussion, education seekers learn to analyze, structure, and summarize information, focus on the main points (as there are time constraints during the presentation), select relevant arguments to support the stated thesis, and refute possible arguments from the opposing side. The rules of debate encourage the development of the ability to concisely and convincingly present own position. We use the so-called Oxford model of debate, which regulates the content, structure of each participant's presentation from the proposition and opposition sides, and the time limit. During the practical sessions of the first substantive module "Professional Standard of a Teacher of Secondary Education Institution", we suggest that education seekers prove or refute the following theses: "Integrated courses: pros and cons", "Objective assessment of students' work in class is easy", "The balance between studying and practice in higher education: what should prevail?", "Selective educational components form professional competencies", "Dual education is the optimal way to master a profession", "A comprehensive university education is

impossible without academic mobility", "Academic integrity is a feature of an honest person".

Another effective form of developing critical thinking, in our opinion, is the use of a technique proposed by the renowned psychologist Edward de Bono, the author of the term *lateral thinking*, which is the realization that "any way of looking at things is just one of many possible ones. This implies an understanding of how the mind uses patterns and the need to depart from established patterns to achieve better results" [9]. The name of this technique (a game-like approach, a role-playing game) became the title of this researcher's book – "*Six Thinking Hats*". It is based on different modes of thinking, namely evaluating the same problem situation from six different perspectives, enabling the formation of a comprehensive understanding of the subject of discussion, taking into account the advantages and disadvantages on logical and emotional levels.

During the practical session, we divide the education seekers into six subgroups. We prepare six hats of different colors in advance: white, black, yellow, red, green, and blue. Each subgroup of students receives a hat of the color they prefer the most. Then, we inform them that each color corresponds to a specific type of thinking and argumentation:

- White: focus is primarily on information without evaluation; analysis of facts, known data, quantitative indicators, etc.
- Black: Critical analysis of the situation regarding weaknesses, risks, vulnerabilities, etc.;
- Yellow: positive, optimistic assessment of the situation, focusing on advantages, analyzing successes or potential successes.
- Red: emotional evaluation of the analyzed situation, activation of feelings, intuition.
- Green: searching for alternative solutions, improving existing ones, and formulating new ideas.
- Blue: generalization, summarization of expressed thoughts.

Each subgroup of students evaluates the proposed situation according to the color of the chosen hat, following this sequence: white first, followed by black, then yellow, and finally blue. The other colors are arranged randomly, with prior agreement among all participants of the discussion.

The six hats technique is aptly used when needed to assess a particular situation from multiple perspectives. During lectures (on the topic "New Ukrainian School: Conceptual Foundations of Secondary School Reform"), students learn that modern education reform is currently in the stage of implementing changes in basic secondary school. Therefore, we apply this technique during practical sessions to evaluate the implementation of competency-based approaches, partnership pedagogy, or formative assessment in grades 5-6 of the New Ukrainian School. Using the six hats technique enables comprehensive evaluation of specific phenomena or situations and helps avoid stereotypical perceptions.

Getting aquinted education seekers with the rules of academic integrity involves understanding the problem of plagiarism as a form of partial or complete misappropriation of authorship of others' works, discoveries, etc., which needs to be addressed. Exploring ways to solve this issue can form the basis of a problem task. For instance: 1. Propose alternative solutions to the problem of plagiarism. Justify the conditions and appropriateness of their application. Justify the sequence of actions and possible obstacles to the implementation of each.

The task of seeking alternative solutions to address certain issues would be relevant for discussing the anticipated reform of the collaboration between schools and parents, wherein they are united by a common goal, with parents involved in their child's education and helping them achieve success. We suggest that students formulate their own approaches to engaging parents in active collaboration with the school and children: what measures to take, what to encourage, and how to avoid potential misunderstandings.

Any reform involves changes and adaptation to the demands of the time. The reform of the new Ukrainian school is associated with the introduction of innovations to improve the quality of education, reconsidering fundamental approaches to the functioning of modern schools, and addressing certain issues. Today's students completed their education in secondary education institutions under the old programs that were in effect before the introduction of the New Ukrainian School reform. Therefore, it is logical to propose the following task to them: 1. Explain what, in your opinion, were the unresolved problems of domestic secondary education that prompted the adoption of reformist decisions. 2. What measures are envisaged by the New Ukrainian School reform to address these issues?

The development of critical thinking is facilitated by tasks designed for organizing independent extracurricular work of education seekers. For instance, independently studying information about educational concepts proposed by renowned educators (such as J. A. Comenius, J. H. Pestalozzi, F. Froebel, S. Rusova, J. Korczak, V. Sukhomlinsky, S. Amonashvili, and others), summarizing it in the form of a presentation, and determining the pedagogical ideas of the author that are relevant today in the context of reforming domestic schools. Another type of assignment for students' independent work is writing an analytical essay. Essay topics involve analyzing and evaluating specific information, ideas, etc. For example, "What do the concepts of humane pedagogy by S. Amonashvili and the concept of the new school have in common?" or "What classification of parts of speech is optimal for school study?" and so on.

Considering that critical thinking involves the ability to argue, prove, evaluate, and consider different views on a problem, one of the tasks aimed at developing this skill is writing a reflective essay according to a defined structure. We suggest structuring the content of the essay in such a way that it necessarily contains a thesis, three different arguments to support it (direct, indirect, and inductive), explanation of their connection to the thesis, and a conclusion. Topics for reflective essays could include "The modern teacher is a creative personality", "The soul of a nation is embodied in its language worldview", "Context can reveal unexpected meanings of a word", and so on.

Studying the topic of the origin of the Ukrainian language, education seekers discover that there are various classifications of stages and sources of its development, often alternative. To form their own view on this issue, we propose the following tasks: 1. Compare the periodizations of the Ukrainian language created by different scholars (Yu. Sheveliov, O. Potebnia, I. Ohiienko, V. Nimchuk, M. Pohodin, O. Shakhmatov, I. Bilodid). 2. Determine the sources of Ukrainian language development indicated by the authors and the criteria they use to create such classifications. 3. Assess the validity and rationale behind the creation of different periodizations. 4. Identify which chronological division of periods of historical development of the Ukrainian language you support and justify why.

One of the important stages in the functioning of the Ukrainian language is the period of the Grand Duchy of Lithuania, as it is associated with granting the status of the state language to the Old Ukrainian literary language: government acts, court rulings, and the Lithuanian Statute of 1529 were written in this language. To comprehend the significance of this period in the aspect of the further development of the Ukrainian language and the defense of Ukrainian language interests by various societal environments (nobility-administrative, spiritual-educational), education seekers perform tasks involve designing a possible alternative path for the development of the Old Ukrainian language: 1. Get acquainted with the assessment of the societal status of the Old Ukrainian language by contemporary scholars (for example, by Iryna Farion, author of the monograph "Social Status of the Old Ukrainian (Ruthenian) Language in the 14th-17th Centuries: Linguistic Consciousness, Linguistic Reality, Linguistic Perspective" [11]). 2. Determine how the status of the

Old Ukrainian language changed after the Union of Lublin in 1569 and why it happened. 3. Explain whether it can be considered that the development path of the Ukrainian language, particularly the traditions of forming official-business and scientific terminology, was interrupted from the 17th century until the publication of "Eneida" by I. Kotliarevsky. 4. Attempt to design an alternative development path for the Old Ukrainian language and identify possible positive changes, particularly in the functioning of its different styles.

Completing such a task aims to develop an understanding of the importance of advocating one's own language interests at various stages of national development and during periods of political change.

The topic "Historical Development of Languages. Writing, its Functions. Types of Writing. Development of Slavic Script" covers a significant amount of theoretical material on the genealogical classification of languages, forms of language functioning, and various types of writing and alphabets. To assimilate the information, operate with basic concepts, and understand the patterns of development of language families and groups, students complete the following tasks: 1. Study the material on the characteristics of language families and groups, particularly the Slavic group. Determine similarities and differences between the Ukrainian language and Bulgarian, Polish, Czech, and Belarusian. Justify your assertions with arguments and examples. 2. Determine which languages of the Slavic language group use Cyrillic script and which use Latin script. Explain the reasons behind this phenomenon (provide reasoned answers). 3. Analyze various opinions regarding the possible introduction of Latin script for written Ukrainian, including arguments presented in a petition posted on the official website of the President of Ukraine [36]. Prepare for debates during practical sessions on "The introduction of Latin script promotes the modernization of the Ukrainian language".

The content of the second thematic module of the educational component "Introduction to the specialty" covers basic information about linguistics as a science. Education seekers get acquainted with the sections of modern linguistics, their characteristics. While studying the topic "Lexicology and phraseology. Lexicography. Studying them at school", students engage in research tasks that require critical examination of theoretical material and formulation of their own assessment of specific phenomena or concepts. For example: 1. Read I. Drach's poem "Babusentsia". Find out what linguistic means the author used. Are all morphemes used by the poet characteristic of colloquial speech? For what purpose, in your opinion, did I. Drach use such word-forming units? Justify your answer. 2. Study the theoretical material on the lexical meaning of words. Provide a reasoned response to the question of whether words change their meaning in the process of functioning in the language and what causes this. Support your reasoning with examples from dictionary entries, mass media, and poetry. 3. Prepare an analytical note on one of the topics: "Active and Passive Lexical Fund of Contemporary Ukrainian Language", "Lexicon of Limited Usage". 4. Using a phraseological dictionary, construct a synonymous series of phraseological units united by such meanings: *experienced, to flee, to think*. Do the lexical meanings of the words that make up the phraseological units change? Why does this happen? 5. Find out, using dictionaries, from which languages the given words are borrowed: *arhiv, albom, arfa, bashtan, dyvan, herbarii, hroshi, bank, ahent, hetman, hrafik, doktor, dekan, baryton, kafe, kniaz, knyha, kozak, mahistr, park, professor, rynok, universytet, ornament, haziain, shkola*. Explain what changes (phonetic, morphological, semantic) they have undergone in the lexical system of the Ukrainian language. 6. Study the theoretical material on the origin of phraseological units and create a presentation titled "Do Words Have Biographies?" 7. Write a mini-research paper "What caused the creation of dictionaries?". 8. Prepare an analytical note on the various classifications of parts of speech according to different criteria for determining the word's part-of-speech affiliation (V. Vynogradov, I. Kovalik, V. Horpynych, I. Kucherenko, I. Vyhovanets, K. Horodenska and I. Vyhovanets). 9. Get acquainted with the specifics of the functional-categorical approach to dividing words into parts of speech. Consider whether it is appropriate to study it in secondary education institutions and at which stage (in which grade). Justify your opinion. Prepare for a brainstorming session on the advisability of introducing schoolchildren to the functional-category approach to defining parts of speech. 10. Can it be argued that punctuation can help avoid misunderstandings during communication? Justify your answer. By completing tasks of this nature, education seekers primarily analyze the information contained in the recommended sources for each topic, select the one that allows them to argue their position, compare and summarize, and evaluate, thus learning to think critically.

The structure of practical sessions within the second thematic module, "Linguistics as the Science of Language", entails topics for conducting debates, such as: "The Introduction of Latin Script Promotes Modernization of the Ukrainian Language", "Does Man Think in Words or Concepts?" "Is the Pronoun a Fully-fledged Part of Speech?" "Context is Crucial for Understanding Word Meaning", and others.

5 Conclusion

A crucial skill for modern professionals in any field is the ability to think critically, which involves analyzing and evaluating various events, phenomena, life, and professional situations, as well as finding unconventional solutions. Critical thinking needs to be developed at all stages of education (from preschool to higher education) and in the process of studying various educational components as a cross-cutting skill that shapes individual competitiveness. The main features of critical thinking include purposefulness, reflexivity, consideration of different approaches to explaining certain situations or solving problems, reasoned evaluation of them, and formulating own position [17].

Educational and professional programs of higher education institutions contain disciplines whose content is related to the development of critical thinking (e.g., "Logic", "Logical Foundations of Professional Communication", etc.). However, fostering a critically thinking individual cannot be limited solely to them; it must occur throughout the entire period of study while learning various disciplines provided by the curriculum. For the educational component "Introduction to the Specialty", we have developed a series of tasks aimed at developing critical thinking. These tasks can be grouped into the following types: 1) formulating own reasoned solution to a problem that differs from the already known one presented in certain works; 2) determining the degree of validity of various assessments of certain situations, approaches to studying the issue; 3) exercises in selecting alternative solutions to the same problem; 4) identifying certain problems in school education that existed before the implementation of the New Ukrainian School reform and explaining how the reform addresses them.

Requests for critical thinking skills will remain relevant for at least the next five years. It depends on educators' awareness of how graduates will be able to withstand misinformation, adapt to today's rapidly changing technologies and the significant volume of information, as well as resist misinformation.

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Primary Paper Section: A

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