THE APPLICATION OF TECHNOLOGIES FOR DEVELOPING CRITICAL THINKING SKILLS OF VOCATIONAL EDUCATION LEARNERS IN THE PROCESS OF TEACHING ECONOMICS

Natalia Kulalaieva, Leonid Romanov, Mykola-Oleg Yershov, Ganna Romanova, Liudmyla Yershova

ABSTRACT

Purpose: The method of using technologies for the development of critical thinking in the process of teaching economics in vocational education institutions, developed by the authors, is highlighted in the article.

Design/Methodology/Approach: The following research methods were applied: theoretical (study and analysis of scientific and teaching literature on the research problem, logical analysis of scientific concepts to define research definitions, induction, deduction, synthesis, comparison, and generalization; SWOT analysis; generalization; modeling; empirical (praximetric – for studying and analyzing pedagogical experience, standards of professional (vocational-technical) education).

Findings: The work outlines the essence, content, and features of the development of critical thinking in vocational education students are investigated. Multiple technologies for the development of critical thinking in students of professional education, appropriate for use in the process of teaching economics have been identified. A SWOT analysis of the use of technologies for the development of critical thinking among students of professional education in the process of teaching economics was carried out. The method of using technologies for the development of critical thinking among students of professional education in the process of teaching economics. At stages of the method, the types of educational activities of the applicants (updating the problem, analyzing the problem, projecting a solution (proposing hypotheses), selection and decision-making, reflection) are considered.

Originality/Value: The materials presented in the article are original, published for the first time.

Keywords: *professional education, vocational education learners, teaching economics, critical thinking, critical thinking development technologies.*

Name and address of the corresponding author:

Ganna Romanova,
V. Sukhomlynskyi State Scientific and Educational Library of Ukraine,
M. Berlynskyi St., 9,
Kyiv, 02000, Ukraine

Email:
roman-ania@ukr.net1

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Natalia Kulalaieva: Professor of the Department of Pedagogy and Psychology, Doctor of Pedagogic Sciences, Professor. Experienced scientist in the field of theory and methods of vocational education, development of "soft" and "meta" skills, implementation of sustainable development strategies in the vocational education process, and organization of dual forms of education in vocational education institutions.

Leonid Romanov: Head of the scientific and organizational department, Candidate of Pedagogical Sciences (PhD). Experienced scientist in the field of theory and methods of vocational education, formation of readiness of future skilled workers of motor transport industry to application of the innovative production technologies, professional development of teachers of higher and professional education institutions.

Mykola-Oleg Yershov: Director, PhD. Experienced IT specialist, researcher in the history of IT education in Ukraine, specialist in the development of digital competence of young people.

Ganna Romanova: Deputy Director for Research, Doctor of Pedagogic Sciences, Professor. Experienced scientist in the

INTRODUCTION

In our time, when living and professional conditions are rapidly changing, the volume of information being transformed exceeds human capabilities, the number of production tasks constantly increases, and their complexity intensifies, preparing future specialists for the labor market becomes increasingly significant. In this regard, the task of vocational education institutions is to assist in the formation of harmonious individuals who possess the necessary knowledge, skills, and abilities, as well as develop the necessary qualities and abilities for a full and successful life. It is these individuals who are capable of building a successful career, ensuring the sustainable development of a society in which democracy prevails, human rights and freedom of thought are respected, and the happiness index increases (Matlasevych and Mykolaychuk, 2023; Yershov, 2021). Obviously, this is made possible by the economic literacy of future professionals (Orap, Savelyuk, Kalba, & Hruts, 2023, p. 88-89; Yershov et al., 2023; Temugen, & Demir, 2023).

However, according to the educational programs and curricula of their training in vocational education institutions, a small number of hours are allocated for subjects of an economic nature. Therefore, in order to master the educational material on economics, vocational education learners need to learn how to independently process large amounts of information, critically evaluate and manipulate data, perform necessary calculations, and make appropriate decisions. In this regard, the relevance and feasibility of developing critical thinking in them is unquestionable. Moreover, it contributes to the development of related life skills, such as organizational abilities, planning, openness, communicative skills, and so on. Critical thinking, as a life skill in itself, enables easy response to the challenges of personal and professional worlds.

A person who can think critically possesses the following skills: the ability to express oneself articulately, substantiating one's words; to argue against something with serious arguments that the person disagrees with; to observe and notice small details; to objectively analyze facts and evidence; to quickly distinguish the important from the trivial; to react adequately and timely to changes; to control key aspects of situations; to work more accurately, carefully, and efficiently. That is why the skills and abilities of critical thinking revolve around working with arguments: proposing, evaluating, and considering alternatives.

With this in mind, the *purpose* of the research is to develop and justify a methodology for the use of critical thinking development technologies in the teaching of economics in vocational education institutions. *The main tasks* that need to be accomplished in order to achieve this goal are as follows: analyzing scientific-pedagogical literature to investigate the essence, content, and peculiarities of critical thinking development in vocational education students; identifying technologies for developing critical thinking in vocational education students that are appropriate for use in the teaching of economics; conducting a SWOT analysis of the use of critical thinking development technologies in vocational education students in the teaching of economics; and developing a methodology for the use of critical thinking development technologies in vocational education students in the process of mastering the basics of industry-specific economics and entrepreneurship.

THEORETICAL BACKGROUND

The theoretical basis of our research is the works of such renowned

field of theory and methods of professional education, design of educational technologies, professional development of teachers of higher and professional education institutions.

Liudmyla Yershova: Deputy Director for Scientific and Experimental Work, Doctor of Pedagogic Sciences, Professor. Experienced scientist in the field of theory and methods of vocational education, in the history of education in Ukraine, the development of career, entrepreneurial and civic competencies.

scholars as A. Crawford, E.W. Saul, S., Matthews and J. Makinster (2005; 2006), D. F. Halpern (2014), T. Chatfield (2017), J. Haber (2020), L. Bloom and K. Doss (2021), and others. Among the various definitions of the studied phenomenon in the works of foreign authors, we pay attention to the formulation of the researcher in the field of psychology of cognition, D. Halpern (2014), who proposes to understand critical thinking as the use of cognitive techniques or strategies that increase the likelihood of obtaining the desired end result. To achieve this, in her opinion, a person must acquire the ability to think clearly and rationally, understanding the logical connection between ideas and thoughts. In the context of research on the professional training of future specialists, we are impressed by the concise definition of O. Yaroshenko (1997, p. 76), who interprets critical thinking as the ability to think about things in such a way as to find the best solution in certain circumstances. Individuals with this ability have a better chance of developing the competencies necessary for a successful career through their professional education. Therefore, educators should select tasks that promote the development of critical thinking in future professionals, namely: planning and implementing appropriate strategies, constructing them after a thorough and diverse analysis, and solving complex issues or problems.

Description of technologies for the development of students' critical thinking is the topic of the works of such contemporary researchers as O. Tiaglo (2008; 2017a; 2017b), S. O. Terno (2009; 2015), N. Skomorovska (2016), N. Kharchenko (2016; 2018), O. Pometun and N. Gupan (2018), O. Konoval, T. Turkot and A. Solomenko (2019), N. Tsoma (2020), Kozachenko N. (2020; 2021), A. Conversky (2020), V. Ivchenko (2021), D. Sultanova (2021), M. Lionenko and O. Huzar (2023), O. Matlasevych and M. Mykolaychuk (2023), O. Popovych and O. Tarasova (2023).

The analysis of their works allowed the technology of developing critical thinking skills in vocational education learners to understand how they contribute to the formation of skills (understanding and evaluating arguments; understanding and evaluating evidence; understanding and considering biases; articulating one's own thoughts clearly, persuasively, and critically in writing; becoming a critical user of digital technologies) and utilizing logical operations (interpretation, analysis, evaluation, reasoning, explanation, and self-regulation) to achieve predetermined goals in relevant activities.

METHODS

The following research methods were used: theoretical (study and analysis of scientific and pedagogical literature on the research problem, logical analysis of scientific concepts to define research definitions, induction, deduction, synthesis, comparison, and generalization – to justify the main provisions of the research; SWOT analysis – to determine the strengths, weaknesses, opportunities, and threats of using critical thinking development technologies in vocational education in the process of teaching economics; generalization – for formulating conclusions and recommendations; modeling – for developing a methodology for using critical thinking development technologies in vocational education in the process of teaching economics); empirical (praximetric – for studying and analyzing pedagogical experience, standards of professional (vocational-technical) education).

RESULTS AND DISCUSSION

The solution to the problem of successful employment of young students upon their entry into the job market largely depends on whether the skills they acquire during their training in vocational education institutions correspond to the requirements of employers – customers of skilled workers. Among the most in-demand skills by leading Ukrainian companies until 2030 are mentioned: teamwork, communication skills, emotional intelligence, cognitive skills, critical and strategic thinking (Management.com.ua, 2023). It is worth noting that the educational process in vocational education institutions is already successfully oriented towards the formation and development of most of these skills. However, questions remain regarding the development of critical thinking in future professionals, particularly the lack of understanding of the concept of "critical thinking". Therefore, let us briefly discuss the history of the development of this pedagogical phenomenon.

The technology of critical thinking development was introduced to Ukrainian pedagogy through the adaptation of the experience of educators from the United States and Canada. In 1998, the implementation of the project "Reading and Writing for the Development of Critical Thinking" began in Ukraine, carried out by the Scientific and Methodological Center for the Development of Critical and Creative Thinking "Intellect". The official authors of the program were Dr. D. Steel and Dr. K. Meredith, with Dr. Ch. Temple as a co-author. Among

Ukrainian educators, the issue of critical thinking was developed by researchers T. Voropai (1999) and A. Tiaglo (2008; 2017a; 2017b) from Kharkiv, who made significant efforts to adapt the foreign experience of critical thinking development to the peculiarities of the educational process in domestic educational institutions. Since then, the development of critical thinking has become an important aspect of both personal and professional development of future specialists. As stated by The Foundation for Critical Thinking (2023), critical thinking is an intellectually disciplined process of actively and successfully understanding, applying, analyzing, synthesizing, and/or evaluating information gathered or acquired through observation, experience, reflection, reasoning, or communication, as a guide to belief and action. His exemplary form is based on universal intellectual values such as clarity, coherence, precision, consistency, relevance, substantial evidence and reasons, depth, breadth, and fairness. This concept is used when studying relevant structures or elements of thought (goals, problems or questions being analyzed; assumptions; concepts; empirical justifications; reasoning preceding conclusions; cause-and-effect relationships; objections from alternative viewpoints, etc.). Critical thinking extends to various subjects, problems, and goals, and is associated with different modes of thinking: scientific, mathematical, historical, anthropological, moral, philosophical, and economic. Critical thinking can also be characterized as the ability to: compare and analyze information from different sources; identify problems and their essence, ask questions; develop theories and evaluate their possibilities and alternatives; make decisions only after analyzing the situation.

Due to this, the importance of studying and effectively utilizing technology for the development of critical thinking in the process of teaching economics in vocational education institutions is increasing. The relevance of this phenomenon is also determined by the content of the general professional competence "mastery of the foundations of industry-specific economics and entrepreneurship", which is represented in the standards of professional (vocational and technical) education for the professions of "Accounting data registrar" (Standard of professional (vocational and technical) education 4121.M.69.20-2018, 2019), "Cashier (in a bank)" (Standard of professional (vocational and technical) education 4212.K.64.10-2017, 2017), "Tourism agent" (Standard of professional (vocational and technical) education 4221.N.79.00-2017, 2017), "Filing clerk" (Standard of professional (vocational and technical) education 4144.N.82.11-2017, 2017). Future professionals in these professions should know: the concept of "industry market" and its regional peculiarities; the basics of entrepreneurial activities and mechanisms for organizing one's own business; organizational and legal forms and types of entrepreneurship; business plan development technologies; enterprise management tools; classification, composition, and structure of enterprise personnel; production activities of entrepreneurial structures, efficiency of utilization of production assets; organization of labor payment at the enterprise; procedure for creation and liquidation of private enterprise, and so on. In addition, they should learn to analyze the structure, segmentation, basic aspects, and stages of enterprise creation; organize and establish their own private enterprise; develop measures to optimize production costs and maximize enterprise profits, as well as business plans. It is obvious that these functions will be better realized if professionals have developed critical thinking skills.

The features of developing critical thinking skills among professional education students can be considered as independence, interdisciplinary approach, awareness, intellectuality, and objectivity. In our opinion, the main objectives of critical thinking development technologies are teaching students to objectively assess their surrounding environment and researched phenomena and processes, making qualitative selections of necessary information and evaluating the reliability of its sources, expressing their own thoughts clearly, logically, and coherently, comprehending cause-and-effect relationships and the ability to consider a problem from different perspectives, developing strategies to achieve goals, and so on.

Technologies and techniques that involve active learning activities for future specialists, during which they familiarize themselves with economic problems that require solutions, recognize the necessity of their resolution, and strive to find original solutions, analyze various possible options, propose diverse hypotheses and evaluate their feasibility, choose the most acceptable solution to the problem and evaluate it, present and analyze the results of their own activities, draw conclusions, and acquire essential experience for further independent actions.

We conducted a SWOT analysis to study the prospects of applying existing critical thinking development technologies in the education of professional learners in the field of economics. Through interviews and discussions with educational professionals in vocational institutions, we identified the strengths and weaknesses of utilizing critical thinking development technologies, as well as the opportunities and threats associated with their implementation. Open-ended questions were posed to educators, such as "In your opinion, what are the advantages of using critical thinking development technologies in the education of professional learners during economics classes?" and "From your perspective, what are the weaknesses of applying critical thinking development technologies

in the teaching of economics in vocational institutions?". Additionally, we inquired about the possibilities that arise from implementing critical thinking development technologies into the educational process while studying economics in vocational institutions, as well as the potential threats that utilizing these technologies may pose to professional learners in the context of economics instruction.

The *strengths* of these educators include: practical orientation of learning (such as selecting an economic strategy); acquisition of skills for solving professional cases; preparation for making responsible decisions, particularly during tests and exams; development of independence, responsibility, and the ability to argue for one's own opinion; formation of analytical, logical, systematic, and creative thinking skills and research skills in vocational education learners; the interactive nature of these technologies contributes to the development of communicative competence in vocational education learners; improved productivity of educational activities; development of effective information search skills.

The *weaknesses* identified include: the need to work with large amounts of informational data; requiring a high level of qualification for teachers; the need for material and technical resources to support this educational process; inadequate level of basic training for vocational education learners.

The *opportunities* identified include: critical thinking technologies can overall elevate the level of education; increased prestige of vocational education institutions; using game forms as elements of these technologies contributes to the formation of economic competence in vocational education learners; formation of competitive graduates of vocational education institutions capable of employment in the modern labor market; application of these technologies enables the formation of personalities of future professionals capable of building a democratic society.

The following *threats* were highlighted: individuals with developed critical thinking may doubt their own values; excessive use of these technologies may lead to the development of skepticism and cynicism in vocational education learners.

Summarizing the conducted SWOT analysis of using critical thinking development technologies in the teaching of economics to vocational education learners, it should be noted that these technologies should be an integral part of economic education and education as a whole. They have far more strengths and opportunities than weaknesses and potential threats. Their application in the educational process of vocational education institutions, specifically in teaching economics, will contribute to increasing the level of professional competence of future professionals, as well as their readiness to build a democratic society.

The authors have developed a *methodology of application* of critical thinking development technologies in the teaching of economics for vocational education learners. At its stages, we considered the types of educational activities of learners, namely: problem actualization, analysis, solution design (hypothesis formulation), solution selection and acceptance, and reflection.

During the problem actualization stage, the necessary critical thinking development technologies are applied, which draw on the vocational education learners' existing experience. They are encouraged to recall what they know about the problem, prompting them to analyze their own knowledge and apply memory and thinking appropriately. In addition, the level of existing knowledge on the issue among vocational education learners is clarified, as well as the knowledge that needs to be acquired. It encourages vocational education learners to engage in active activities. They are encouraged to think purposefully, express their thoughts in their own words, and demonstrate their knowledge. They subsequently redefine information, creating an effective connection between existing and new knowledge in memory. At this stage, it is appropriate to use such techniques as "conceptual wheel," "associative bush," "cluster," "directed perception," "true or false statements," "key terms," and so on. An essential element of this stage is to motivate learners to learn, develop interest in solving educational questions, and understand the purpose of studying. Therefore, it is worth emphasizing the advantage of purposeful educational activities, as well as the internal motivation of future professionals. In this regard, to support the cognitive activity of vocational education learners, it is necessary to maintain their interest in the researched topic.

During the analysis stage, vocational education seekers need to understand the essence of the problem. They work with new information, search for necessary sources, facts, etc., highlight the most important aspects, and gather all the necessary resources. The most commonly used methods at this stage include "thinking hats," "mind maps," "thin" and "thick" questions, etc.

The solution design stage is characterized by vocational education seekers proposing and justifying various hypotheses for problem-solving, as well as making relevant generalizations. The most appropriate methods for this stage are "express conference," "conceptual wheel," "idea basket," "brainstorming," "associative bush," etc.

During the decision-making stage, future specialists identify possible problem-solving approaches, search

for original solutions, compare and evaluate them, and identify relevant patterns using methods such as "P.R.E.S. method," "fishbone," "idea basket," etc.

During the reflection stage, vocational education seekers conduct self-analysis and self-evaluation, asking themselves questions such as: "What new knowledge have they gained?", "What is the value of the acquired knowledge and where can it be applied?", "How did the learning process take place?", "What other knowledge is necessary for solving similar problems in the future?", "What mistakes were made?", "What needs to be done to avoid mistakes and achieve more success in the future?", "To what extent did the lesson meet expectations?". They discuss the results of their work, evaluate the learning process, share their thoughts. They formulate conclusions, summarize, and exchange ideas using methods such as "five-minute essay," "leave the last word to me," "true or false statements," "unfinished sentences," etc.

CONCLUSION

Therefore, the work outlines *general approaches* to solving the problem of using technology to develop critical thinking in the teaching of economics in vocational education institutions. Based on the analysis of scientific and pedagogical literature, the essence, content, and peculiarities of the development of critical thinking in vocational education learners have been studied. The essence of developing critical thinking in vocational education learners lies in the formation of skills (understanding and evaluating reasoning; understanding and evaluating evidence; understanding and considering biases; clearly, convincingly, and critically expressing one's own thoughts in writing; becoming a critical user of digital technologies) and the ability to use logical operations (interpretation, analysis, evaluation, deduction, explanation, and self-regulation) to achieve the predetermined goal of the corresponding activity. Its content consists of a set of cognitive techniques and strategies that increase the likelihood of achieving the desired end result. The characteristics of the development of critical thinking in vocational education learners are independence, interdisciplinary, awareness, intellectualism, and objectivity.

A number of *technologies* for developing critical thinking in vocational education learners have been identified, which are suitable for use in the teaching of economics ("directed perception," "five-minute essay," "express conference," "leave the last word to me," "true or false statements," "key terms," "conceptual wheel," etc.). The significance of their application in the teaching of economics in vocational education institutions is confirmed by the content of the general professional competence "mastery of the basics of industry economics and entrepreneurship," which future professionals should develop during various types of their educational activities (problem actualization and analysis, design, selection and decision-making, and reflection).

The *methodology of application* of critical thinking development technologies in vocational education students' teaching process of economics has been published, and its main stages have been characterized (problem actualization and analysis, solution design (hypothesis formulation), decision-making and reflection).

SWOT analysis of using critical thinking development technologies in vocational education students' teaching process of economics has been conducted. It is stated that these technologies should be an integral part of economic education and education overall. They have many more strengths and opportunities than weaknesses and potential threats. Their implementation in the educational process of vocational education institutions, particularly in the teaching of economics, will contribute to raising the level of professional competence of future specialists and their readiness to restore the Ukrainian economy and build an open democratic society.

REFERENCES

Bloom, L., A., & Doss, K. (2021). Using Technology to Foster Creative and Critical Thinking in the Classroom. In *Research Anthology on Developing Critical Thinking Skills in Students.* IGI Global: Publishing Tomorrow's Research Today. Access Mode: https://www.igi-global.com/chapter/using-technology-to-foster-creative-and-critical-thinking-in-the-classroom/269906.

Chatfield, T. (2017). *Critical Thinking: Your Guide to Effective Argument, Successful Analysis and Independent Study*. Newbury Park: SAGE Publications Ltd. ISBN: 978-1473947146.

Conversky, A.E. (2020). *Critical thinking: a textbook*. Kyiv: Center for Educational Literature. ISBN: 98966-439-83-9.

Crawford, A., Saul, E.W., Matthews, S., & Makinster, J. (2005). *Teaching and learning strategies for the thinking classroom*. New York: Open Society Institute. Access Mode: https://idebate.net/Publications/PDFs/Teaching%20and%20Learning%20Strategies%20for%20the%20Thinking%20Classroom%20-%20Alan%20Crawford,%20Samuel%20R.%20Mathews,%20Jim%20Makinster,%20E.%20Wendy%20Saul.pdf.

Crawford, A., Saul, E.W., Matthews, S., & Makinster, J.; Pometun, O. (ed.). (2006). Technologies for the Development of Students' Critical Thinking Translation of the publication of the project "Reading and Writing for Critical Thinking". Kyiv: Pleiades Publishing House. Access Mode: https://osvita.ua/doc/files/news/487/48780/KritichneView.pdf.

Foundation for Critical Thinking (2023). *Join the Center for Critical Thinking Community Online*. Access Mode: https://www.criticalthinking.org/pages/join-the-community-online/1512?gad=1&gclid=CjwKCAjwkNOpBhBEEiwAb3MvvcNNoRzHxCCs0pwuHvNkLHz5_iWblNiqJDXY9lPfNvf8wpVLYyS73hoCK6oQAvD_BwE.

Haber, J. (2020). *Critical Thinking.* Cambridge: The MIT Press. ISBN: 9780262538282.

Halpern, D. F. (2014). *Thought and Knowledge: An Introduction to Critical Thinking. Fift edition.* New York and London: Psychology Press. Taylor & Francis Group. Access Mode: https://tandfbis.s3.amazonaws.com/rt-media/pdf/9781848726291/chpt_1.pdf.

Honcharuk, A.V. (2020). *Methodical recommendations for the formation of critical thinking*. Blog of a teacher of foreign literature. Access Mode: https://alla28916.blogspot.com/p/blog-page_27.html.

Ivchenko, V. (2021). Critical thinking and eco-creative audit as a basis for professional interpretive activity in the field of desig. In *Theoretical foundations of the functioning of Education. Ways to improve the effectiveness of educational activitie*s, (pp. 475–82). International Science Group. Access Mode: http://dx.doi.org/10.46299/isg.2021.mono.ped.ii-475-482.

Kharchenko, H. V. (2016). Critical thinking as a characteristic of the modern personality of a teenager. *Theoretical and methodological problems of raising children and school youth*, 20(2), p. 276-286. Access Mode: http://nbuv.gov.ua/UJRN/Tmpvd_2016_20%282%29__27.

Kharchenko, N. (2018). *Development of critical thinking. Innovative forms of work for children and adults*. Kyiv : "Shkilnyi Mir Publishing Group". Access Mode: https://lib.iitta.gov.ua/713879/.

Konoval, O. A., Turkot, T. I., & Solomenko, A. O. (2019). *Methodology for the development of critical thinking of students (on the examples of studying special relativity and electrodynamics): a study guide*. Kryvyi Rih: R. A. Kozlov. Access Mode: http://elibrary.kdpu.edu.ua/xmlui/handle/123456789/3562. https://doi.org/10.31812/123456789/3562.

Kozachenko, N. (2020). Critical thinking and ordinary incompetence. *Visnuk of the Lviv University. Series Philos.-Political Studies*, *33*, 42-47. https://doi.org/10.30970/PPS.2020.33.5

Kozachenko, N. (2021). Critical thinking and feminist epistemology. *Bulletin of Lviv University. Philosophical and Political Studies, 38*, 50-56. http://elibrary.kdpu.edu.ua/xmlui/handle/123456789/6041 http://dx.doi.org/10.31812/123456789/6041.

Larionova, N.B. (2019). *Development of critical thinking of younger schoolchildren in the conditions of the*

New Ukrainian School: methodological guide. Kharkiv: Madrid Printing House, 2019. Access Mode: file:///C:/Users/Deluxe/Downloads/205%20(1).pdf.

Lionenko, M., & Huzar, O. (2023). Development of critical thinking in the context of digital learning. *Economics & Education*, *8*(2), 29-35. https://doi.org/10.30525/2500-946X/2023-2-5.

Management.com.ua (2023). *The ten most in-demand skills for 2030.* Access Mode: https://www.management.com.ua/notes/10-naybilsh-zatrebuvanykh-navychok-2030.html?fbclid=IwAR3fNtUKD8VGNy7Biwtjevu K8ZmLfF6j-evgLzBkcx8uNhMwa7UUpJtylSc#.ZEEU1tE5UPY.facebook.

Mansbach, E. (2015). Using technology to develop students' Critical Thinking Skills. *Northwestern: Professional studies* (September, 14). https://dl.sps.northwestern.edu/blog/2015/09/using-technology-to-develop-students-critical-thinking-skills/.

Matlasevych, O., & Mykolaychuk, M. (2023). What war never destroys: factors for maintaining happiness and resilience in young families during war. *Youth Voice Journal, II*, 55-66. Access Mode: https://www.rj4allpublications.com/product/what-war-never-destroys/.

Orap, M., Savelyuk, N., Kalba, Y., and Hruts H. (2023) Economic attitudes as a component of economic socialization of Ukrainian youth, Inequality, Informational Warfare, Fakes and Self-Regulation in Education and Upbringing of Youth, *Youth Voice Journal*, *II*, 88-97. Access Mode: https://www.rj4allpublications.com/product/economic-attitudes-as-a-component-of-economic-socialization-of-ukrainian-youth/.

Pometun O., & Gupan N. (2018). Development of students' critical thinking skills by means of school history textbooks. *Problems of the modern textbook*, 20, pp. 327-338. https://lib.iitta.gov.ua/722734/

Pometun, O. I. (2018). Critical thinking as a pedagogical phenomenon. *Ukrainian Pedagogical Journal*, *2*, 89-98. Access Mode: https://uej.undip.org.ua/index.php/journal/article/view/493/423.

Popovych, O., & Tarasova, O. (2023). Development of the creative potential of future qualified workers in vocational education institutions, *Professional Pedagogics*, 1(26), 24–30. https://doi.org/10.32835/2707-3092.2023.26.24-30.

Skomorovska, N.B. (2016). *Development of critical thinking of high school students in the lessons of Ukrainian literature: author's abstract*. PhD. Kyiv: V.Stefanyk Precarpathian University. Access Mode: https://enpuir.npu.edu.ua/bitstream/handle/123456789/14435/100317235.pdf?sequence=1.

Standard of professional (vocational and technical) education 4121.M.69.20-2018 (2019). Profession: Accountant for registration of accounting data. Code: 4121. Professional qualification: accountant for registration of accounting data. Kyiv: Official publication. Access Mode: https://mon.gov.ua/ua/osvita/profesijno-tehnichna-osvita/reforma-profesijnoyi-osviti/zmist-profesijnoyi-osviti-osvitni-standarti-programi-informaciya-dlya-uchniv-ta-pedagogiv/derzhavni-standarti-navchalni-plani-ta-programi/arhiv-zatverdzhenih-standartiv-profesijnoyi-osviti-2006-2020/zatverdzheni-standarti-profesijnoyi-osviti-2019.

Standard of professional (vocational and technical) education 4144 .N.82.11-2017 (2017). Profession: Clerk. Code: 4144. Professional qualification: clerk. Kyiv: Official publication. Management (2023). Access Mode: https://mon.gov.ua/ua/osvita/profesijno-tehnichna-osvita/reforma-profesijnoyi-osviti/zmist-profesijnoyi-osviti-osvitni-standarti-programi-informaciya-dlya-uchniv-ta-pedagogiv/derzhavni-standarti-navchalni-plani-ta-programi/arhiv-zatverdzhenih-standartiv-profesijnoyi-osviti-2006-2020/zatverdzheni-standarti-profesijno-tehnichnoyi-osviti-2017.

Standard of professional (vocational and technical) education 4212.K.64.10-2017 (2017). Profession: Cashier (in a bank). Code: 4212. Professional qualification: cashier (in a bank). Kyiv: Official publication. Access Mode: https://mon.gov.ua/ua/osvita/profesijno-tehnichna-osvita/reforma-profesijnoyi-osviti/zmist-profesijnoyi-osviti-osvitni-standarti-programi-informaciya-dlya-uchniv-ta-pedagogiv/derzhavni-standarti-navchalni-plani-ta-programi/arhiv-zatverdzhenih-standartiv-profesijnoyi-osviti-2006-2020/zatverdzheni-standarti-profesijno-tehnichnoyi-osviti-2017.

Standard of professional (vocational and technical) education 4212.K.64.11-2021 (2021). Profession: Bank controller. Code: 4212. Professional qualification: bank controller. Kyiv: Official publication. Access Mode: https://mon.gov.ua/ua/osvita/profesijno-tehnichna-osvita/reforma-profesijnoyi-osviti/zmist-profesijnoyi-osviti-osvit-

ni-standarti-programi-informaciya-dlya-uchniv-ta-pedagogiv/derzhavni-standarti-navchalni-plani-ta-programi/zatverdzheni-standarti-profesijnoyi-osviti-2021.

Standard of professional (vocational and technical) education 4221.N.79.00-2017 (2017). Profession: Tourism organization agent. Code: 4221. Professional qualification: tourism organization agent. Kyiv: Official publication. Access Mode: https://mon.gov.ua/ua/osvita/profesijno-tehnichna-osvita/reforma-profesijnoyi-osviti/zmist-profesijnoyi-osviti-osvitni-standarti-programi-informaciya-dlya-uchniv-ta-pedagogiv/derzhavni-standarti-navchalni-plani-ta-programi/arhiv-zatverdzhenih-standartiv-profesijnoyi-osviti-2006-2020/zatverdzheni-standarti-profesijno-tehnichnoyi-osviti-2017.

Sultanova, D.S. (2021). Technology of the Development of Students' Critical Thinking. *Pindus Journal of Culture, Literature, and ELT*, *9*, 43-46. Access Mode: https://literature.academicjournal.io/index.php/literature/article/view/122.

Temugen, E., & Demir, I. (2023). Promoting the resilience of refugees by developing their digital marketing skills. *Professional Pedagogics*, *2*(27), 1–13. https://doi.org/10.32835/2707-3092.2023.27.1-13.

Terno, S. O. (2009). Critical Thinking – Modern Dimension of Social Science Education. Zaporizhzhia: Prosvita. Access Mode: https://sites.znu.edu.ua/interactiv.edu.lab/Posibnyky/Terno_monograph.pdf.

Terno, S. O. (2015). Critical Thinking: Strategies and Procedures. *Scientific works of the Faculty of History of Zaporizhzhia National University*, *44*(2), 179-183. Access Mode: https://sites.znu.edu.ua/interactiv.edu.lab/Statti_z2012/Terno-CT-stretegies.pdf.

Tiaglo O. (2008) *Critical Thinking: A Manual*. Kharkiv: "Osnova" Publishing House. Access Mode: https://www.researchgate.net/publication/322318143_Kriticne_mislenna.

Tiaglo O. (2017a). Experience of Mastering of Critical Thinking in the Ukrainian Higher Education. *Philosophy of Education,* 2 (21), pp. 240-257. https://dspace.univd.edu.ua/server/api/core/bitstreams/909fffa7-c93e-4481-9f0b-818226a5c07d/content.

Tiaglo O. (2017b). Will the culture of critical thinking be there in the new Ukrainian school? *Ukrainian Truth. Life*. Access Mode: http://www.life.pravda.com.ua/columns/2017/02/9/222533/.

Tiaglo, O., & Voropai, T. (1999). *Critical Thinking: A Challenge to the XXI-st Century Education*. Kharkiv: University of Internal Affairs. Access Mode: https://www.oocities.org/tyaglo/ct/index.html

Tsoma, N. S. (2020). *Development of critical thinking of future skilled workers in the process of studying informative disciplines.* Candidate of Science. Sumy: Sumy State Pedagogical University named after A. S. Makarenko. Access Mode: https://sspu.edu.ua/images/2020/doc/aref_Tsoma_N_b8297.pdf.

World Economic Forum (2016). *The Future of Jobs. Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution.* Access Mode: http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf.

Yaroshenko, O.G. (1997). *Group educational activity of schoolchildren: theory and methodology*. Kyiv: Partner. Access Mode: https://scholar.google.com/citations?view_op=view_citation&hl=en&user=hkH-HVgAAAAJ&citation_for_view=hkH-HVgAAAAJ:xtRiw3GOFMkC.

Yershov, M., Romanov, L., Yershova, L., Kulalaieva, N., & Romanova, G. (2023). The development of higher IT education in Ukraine: condition and prospects. Inequality, Informational Warfare, Fakes and Self-Regulation in Education and Upbringing of Youth. *Youth Voice Journal, II*, 98-109. Access Mode: https://www.rj4all-publications.com/product/the-development-of-higher-it-education-in-ukraine-condition-and-prospects/

Yershov, M.-O. (2021). Freedom as a trend of modern IT-education (2021). *The scientific heritage*, *72* (72), 4, 24-29. Access Mode: https://www.scientific-heritage.com/wp-content/uploads/2021/08/The-scientific-heritage-No-72-72-2021-Vol-4.pdf