



APPLICATION OF METHODS FOR DEVELOPING PROFESSIONAL COMPETENCE IN FUTURE ELECTRICIANS AT AGRICULTURAL COLLEGES

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Abstract

Relevance: The relevance is determined by the reform of the content, methods, forms, and technologies of professional higher education, which is carried out based on a competence-based approach and identifies the need for a comprehensive application of teaching methods in the process of developing professional competence in future electricians at agricultural colleges.

Objective: To identify and characterize a set of methods for developing the professional competence of future electricians at agricultural colleges.

Methods: Theoretical analysis of sources - to determine the state of development of methods for developing the professional competence of future electricians at agricultural colleges; systematization and summarization of the results of theoretical understanding of scientific works, best educational practices, and personal experience - to identify and justify the methodological features of developing professional competence in future electricians at agricultural colleges and determine the most conducive methods for this purpose.

Results: Methodological peculiarities and mechanisms for developing professional competence in future electricians in educational practice have been identified; successful examples of using individual methods in the study of electrotechnical disciplines are provided; the most optimal methods for developing professional competence in future electricians at agricultural colleges have been determined.

Conclusions: A set of methods for developing professional competence in future electricians at agricultural colleges has been identified (explanatory-illustrative, reproductive, problem-based, partial-search, heuristic, research methods); it is shown that their combination in the professional training of future electricians at agricultural colleges significantly improves the success of assimilating general educational and professional knowledge and developing practical skills and abilities of learners.

Keywords: *professional higher education, professional competence of future electricians, agricultural colleges, methods for developing professional competence.*

Introduction. Socio-economic changes in Ukraine, the emergence and rapid development of high technologies, the growth of the technical equipment level in production, ensuring high rates of science and technology development, necessitated by the need to achieve competitiveness of domestic production and services sector, require the presence of qualified specialists and a corresponding system of their preparation. Vocational post-secondary education under current conditions should be aimed at forming qualities in the future specialist capable of meeting employers' demands: ability to work in a

team, quickly adapt in an innovative economic reality, make independent decisions, be proactive and flexible regarding innovations, and rapidly respond to urgent problems.

Addressing these tasks requires the improvement of professional training for specialists in the agricultural profile within the framework of a competency-based approach, which actualizes the search and development of new mechanisms in the system of vocational post-secondary education, among which the implementation of innovative educational technologies occupies a special place.

A key trend is the definition of education outcomes through professional competence, to the problem of forming which domestic and foreign researchers pay great attention. According to the competency-based approach, the level of professional training of future electricians in agricultural colleges is determined by the degree of their mastery of modern knowledge, ability to think critically, increase the efficiency of the production process under resource constraints, apply newly acquired knowledge in combination with existing knowledge, and find practical application methods for this knowledge. The quality of education in colleges with an agricultural profile is influenced by many factors, among which those related to the methods and forms of education are quite important, as their application affects the development of students' independence and creative activity, formation of their professional thinking, and competence (Luzan, Titova, Mosya, & Pashchenko, 2021).

One of the effective ways to develop professional competence in future electrical technicians, ensuring their necessary theoretical knowledge and practical application skills, is considered to be the comprehensive use of teaching methods. Therefore, the issue of substantiating the comprehensive application of methods for developing professional competence in future electrical technicians in agricultural profile colleges is quite relevant for vocational higher education.

Sources. In modern conditions, the training of competent and qualified specialists is one of the most significant problems for successful socio-economic development. The renewal of vocational education based on a competency-based approach, which involves the development of fundamental and practical orientation of educational programs, has been the subject of research by domestic and foreign scientists. General issues of teaching methods, their classification, and application features have been discussed in the scientific works of A. Aleksiuk (1981), G. Vashchenko (1997), M. Fitsula (2010), D. Chernilevsky (2008), and others. Over the last decade, the development of various aspects regarding the application of methods for forming different types of competencies in future specialists has been the focus of scientific research by L. Bazyl (2021), T. Gerlyand (2019), L. Yershova (2022), O. Koshuk (2018), P. Luzan (2021), Z. Kurlyand, T. Osypova, R. Gurina, I. Barteneva & I. Bogdanova (2012), T. Paschenko (2021), V. Radkevich (2022), O. Radkevych (2020), O. Titova (2019), and others. However, in pedagogical theory, there are still no solutions regarding the methodology for determining

the effectiveness of the application of various teaching methods for forming the professional competence of future electrical technicians in agricultural profile colleges.

Objective: To identify and characterize a complex of methods for forming professional competence in future electrical technicians in agricultural profile colleges.

Methods: Theoretical analysis of sources - to determine the state of development of methods for forming professional competence in future electrical technicians in agricultural profile colleges; systematization and generalization of the results of theoretical understanding of scientific works, best educational practices, and personal experience - to identify and substantiate the methodological features of forming professional competence in future electrical technicians in agricultural profile colleges and to determine the most favorable complex of methods for this.

Results and Discussion. The effectiveness of training a competent specialist, competitive in the labor market, creatively thinking, freely mastering his profession, oriented towards continuous self-education and self-development, ready for self-improvement, self-realization in the conditions of developing science-intensive technologies, depends on the teacher's ability to choose the optimal method or approach to teaching, taking into account the circumstances of each lesson. The teaching method is a set of techniques, the implementation of which allows achieving educational goals, ways of interaction between the teacher and students in solving educational tasks. The teacher's choice of appropriate methods, techniques, and teaching tools is made taking into account the shortest path of student cognition, the most rational combination (from the point of view of educational goals) of theoretical knowledge and experiment, induction and deduction, logical and intuitive conclusions in their dialectical unity (Honcharenko, 1997).

Studying and summarizing the best educational practices and personal experience convinces that, for developing the professional competence of future agricultural college electrician technicians, it is necessary to apply a didactic system of teaching methods according to the classification of learning methods by the nature of the educational activities of students: informational-receptive (explanatory-illustrative); reproductive; problem-posing; heuristic (partially-search); research-based.

Applying *explanatory-illustrative (informational-receptive) teaching methods*, instructors of agricultural colleges provide

information to vocational education students. The instructor conveys information through verbal means (narration, lecture, explanation), printed materials (textbooks, anthologies, guides, etc.), visual aids (demonstrations, cinema, video, slides, diagrams, and tables, etc.), and practical demonstration of activities (solving tasks, conducting laboratory work, developing response algorithms, etc.). The effectiveness of the explanatory-illustrative method has been tested by the long-standing practice of numerous educational institutions. This method is extensively covered in scientific-methodological literature (Aleksiuk, 1981; Koshuk, 2018; Kurlyand et al., 2012; Titova, 2019; Fitsula, 2010; Chernilevsky, 2008; Yagupov, 2002, and others). Using the explanatory-illustrative method implies only the perception, understanding, and memorization of the conveyed material. Without a doubt, to be satisfied with the level of knowledge obtained solely through the application of this method by the teacher is impossible, as it contradicts the modern goals of education, upbringing, and development. At the same time, the specified level of knowledge formation is the initial stage of the learning process. Informational-receptive teaching methods are often used by teachers in classes when starting a new topic or a new fragment of educational material when students lack the knowledge necessary to assimilate this material.

For example, *the study of electrical phenomena traditionally begins with the teacher explaining the electrification of bodies. Since electrical phenomena have not yet been discussed in previous lessons, the teacher uses the explanatory-illustrative method in the teaching process. He may start with a narrative, explain the origin of the term "electricity," involve elements of the history of electrical engineering, and then illustrate the story with demonstration experiments.*

Agreeing with the considerations of many scientists, we believe that the professional competence of future electrical technicians is effectively formed in the process of technical activity, through the performance of independent practical tasks, exercises to consolidate skills in working with tools, instruments, equipment, demonstrating techniques of labor actions and operations. The results of theoretical research lead to the conclusion that this teaching method is designed to ensure the assimilation of ready-made knowledge and skills; it has been and remains economical and appropriate. Additionally, it has been found that the explanatory-illustrative method is implemented in a deductive form, if the teacher conveys generalized knowledge

(provides definitions, introduces regularities, explains), then presents numerous examples that fall under the general rule and fill the abstraction with concrete content (illustrates, explains).

The reproductive method of teaching is used to develop skills and abilities in vocational education students and facilitates the reproduction of knowledge, applying it in familiar or slightly modified situations. Instructors, through a system of tasks, organize the activities of vocational education students for the repeated reproduction of imparted knowledge or demonstrated methods. Scientific and pedagogical workers use various teaching tools, and students, employing these same tools for task execution, follow a model (example of task execution) previously provided by the instructor.

The reproductive method is evident in the oral reproduction of knowledge imparted to future specialists, in reproductive discussions, and in solving electrotechnical tasks. It is used in practical and laboratory works with detailed instructions. To enhance the effectiveness of this method, special systems of exercises, tasks (didactic materials), and even programmed materials providing feedback and self-assessment are developed.

In mastering the content of electrotechnical disciplines, the reproductive method elevates knowledge acquisition to a higher level and is often used in combination with the explanatory-illustrative method. Both methods enrich vocational education students with knowledge, skills, and abilities, fostering fundamental intellectual operations, but they do not necessarily promote the targeted development of their creative abilities.

The problem-based teaching method is most often realized as an oral monologue by the instructor, activating productive mental activity by creating a problematic situation for the students, followed by analyzing reasoned propositions for its resolution. College instructors not only organize the transfer of information but also acquaint vocational education students with the process of finding solutions to various problems. However, problem-based learning cannot always be applied due to the complexity of the material being studied. The essence, functions, structure, features, rules, and methods of creating problem situations in problem-based learning are thoroughly illuminated in scientific-pedagogical research and educational-methodical literature (Aleksyuk, 1981; Manko, 2006; Yagupov, 2002, etc.), thus warranting a more detailed examination of the peculiarities of applying the problem-based teaching method in the process of

developing professional competence in future electrical technicians in agricultural profile colleges.

The content of electrotechnical disciplines contains a significant amount of educational information, which is appropriately taught using the problem-solving method. For example, *the issue of choosing an electric motor for a production mechanism. The productivity of the mechanism, the course of the technological process, depends on the characteristics of the electric motor. The task of choosing an electric motor is complex in nature. The criterion for selection is technical and economic indicators, where the decisive factor in the choice of the electric motor is such requirements as economy and reliability of its operation. This logic of mental activity should lead to the resolution of this technical task - the correct selection of power and the constructive type of the motor.*

The effectiveness of forming professional competence in future electrical technicians is enhanced if the teacher in an agricultural college illustrates theoretical material with practical

examples, analyzing real situations. In the process of active cognitive activity during seminar sessions, the student engages in solving problem tasks aimed at establishing connections between homogeneous concepts, clarifying essential characteristics, etc. In the course of solving problem tasks, future specialists develop the ability to invent, forecast, analyze, and think creatively.

Let's consider another example of creating problems while solving a task on the topic "Connection of Conductors". Task condition: *Determine the current flowing through each resistor in the circuit, whose diagram is shown in the figure, if the voltage at the terminals is 10 V, and the resistance of resistors $R_1=R_2=R_3$ is 10 Ohms each. The diagram of this circuit is shown in Figure 1. In the diagram, it is not simultaneously visible how the conductors are connected - this is precisely the beginning of the problematic situation. In such tasks, the main actors are the students of professional higher education. They solve the problem, put forward hypotheses, prove and test them.*

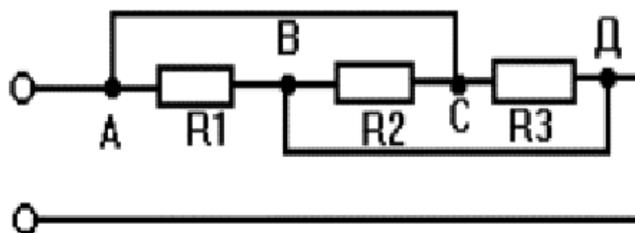


Fig. 1. Scheme of the Chain for the Problem Statement

Thus, during problem-based instruction, problems (real or constructed specifically by the instructor) are posed, scientists' hypotheses, thinking, experiments are explained, conclusions are

drawn, and real experiments or their educational modifications supporting these conclusions are demonstrated. As a result, the structure of problem-based instruction, presented in Figure 2, is formed.



Figure 2. Structure of problem-based learning during the study of electrotechnical disciplines.

During problem-based teaching of the material, the instructor uses oral speech, printed texts (textbooks or other sources), demonstrative experiments, demonstrations, etc.

Mastering the profession of an electrician technician, which is technological, involves processing and memorizing structures, dependencies, classifications, tabular data, etc. Under these circumstances, it is advisable for future electrician technicians to acquire knowledge and skills in generalizing, structuring, analyzing the

received information using mind maps (intellect maps) as a special technique of alternative recording of information by creating visualizations, structural diagrams. An intellect map is an effective visual material that makes it easier to remember information, created either on paper by hand or using special online services for creating intellect maps (Fig. 3). It can be used for creating new ideas, recording ideas, analyzing and organizing information, decision making.

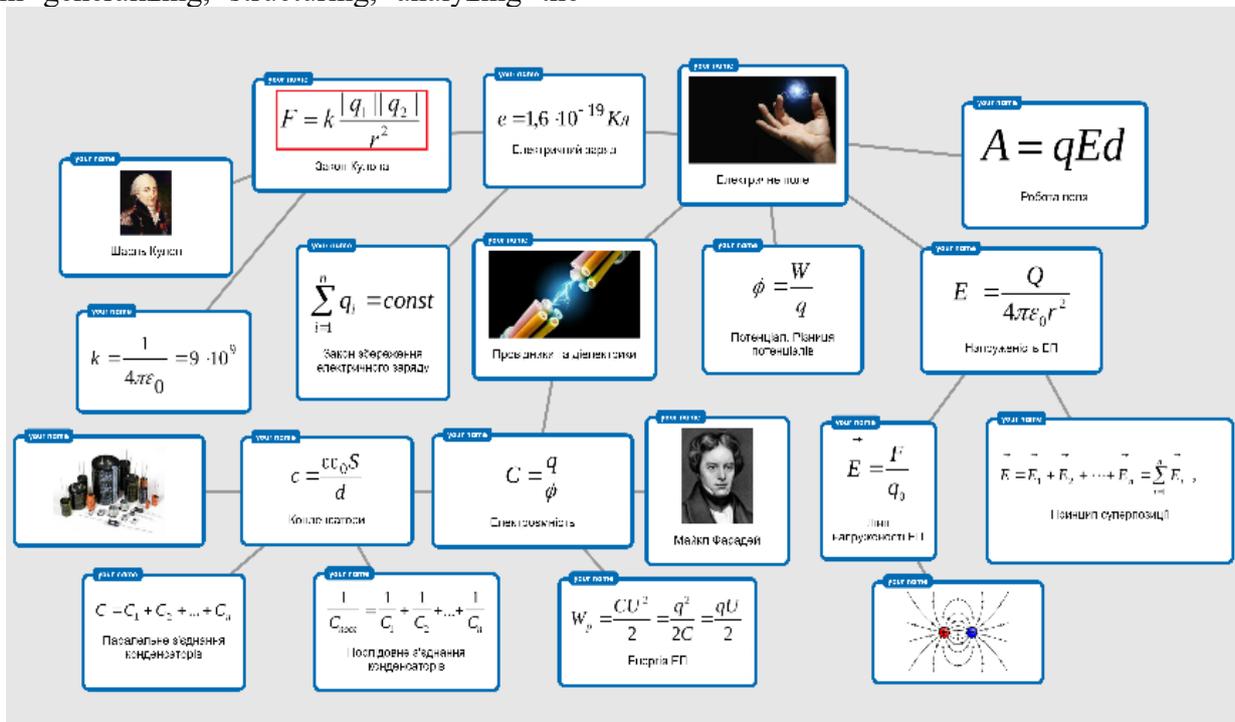


Figure 3. Example of a mental map "Electric field"

Indeed, a mind map is a tool for visual representation and recording of information, different from the usual linear method. It is creativity that develops thinking and memory. The key advantage of mind maps is the perspective to perceive information visually, structurally with interconnections, and to logically visualize one's thoughts. The creation of a mind map is a convenient, effective technique of thinking and alternative recording. General rules for creating mind maps can be outlined: at the center of the intellect map, it is necessary to place an image of the entire problem (task); from the center should extend main branches with labels that signify the main sections of the map (using arrows to indicate

connections between elements of the map); the main branches need to be divided into finer branches; all branches are accompanied by keywords that prompt recalling a particular concept.

In the course of the research, mind maps were used as an effective way of taking lecture notes (compiling support schemes, classifications and dependencies, summaries), for preparing material on a certain topic, as aid in solving creative tasks, conducting trainings, brainstorming (collective solving of complex tasks, generating new ideas, creativity), for better memorization of material, planning and developing creative projects, etc. The sequence of applying the method of mind maps in solving creative tasks is shown in Figure 4.

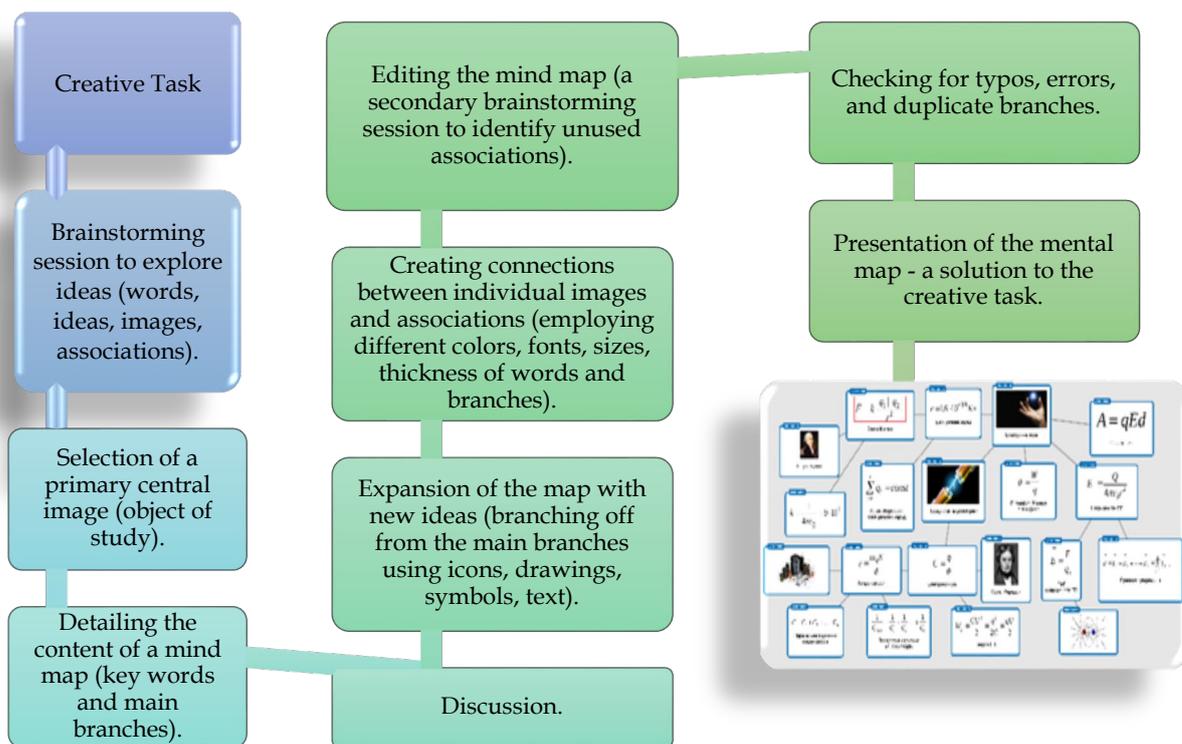


Fig. 4. Sequence of Applying the Mental Mapping Method in Solving Creative Tasks.

Thus, during problem-based teaching, students familiarize themselves with the process of cognition, engage in it, and participate actively.

The heuristic (or partial-search) method is a technique where the instructor organizes the participation of vocational education students in performing certain steps of problem-solving. The instructor's role involves constructing the task, dividing it into stages, and determining which stages students complete independently, thereby facilitating their independent cognitive activity. In some cases, students learn to identify problems, while in others, they create evidence, produce hypotheses, formulate conclusions from demonstrated facts, and plan the sequence of testing a hypothesis. In other words, this method ensures a step-by-step mastery of problem-solving tasks.

One form of heuristic teaching is heuristic dialogue. Unlike reproductive conversation, heuristic dialogue requires vocational education students to not only reproduce acquired knowledge but also engage in creative search. During a heuristic conversation, the instructor guides the search, poses problems sequentially, formulates contradictions, creates conflict situations, structures the stages of conversation, and students independently seek solutions to the problem at each stage of the dialogue.

The significance of the **research method** primarily lies in the fact that students perceive new facts and phenomena not through the instructor's words but through their own independent, creative activities. The purpose of this method is to deeply familiarize future specialists with the nuances of creative activity and gain relevant experience. Research by scholars (L. Bondarenko, S. Martynenko, A. Moskalenko, L. Khoruzha, and others) has shown that limiting the educational process to partial problem-solving by students (as in the case of heuristic teaching) does not foster the development of skills to investigate and solve comprehensive problems.

Problem-solving is facilitated through the development of skills such as analyzing the task conditions, breaking down the main problem into a series of sub-problems, planning the stages of problem resolution, producing a hypothesis, and theoretically and experimentally verifying the correctness of the solution. The research method teaches the application of known knowledge to solve problem tasks and acquire new knowledge through such solutions. Undoubtedly, the research method is fundamental in fostering the need for creative, independent activity among vocational education students. The nature of tasks under the research method can vary: laboratory work and practical home

assignments; solving analytical problems; group and individual tasks, etc. Laboratory works, integral to the educational process in electrotechnical disciplines, are usually organized according to instructions. In such instructions, students are provided with an action algorithm for instruments, guidelines for conducting various measurements, etc.; the students' role in such laboratory work is generally limited to recording results or drawing conclusions about their activities. While undoubtedly beneficial and necessary, especially in the early stages of electrotechnical training, ensuring the quality of modern specialists' training requires involving

students in independent, creative search. Therefore, in the context of the proposed methodology for developing vocational competence in future electrician technicians, research laboratory works are conducted, where only the goal of the work is defined in the instructions, and the stages of investigation (work plan) are independently developed by students (and sometimes they even determine and select the necessary instruments and devices for the work). The main condition for organizing research tasks of any type is that students go through the stages of the research process, provided that the proposed tasks are accessible (fig.5).

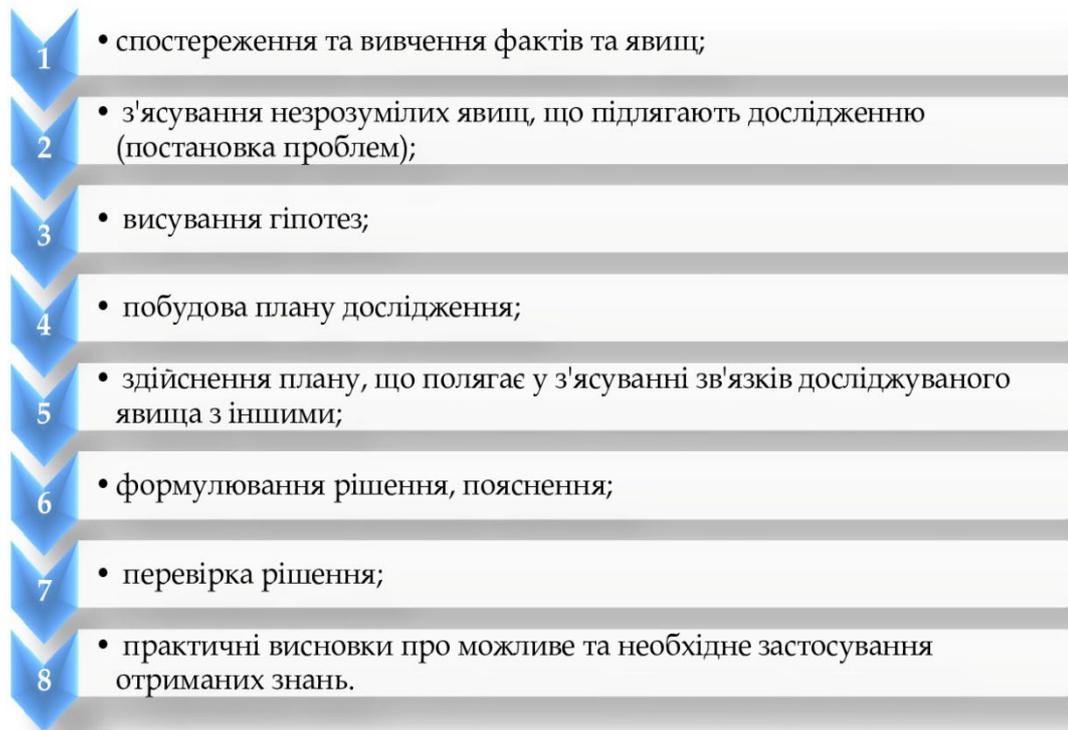


Fig. 5. Stages of the study (work plan) in the process of performing research tasks.

Undoubtedly, productive teaching methods (problem-based teaching, heuristic, and research methods) are designed to facilitate the acquisition of knowledge and skills by professional higher education seekers at the level of their creative application. Alongside traditional methods, various interactive methods have recently gained significant popularity.

Conclusions. A complex of methods conducive to enhancing the effectiveness of developing professional competence in future electrician technicians at agricultural profile colleges has been identified and characterized. This complex includes explanatory-illustrative, reproductive,

problem-based teaching, partial-search, heuristic, and research methods. It has been shown that their combination in the professional training of future electrician technicians at agricultural profile colleges significantly improves the success of assimilating general education and professional knowledge, as well as forming practical skills and abilities of education seekers.

The perspectives for further scientific exploration will be associated with investigating the peculiarities of applying interactive methods to form professional competence in future electrician technicians at agricultural profile colleges.

List of references

- Алексюк, А. М. (1981). *Загальні методи навчання в школі*. (2-ге вид.). Київ: Радянська школа.
- Бондаренко, Л. І. (2013). Розвиток дослідницької компетентності майбутніх викладачів вищих навчальних закладів : методичні рекомендації. Луганськ : Вид-во ДЗ «ЛНУ імені Тараса Шевченка».
- Ващенко, Г. Г. (1997). *Загальні методи навчання: підручник для педагогів*. Київ.
- Герлянд, Т. М. (2019). Загальноосвітня підготовка майбутніх кваліфікованих робітників аграрного профілю: теорія і методика: монографія. Київ: Ямчинський О. В.
- Гончаренко, С. У. (1997). *Український педагогічний словник*. Київ: Либідь.
- Кошук, О. Б. (2018). *Формування професійної компетентності майбутніх фахівців із агроінженерії: теорія і методика: монографія*. Київ: Компринт.
- Курлянд, З. Н., Осипова, Т. Ю., Гурін, Р. С., Бартенєва, І. О., & Богданова, І. М. (2012). *Теорія і методика професійної освіти: навчальний посібник*. Київ: Знання.
- Манько, В. А. (2006). Проблемне навчання як актуальна науково-педагогічна проблема. *Засоби навчальної та науково-дослідної роботи*, 25, 102–106.
- Радкевич, О. П. (2020). Розвиток правової культури педагогічних працівників закладів професійної освіти: теорія і практика: монографія. Київ: Майстер Книг.
- Тітова, О. А. (2019). *Педагогічна система розвитку творчого потенціалу майбутніх інженерів у аграрних університетах: теоретичне обґрунтування та методичне забезпечення: монографія*. Мелітополь: Однорог Т. В.
- Фіцула, М. М. (2010). *Педагогіка вищої школи: навчальний посібник*. (2-ге вид., доповнене). Київ: Академвидав.
- Чернілевський, Д. В. (2008). *Педагогіка вищої школи: підручник*. Вінниця : Глобус-Прес.
- Ягупов, В. В. (2002). *Педагогіка: навчальний посібник*. Київ: Либідь.
- Bazyl, L. (2021). Training of future specialists for entrepreneurial activity: realities and prospects. *Professional Pedagogics*, 2(23), 149–158. <https://doi.org/10.32835/2707-3092.2021.23.149-158>
- Kovalchuk, V., Prylepa, I., Chubrei, O., Marynchenko, I.Є, Opanasenko, V., & Marynchenko, Y. (2022). Development of Emotional Intelligence of Future Teachers of Professional Training. *International Journal of Early Childhood Special Education (INT-JECSE)*, 14(1): 39-51. <https://doi.org/10.9756/INT-JECSE/V14I1.221006>
- Luzan, P., Titova, O., Mosya, I., & Pashchenko, T. (2021). Methodology for assessing the quality of training specialists in institutions of professional pre-higher education. *Professional Pedagogics*, 1(22), pp. 169-184. DOI: <https://doi.org/10.32835/2707-3092.2021.22.169-184>.
- Radkevych, V., & Yershova, L. (2022). Status of preparedness of vocational education system to counter real and potential threats to national security and national interests of Ukraine in the conditions of external and internal challenges. *Professional Pedagogics*, 1(24), 4-17. <https://doi.org/10.32835/2707-3092.2022.24.4-17>.
- Yershova, L., Zakatnov, D., & Titova, O. (2022). Terminological analysis of basic concepts in the study of the entrepreneurial competence of future performing artists. *Professional Pedagogics*, 2(25), 58-65. <https://doi.org/10.32835/2707-3092.2022.25.58-65>.

Translated & Transliterated

- Aleksiuk, A. M. (1981). *Zahalni metody navchannia v shkoli [General methods of learning at school]*. (2-he vyd.) Kyiv: Radianska shkola, [in Ukrainian].
- Bondarenko, L. I. (2013). *Rozvytok doslidnytskoi kompetentnosti maibutnykh vykladachiv vshchychkh navchalnykh zakladiv : metodychni rekomendatsii [Development of research competence of future teachers of higher educational institutions: methodical recommendations]*. Luhansk: Vyd-vo DZ «LNU imeni Tarasa Shevchenka» .
- Vashchenko, H. H. (1997). *Zahalni metody navchannia: pidruchnyk dlia pedahohiv [General teaching methods: a textbook for teachers]*. Kyiv, [in Ukrainian].
- Herliand, T. M. (2019). *Zahalnoosvitnia pidhotovka maibutnykh kvalifikovanykh robitnykiv ahrarnoho profiliiu: teoriia i metodyka: monohrafiia. [General educational training of future skilled workers of the agrarian*

profile: theory and methodology: monograph [General educational training of future skilled agricultural workers: theory and methodology: monograph], Kyiv: Yamchynskiy O. V., [in Ukrainian].

Honcharenko S. U. (1997). *Ukrainskyi pedahohichnyi slovnyk [Ukrainian pedagogical dictionary]*. Kyiv: Lybid, [in Ukrainian].

Koshuk, O. B. (2018). *Formuvannia profesiinoi kompetentnosti maibutnikh fakhivtsiv iz ahroinzhenierii: teoriia i metodyka: monohrafiia [Formation of professional competence of future specialists in agricultural engineering: theory and methodology: monograph]*. Kyiv: Kompynt [in Ukrainian].

Kurliand, Z. N., Osypova, T. Yu., Hurin, R. S., Bartienieva, I. O., & Bohdanova, I. M. (2012). *Teoriia i metodyka profesiinoi osvity: navchalnyi posibnyk [Theory and methodology of professional education: study guide]*. Kyiv: Znannia, [in Ukrainian].

Manko, V. A. (2006). Problemne navchannia yak aktualna naukovo-pedahohichna problema [Problem-based learning as an actual scientific and pedagogical problem]. *Zasoby navchalnoi ta naukovo-doslidnoi roboty [Means of educational and research work]*, 25, 102-106, [in Ukrainian].

Radkevych, O. P. (2020). *Rozvytok pravovoi kultury pedahohichnykh pratsivnykiv zakladiv profesiinoi osvity: teoriia i praktyka: monohrafiia [Development of legal culture of pedagogical workers of vocational education institutions: theory and practice: monograph]*. Kyiv: Maister Knyh [Master of Books], [in Ukrainian].

Titova, O. A. (2019). *Pedahohichna systema rozvytku tvorchoho potentsialu maibutnikh inzheneriv u ahrarnykh universytetakh: teoretychne obgruntuvannia ta metodychne zabezpechennia: monohrafiia [Pedagogical system for developing the creative potential of future engineers in agricultural universities: theoretical justification and methodical support: monograph]*. Melitopol: Odnoroh T. V., [in Ukrainian].

Fitsula, M. M. (2010). *Pedahohika vyshchoi shkoly: navchalnyi posibnyk [Higher school pedagogy: study guide]*. (2-he vyd., dopovnene). Kyiv: Akademydav, [in Ukrainian].

Chernilevskiy, D. V. (2008). *Pedahohika vyshchoi shkoly: pidruchnyk [Higher school pedagogy: textbook]*. Vinnytsia : Hlobus-Pres , [in Ukrainian].

Yahupov, V. V. (2002). *Pedahohika: navchalnyi posibnyk [Pedagogy: study guide]*. Kyiv: Lybid, [in Ukrainian].

Bazyl, L. (2021). Training of future specialists for entrepreneurial activity: realities and prospects. *Professional Pedagogics*, 2(23), 149-158. <https://doi.org/10.32835/2707-3092.2021.23.149-158>, [in English].

Kovalchuk, V., Prylepa, I., Chubrei, O., Marynchenko, I. C., Opanasenko, V., & Marynchenko, Y. (2022). Development of Emotional Intelligence of Future Teachers of Professional Training. *International Journal of Early Childhood Special Education (INT-JECSE)*, 14(1): 39-51. <https://doi.org/10.9756/INT-JECSE/V14I1.221006> , [in English].

Luzan, P., Titova, O., Mosya, I., & Pashchenko, T. (2021). Methodology for assessing the quality of training specialists in institutions of professional pre-higher education. *Professional Pedagogics*, 1(22), pp. 169-184. <https://doi.org/10.32835/2707-3092.2021.22.169-184>, [in English].

Radkevych, V., & Yershova, L. (2022). Status of preparedness of vocational education system to counter real and potential threats to national security and national interests of Ukraine in the conditions of external and internal challenges. *Professional Pedagogics*, 1(24), 4-17. <https://doi.org/10.32835/2707-3092.2022.24.4-17>, [in English].

Yershova, L., Zakatnov, D., & Titova, O. (2022). Terminological analysis of basic concepts in the study of the entrepreneurial competence of future performing artists. *Professional Pedagogics*, 2(25), 58-65, <https://doi.org/10.32835/2707-3092.2022.25.58-65>, [in English].

ОСОБЛИВОСТІ ЗАСТОСУВАННЯ МЕТОДІВ ФОРМУВАННЯ ФАХОВОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ТЕХНІКІВ-ЕЛЕКТРИКІВ У КОЛЕДЖАХ АГРАРНОГО ПРОФІЛЮ

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Реферат:

Актуальність визначається реформуванням змісту, методів, форм, технологій фахової передвищої освіти, що здійснюється на засаді компетентнісного підходу й визначає потребу комплексного застосування методів навчання у процесі формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю.

Мета: визначити й охарактеризувати комплекс методів формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю.

Методи: теоретичний аналіз джерел – для визначення стану розробленості методів формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю; систематизація й узагальнення результатів теоретичного осмислення наукових праць, кращих освітніх практик і власного досвіду – для виявлення й обґрунтування методичних особливостей формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю та визначення комплексу найбільш сприятливих для цього методів.

Результати: виявлено методичні особливості і механізми формування фахової компетентності майбутніх техніків-електриків в освітній практиці; наведено успішні приклади використання окремих методів у процесі вивчення електротехнічних дисциплін; визначено найбільш оптимальні з них для формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю.

Висновки: визначено комплекс методів формування фахової компетентності майбутніх техніків-електриків у коледжах аграрного профілю (пояснювально-ілюстративні, репродуктивні, проблемного викладу, частково-пошукові, евристичні, дослідницькі); показано, що їх поєднання у професійній підготовці майбутніх техніків-електриків у коледжах аграрного профілю значно покращує успішність засвоєння загальноосвітніх та професійних знань, формування практичних умінь та навичок здобувачів освіти.

Ключові слова: фахова передвища освіта, фахова компетентність майбутніх техніків-електриків, коледжі аграрного профілю, методи формування фахової компетентності.

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