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CRITERIA AND INDICATORS FOR ASSESSING THE DIAGNOSTIC COMPETENCE OF FUTURE PHILOSOPHY DOCTORS IN EDUCATIONAL AND SCIENTIFIC TRAINING PROCESS.

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The article is devoted to the problem of substantiating the criteria and indicators for assessing the diagnostic competence of future Philosophy Doctors in their educational and scientific training process. The scientific approaches of foreign and domestic scholars to their definition have been analyzed. The content of the concepts of "criterion" and "indicator" is substantiated with regard to their diagnostic function. Five key criteria have been identified based on the specifics of their scientific and pedagogical activities, they are: axiological-motivational, intellectual, activity, psychological and reflective which fully make it possible to provide an opportunity to systematically cover the content of their diagnostic competence and diagnose its development. These criteria allow clarifying such problematic questions regarding the subject of our research as:

- valuable attitude of the subjects to their future diagnostic activities and their motivation;*
- the mastery of diagnostic knowledge system, which is important for the diagnostic activity of future Ph. Doctors and determination of the diagnostic problem essence in relation to them and ways of solving it;*
- possession of the system of diagnostic skills and practice that they need for diagnostic activities and the ability to choose the best solution in diagnostic activities;*
- to find out the development of professionally important diagnostic qualities as subjects of diagnostic activity;*
- to find out how the researched subjects perceive themselves as a subject of diagnostic activity.*

For each criterion, respectively, the indicators of measuring the formation of a particular component of the diagnostic competence of future Ph. Doctors in the process of their educational and scientific training and methodological tools for their evaluation have been determined.

The article presents the criteria and characteristics by means of which the degree of merit of the research goals is evaluated. The appropriate criteria and indicators are necessary for measuring the formation of the future Ph. Doctor's diagnostic competence, by which it is possible to find out its formation at different stages of their diagnostic training.

Key words: *diagnostic, diagnostic competence, measurements, educational and professional training, criteria, indicators, future Philosophy Doctors, methods.*

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КРИТЕРІЇ ТА ПОКАЗНИКИ ОЦІНЮВАННЯ ДІАГНОСТУВАЛЬНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ДОКТОРІВ ФІЛОСОФІЇ В ПРОЦЕСІ ОСВІТНЬО-НАУКОВОЇ ПІДГОТОВКИ

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Стаття присвячена проблемі обґрунтування критеріїв і показників оцінювання діагностувальної компетентності майбутніх докторів філософії в процесі їх освітньо-наукової підготовки. Проаналізовано наукові підходи зарубіжних і вітчизняних науковців до їх визначення. Обґрунтовано зміст понять "критерій" і "показник" із урахуванням їх діагностувальної функції. На основі специфіки їх науково-педагогічної діяльності виокремлено п'ять основних критеріїв – аксіологічно-мотиваційний, інтелектуальний, діяльнісний, психологічний і рефлексивний, які в повному обсязі дають можливість системно охопити зміст їх діагностувальної компетентності та діагностувати її розвиненість. Ці критерії дають можливість з'ясувати такі проблемні питання щодо предмета нашого дослідження:

- ціннісне ставлення досліджуваних до своєї майбутньої діагностувальної діяльності та її мотивацію;
- володіння системою діагностувальних знань, яка необхідна для діагностувальної діяльності майбутніх докторів філософії, та визначення суті діагностувальної проблеми щодо них та шляхи її розв'язання;
- володіння системою діагностувальних навичок і вмінь, яка їм необхідна для діагностувальної діяльності та здатність вибрати оптимальне рішення у діагностувальній діяльності;
- з'ясувати розвиненість професійно-важливих діагностувальних якостей як суб'єктів діагностувальної діяльності;
- з'ясувати сприйняття досліджуваними самих себе як суб'єкта діагностувальної діяльності.

Для кожного критеріїв підібрані відповідні показники для вимірювання відповідних компонентів діагностувальної компетентності майбутніх докторів філософії в процесі їх освітньо-наукової підготовки та визначено методичний інструментарій їх оцінювання.

Представлено критерії і показники, за допомогою яких оцінюється ступінь досягнення дослідницьких цілей у нашому дослідженні. Відповідні критерії і показники необхідні для оцінювання сформованості діагностувальної компетентності майбутніх докторів філософії, за якими можна з'ясувати її сформованість на різних етапах їх діагностувальної підготовки.

Ключові слова: діагностування, діагностувальна компетентність, вимірювання, освітньо-професійна підготовка, критерії, показники, майбутні доктора філософії, методики.

Introduction of the issue. The military aggression of the Russian Federation against Ukraine became a long-term factor that affected all spheres of life in our country. The Strategy of the National Security of Ukraine defines one of the ways for providing its national interests and creation of favorable conditions for the development of military science. The military-political situation demands qualitatively new concepts from military experts, methods and means of military professional training. In this regard, the questions of the development of diagnostic competence of future Ph. D. Doctors in the military education sphere are becoming more and more relevant and occupy an important place in the

structure of their professional competence. And the substantiation of criteria and indicators for assessing their diagnostic competence in the process of educational and scientific training is one of the important tasks of both educational and scientific training and our research.

Current state of the issue. The analysis of scientific sources and dissertations on the study of diagnostic competence of future Ph. D. Doctors show that both foreign and domestic scientists are conducting research on determining the criteria and indicators for diagnosing its development. Among many works, it is necessary to highlight the American scientists Edward L. Desi and Richard M. Ryan, who emphasize that when

performing any activity, a person has an intrinsic motivation for a particular activity and also evaluates his or her own performance [16].

In particular, the diagnostic activity of teachers is presented in the scientific works of H.O. Hatz [3], K. Ingenkamp [6], I.P. Pidlasyi [8], S.M. Martynenko [7], O.V. Zastelo, O.M. Kyrychenko, V.V. Yahupov [4; 5; 12; 13; 14; 15; 17; 18] and others, which reveal and substantiate various aspects of pedagogical diagnosis.

They believe that one of the most important aspects of the effective work of research and teaching staff is their diagnostic activity, which is based on their diagnostic competence. Accordingly, reliable criteria are needed to assess its formation and development.

The analysis and synthesis of scientific sources indicate that the diagnostic activity and competence of future Ph. Doctors have not been the subject of scientific research in the national psychological and pedagogical sciences.

However, in terms of the content of their activities, they must, firstly, be well-motivated, intellectually prepared and professionally ready to implement the diagnostic function in scientific and pedagogical activities; secondly, to implement the diagnostic function, they must have a formed system of diagnostic knowledge, skills and abilities, that is, diagnostic competence, which is an important prerequisite for their successful scientific and pedagogical activities in the system of military education.

Outline of unresolved issues brought up in the article. The main previously unresolved parts of the general problem of future Ph. Doctors include their diagnostic readiness for diagnostic activity and the development of their diagnostic activity. This is due to the fact that their future research and teaching activities involve the direct implementation of the diagnostic function. And the quality of its implementation directly depends on the development of their diagnostic competence. In their opinion, it is necessary to carry out measurements with the help of a substantive pedagogical analysis of the relevant aspects and

processes of teaching and upbringing of students [9: 233, 235]. Accordingly, the future Doctor of Philosophy should not only diagnose his or her subordinates, but also find out his or her shortcomings in readiness to solve a particular scientific and pedagogical task in the pedagogical process, promptly find out their causes and organize appropriate measures to eliminate them in a timely manner. Thus, the diagnostic competence of future Ph. Doctors is their diagnostic preparedness, intellectual, activity and subjective ability, as well as professional, subjective and psychological readiness to implement the diagnostic function in pedagogical activity through creative adherence to its pedagogical principles and the use of modern methods, techniques, technologies and means of pedagogical diagnosis in pedagogical activity.

The aim of the research – is substantiation of criteria and indicators for assessing the development of diagnostic competence of future Ph. Doctors in the process of their educational and scientific training.

Results and discussion. Measuring the diagnostic competence of future Ph. Doctors requires clarification of the concepts of "criterion" and "indicator". "Criterion" comes from the Greek "kriterion" – the ability to discern; a means of judgment, a measure. According to the Large Explanatory Dictionary of the Ukrainian language "criterion" – the basis for assessing the definition or classification of something; a measure [1: 602]. "Indicator" – evidence, proof, sign of something. Clear evidence of the results of some work, some process; data on achievements in something [2: 1024].

And the concept of "evaluation criterion" in military-pedagogical research is "...a specific parameter by which the subject of military-pedagogical research and its components are evaluated, that is, these are the main parameters for diagnosing its effectiveness, finding out the statistical reliability of the experimental results obtained" [10: 214].

It is supposed that a criterion is an important and defining feature that characterizes various qualitative aspects of

the phenomenon and process under study, revealing their essence, and an indicator is a quantitative and qualitative characteristic of the formation/development of each parameter, feature and manifestation of the phenomenon and process under study, which is the subject of research in a particular scientific study. For the purposes of our study, the criteria are understood as those qualities, manifestations, and attitudes of a future Doctor of Philosophy towards diagnostic activities that reflect the essential characteristics of his or her diagnostic competence and are subject to evaluation. They make it possible to clarify the subject of our study – the diagnostic competence of future Doctor of Philosophy, which makes it possible to measure and evaluate its state, level of functioning, formation, and development in the process of educational and scientific training. "At the same time, the following fact should be borne in mind: justified criteria should create a system for the subject under study in a particular military-pedagogical research from certain methodological positions, for example, competence, contextual, activity, subject-activity, the essence of which is that each criterion in the system of criteria should express the most general essential feature of the subject of research, according to which the evaluation/diagnosis and comparison of real studied military-pedagogical phenomena takes place" [10: 218].

It should always be taken into consideration that assessment criteria and indicators are based on the principles of impartiality, integrity, fairness, transparency, objectivity, openness, and pedagogical tact. This allows teachers to achieve objectivity in measuring various psychological and pedagogical phenomena that are the subject of the study. In particular, the concept of "criterion" is broader than "indicator", since, unfortunately, there are opposing opinions in this regard. A single criterion usually has a system of indicators. Some scholars emphasize that the criterion and the indicator are closely interrelated. V.V. Yagupov and V.Y. Kiva note that a

scientifically sound choice of a criterion largely determines the correct choice of a system of indicators and, conversely, the quality of an indicator depends on how fully and objectively it characterizes the adopted criterion [13: 251].

Thus, the analysis of the scientific literature on our study has led to the conclusion that criteria and indicators are essential for assessing the diagnostic competence of future Doctor of Philosophy and clarifying its various manifestations, which can be used to diagnose them at different stages of educational and professional training.

They should be impartial and include evidence of this competence. In the context of our work, the concept of "criterion" for assessing the development of diagnostic competence of future Doctor of Philosophy will be used as a measure or benchmark and indicator, on the basis of which the state of its development is determined. In turn, we understand the criteria as the following specific manifestations and attitudes of future Doctor of Philosophy as future research and teaching staff to diagnostic activities that reflect the essential characteristics of their diagnostic competence. In this regard, it can be concluded that the criterion is an important and defining feature that characterizes various qualitative aspects of the pedagogical phenomenon we are studying – their diagnostic competence, and the indicator represents certain manifestations of each specific criterion for assessing its development, which allow us to conclude that it is developed in the process of educational and scientific training. It is identified. In accordance with the substantiated components of their diagnostic competence, it is identified the axiological-motivational, intellectual, operational, psychological and reflexive criteria for assessing its development.

Thus, based on the tasks, goals and content of the military professional activity of future Ph. Doctors, in accordance with the specifics of their future scientific and pedagogical activities, we can clearly identify a list of criteria and indicators for assessing the development of their diagnostic competence. These criteria

systematically cover their diagnostic activities, and also make it possible to measure their diagnostic competence,

ability and willingness to solve diagnostic professional tasks in scientific and pedagogical activities (Table 1).

Table 1

Basic criteria and indicators for measuring the diagnostic competence development of future Ph. Doctors.

Components	Criteria	Indicators	Methods
Axiological-motivational	Axiological-motivational	Diagnostic values	S. Bubnov method "Diagnosis of the real structure of personal value orientations"
		Diagnostic motivation	Methodology of K. Zamfer, modified by A. Rean "Diagnostics of motivation of professional activity"
Cognitive	Intellectual	Knowledge in military education sphere and diagnostic activity	Test to determine the levels of knowledge in military education field towards diagnostic activity
		Future Ph. Doctors' knowledge of diagnostic methods, application of methods, methodological techniques of diagnostic activity	Author's methodology. Test to determine the levels of knowledge of methods, diagnostic technique of future Ph. Doctors.
		Methodological knowledge of future Ph. Doctors on the means of diagnostic activity	Author's methodology. Test to determine knowledge of the use of diagnostic tools.
Operationally active	Operational	Diagnostic skills and abilities in the field of military education	Author's methodology for assessing diagnostic skills and abilities in the field of military education
		Diagnostic skills and abilities to apply methods, techniques, and methods of diagnostic activities.	Author's methodology. Test for determining the skills levels and abilities of future Ph. Doctors due to the application of methods, techniques and diagnostic methods in scientific and pedagogical activities
		Methodological skills and abilities of future Ph. Doctors in the use of diagnostic tools	Author's methodology. Test to determine the skills and abilities to use diagnostic tools for the implementation of the diagnostic function by future Ph. Doctors
Individual Psychological	Psychological	Communicativeness and organizability	Methodology "Communicative and Organizational Abilities" by V. Sinyavsky and B. Fedorishin
		Tolerance	Express questionnaire "Tolerance Index"
		Objectivity	Test-questionnaire "Study of subjective control" by E.F. Bazhin on the basis of the J. Rotter control scale

Subject	Reflexive	Subjectivity	M. Shchukina method "Assessment of the level of development of personality subjectivity"
		Responsibility	Test questionnaire. Test on responsibility
		Reflexivity	Methodology of A. Karpov "Evaluation of reflexivity"

The axiological and motivational criterion makes it possible to find out the values and motives of the diagnostic activity of future Doctor of Philosophy. The necessity of professional values as a criterion is related to the following fact: they "...play a crucial role first in the formation of professional competence of future specialists in the process of acquiring professional education, and then in its actualization in the process of professional activity. They directly influence the formation and saturation of the motivational sphere of future specialists" [11: 207].

That is why the value and motivational aspect is the core of their diagnostic activities as it includes a set of conscious values, motives and motivation. This criterion is one of the key ones as it is based on the values of diagnostic activity and its motivation.

1. Diagnostic values. We chose the methodology S.S. Bubnov "Diagnosis of the real structure of personal value orientations", the advantage of which is to determine whether the following aspirations really exist: to realize oneself in future diagnostic activities; to continuous development and self-development as a military professional and researcher.

2. Diagnostic motivation. It will be determined by means of a technique of K. Zamer in modification of A. Rean "Diagnosis of motivation of professional activity". It is based on the concept of intrinsic and extrinsic motivation. The higher the satisfaction with diagnostic activity, the more optimal the motivational complex: a significant advantage of internal positive motivation and a low advantage of external negative motivation. To conclude, the main indicators of the axiological motivational

criterion are values and motivation of diagnostic activity of future Ph. Doctors.

The intellectual criterion of measuring the formation of diagnostic competence of future Ph. Doctors makes it possible to find out, first, the development of military-professional, pedagogical, methodological and special knowledge as an object and subject of diagnosis; second, the development of knowledge about pedagogical diagnosis, diagnostic methods, technologies, means and methods of their application in diagnostic activities; third, the development of methodological knowledge about the methodology of using diagnostic tools.

1. The knowledge in the field of military education and diagnostic activities, determined by the author's test – a test to determine the levels of knowledge in the field of military education in relation to diagnostic activities.

2. Knowledge of future Ph. Doctors of diagnostic methods, application of methods and techniques of diagnostic activity. To find out, the author's methodology will be used – a test to determine the levels of knowledge of methods and techniques of diagnosis of future Doctor of Philosophy.

3. Methodological knowledge of future Ph. Doctors regarding the means of diagnostic activity. They need to know what means to use to realize the diagnostic function as a military educator and researcher.

For this purpose, the author's methodology will be used - a test to determine the knowledge of using the diagnostic tools for the implementation of the diagnostic function by future Ph. Doctors.

The operational criterion for assessing the diagnostic competence of future Ph. Doctors makes it possible to find out their practical ability to implement the diagnostic function in the process of scientific and pedagogical activity, successfully solve various diagnostic situations in the pedagogical process, independently solve diagnostic tasks in the process of implementing their scientific and pedagogical functions and carry out research activities as a scientist and researcher.

The operational criterion indicators

1. Diagnostic skills and abilities in the field of military education, which are determined by the author's methodology for assessing diagnostic skills and abilities in the field of military education. It makes it possible to find out the development of diagnostic knowledge of future Ph. Doctors in the field of military education, which is necessary for every military scientist and teacher for diagnostic activities.

2. Diagnostic skills and abilities in the application of methods, techniques, and methods of diagnostic activity. To determine the levels of this knowledge, we will use the author's test to determine the levels of skills and abilities of future Ph. Doctors in the application of methods, techniques and diagnostic methods in scientific and pedagogical activities.

3. Methodological skills and abilities of future Ph. Doctors in the use of diagnostic tools. They should know what tools to use to implement the diagnostic function as a military educator and researcher. The author's methodology will be used to determine the skills and abilities to use diagnostic tools to implement the diagnostic function of future Ph. Doctors.

The psychological criterion is used to evaluate the individual psychological component of the diagnostic competence of future Doctor of Philosophy, since the success of diagnostic activities depends significantly on their individual psychological diagnostic qualities.

Indicators of the psychological criterion

1. Communicative and organizational skills are extremely important professional qualities of every military scientist and educator for organizing and conducting diagnostic activities. To evaluate it, we will use the methodology "Communication and organizational skills" by V. Sinyavsky and B. Fedorishyn.

2. Tolerance is a professionally important quality for diagnostic activities, which is manifested in respect for respondents, acceptance and correct understanding without aggression of their different opinions that differ from their own, as well as tolerance to the peculiarities of behavior, customs, feelings, beliefs and lifestyle, which affects the professional ability to carry out diagnostic activities with research. To determine its development, it is proposed to use the express questionnaire "Tolerance Index".

3. Objectivity is a special professionally important quality of a future Doctor of Philosophy as a scientist and teacher, since the results of diagnostic measures in both scientific and scientific-pedagogical activities largely depend on the objectivity of their implementation. For this purpose, a test-questionnaire "Study of subjective control" (by E.F. Bazhin based on the J. Rotter control scale) is used, which allows quickly and quite effectively to determine the level of formation of subjective control.

The reflective criterion of the diagnostic competence of future Doctor of Philosophy includes the ability to determine one's own emotional state and the state of others in the process of performing their duties; the ability to diagnose, predict, and self-analyze one's own and others' behavior and activities. Ability to analyze actions and deeds, critically realize the peculiarities of the phenomenon under study, "see" opportunities for self-regulation of activity and behavior, including perception and understanding of themselves as subjects of military

professional, including diagnostic activities.

The main indicators of reflective criterion

Subjectivity is the awareness and perception of oneself as a subject of diagnostic activity; it includes such qualities as autonomy, independence and professional subjectivity, responsibility, objectivity in diagnostic activity, which is important for future Doctor of Philosophy. To have self-perception as perfect professionals and specialists, to study this indicator, we will use the methodology of M. Shchukina "Assessment of the level of development of personality subjectivity";

Responsibility is the ability of a respondent working in the 'human-to-human' system to consciously set diagnostic tasks primarily for themselves and the student, to predict ways to solve them, and to have the ability to engage in subject-subject interaction in the process of solving them. It should be emphasized that with a sense of responsibility to their respondents and an awareness of the research goal, a teacher's professional skills in diagnostic activities begin to develop. To study this indicator, we will use a test questionnaire – the responsibility test, which will measure the level of responsibility of respondents.

Reflexivity is the ability of the respondent to analyze his actions and deeds, critically realize his features, see his possibilities in self-regulation of his activity and behavior. Reflexive analysis includes comprehension of essence and the reasons of the phenomena and processes which have led to this or that result of the professional activity. In other words, reflexivity provides such major processes of selfknowledge as self-

perception, selfobservation, self-analysis, and selfreflection. The degree of reflexivity of the scientist determines the degree of objectivity of his knowledge about himself, since it is the ambiguity and non-categorical judgment of oneself that allows an internal dialogue, discussion with oneself about one's personality and clarification of its values. The most important content of reflexivity in selfknowledge is the future Ph. Doctor ability to critically comprehend his or her own characteristics and abilities. We will measure it with the help of A.V. Karpov's method "Evaluation of reflexivity", which makes it possible to realize the ability of respondents to reflect on their own experience in order to understand, evaluate and justify their own beliefs.

Conclusions and research perspectives. The criteria and indicators for measuring the diagnostic competence of future Ph. Doctors have been defined, which make it possible to determine their diagnostic preparedness, intellectual, activity and subjective ability, as well as professional, subjective and psychological readiness to implement the diagnostic function in the process of future scientific and scientific-pedagogical activity.

The system of contextual criteria for measuring the development of diagnostic competence of future Doctor of Philosophy has been substantiated - axiological and motivational, intellectual, activity, psychological and reflective, each of which has appropriate indicators.

Perspective area of research is the substantiation of pedagogical conditions for the development of diagnostic competence of future Ph. Doctors in the process of educational and scientific training.

LIST OF REFERENCES (TRANSLATED & TRANSLITERATED)

1. *Akademichnyi tlumachnyi slovnyk: v 11 tomakh [Academic explanatory dictionary: in 11 volumes]*. (1973). Kyiv: Naukova Dumka, t. 4, 739 [in Ukrainian].
2. Busel, V.T. (2005). *Velykyy tlumachnyy slovnyk suchasnoyi ukrajins'koyi movy [A large explanatory dictionary of the modern Ukrainian language]*. Kyiv, 1728 [in Ukrainian].
3. Hats, G.O. (2010). *Metodyka formuvannia diahnostychnoi kompetentnosti maibutnikh uchyteliv fizychnoi kultury [The method of formation of diagnostic*

competence of future teachers of physical education]. *Pedahohika, psykhologhiia ta medyko-biologichni problemy fizychnoho vykhovannia i sportu – Pedagogy, psychology and medical and biological problems of physical education and sports*, № 3, 18-20. Retrieved from: <https://www.sportpedagogy.org.ua/html/journal/2010-03/10ggoptt.pdf> (access date: 12/20/2022) [in Ukrainian].

4. Zastelo, O.V. (2018). *Rozvytok diahnostychnoi kompetentnosti vykladachiv inozemnykh mov vyshchyykh viiskovykh navchalnykh zakladiv u systemi pisliadyplomnoi osvity [Development of diagnostic competence of foreign language teachers of higher military educational institutions in the postgraduate education system]*. Candidate's thesis. Kyiv: Instytut Sluzhby zovnishnoi rozvidky Ukrainy, Natsionalnyi universytet oborony Ukrainy imeni Ivana Cherniakhovskoho, 374 [in Ukrainian].

5. Zastelo, O.V., & Yagupov, V.V. (2018). *Kryterii ta pokaznyky otsiniuvannia rozvynenosti diahnostychnoi kompetentnosti vykladachiv inozemnykh mov VVNZ [Criteria and indicators for evaluating the development of diagnostic competence of teachers of foreign languages at VVNI]*. *Scientific Letters of Academic Society of Michal Baludansky*. Košice, Slovakia, vol. 6, no. 3, 159-164 [in Ukrainian].

6. Ingenkamp Karlheinz. (1997). *Lehrbuch der pädagogischen Diagnostik*. Verlagsort: Weinheim; Basel. Verlag: Beltz. Jahr, 301 [in German].

7. Martynenko, S.M. (2013). *Vyvchennia osobystosti molodshoho shkoliara zasobamy pedahohichnoi diahnostyky: navch.-metod. posib. [Studying the personality of a younger schoolboy by means of pedagogical diagnostics: teaching-method. manual]*. Kyiv: Univ. B. Grinchenko, 144 [in Ukrainian].

8. Podlasy, I.P. (1998). *Diahnostyka ta ekspertyza pedahohichnykh proektiv: navch. posib. [Diagnostics and expertise of pedagogical projects: teacher. manual]*. Kyiv: Ukraina, 343 [in Ukrainian].

9. Sysoeva, S.O., & Krystopchuk, T.E. (2013). *Metodolohiia naukovo-pedahohichnykh doslidzhen: pidr. [Methodology of scientific and pedagogical research: textbook]*. Rivne: Volynski oberehy, 360 [in Ukrainian].

10. Yagupov, V.V. (2019). *Teoriia i metodolohiia viiskovo-pedahohichnykh doslidzhen: pidruchnyk [Theory and methodology of military-pedagogical research: textbook]*. Kyiv: NUOU imeni Ivana Cherniakhovskoho, 444 [in Ukrainian].

11. Yagupov, V.V. (2022). *Tsinnisno-motyvatsiinyi komponent profesiinoi kompetentnosti fakhivtsiv: metodolohichnyi aspekt [Value-motivational component of professional competence of specialists: methodological aspect]*. *Visnyk Natsionalnoho universytetu oborony Ukrainy – Bulletin of the National Defense University of Ukraine*, no. 6 (64), 207-219. DOI: 10.33099/2617-6858-22-70-6-207-219. Retrieved from: <http://visnyk.nuou.org.ua/issue/view/15889> [in Ukrainian].

12. Yagupov, V.V., & Kyrychenko, O.M. (2021). *Formuvannia diahnostuvalnoi kompetentnosti maibutnykh ofitseriv u protsesi profesiinoi pidhotovky [Formation of diagnostic competence of future officers in the process of professional training]*. *Aktualni problemy rozvytku sluzhbovo-prykladnykh, tradytsiinykh i skhidnykh odnorbstv: zb. nauk. pr. za mat. KhV mizhnar. konf. / MVS Ukrainy, Kharkiv. nats. un-t vnutr. sprav, Nauk. park "Nauka ta bezpeka Ukrainy" – Actual problems of the development of service-applied, traditional and oriental martial arts: coll. of science pr. for mat. XV International conf. / Ministry of Internal Affairs of Ukraine, Kharkiv. national University of Internal Affairs of affairs, Science Park "Science and Security of Ukraine", Kharkiv, 145-146 [in Ukrainian].*

13. Yagupov, V.V., & Kiva, V.Y. (2019). *Kryterii ta pokaznyky diahnostuvannia rozvynenosti informatsiino-komunikatsiinoi kompetentnosti vykladachiv systemy viiskovoi osvity [Criteria and indicators for diagnosing the development of information and communication competence of teachers of the military education system]*. *Informatsiini tekhnolohii i zasoby navchannia – Information technologies and teaching aids*, vol. 71, no. 3, 248-266. DOI: 10.33407/itlt.v71i3.2916. Retrieved from:

http://nbuv.gov.ua/UJRN/ITZN_2019_71_3_20 (access date: 12/20/2022). [in Ukrainian].

14. Yagupov, V.V., & Trakalyuk, O.L. (2021). Kryterii ta pokaznyky diahnostuvannia profesiinoi pidhotovlenosti ofitseriv operatyvno-taktychnoi lanky upravlinnia [Criteria and indicators for diagnosing the professional training of officers of the operational-tactical management link]. *Visnyk Natsionalnoho universytetu oborony Ukrainy – Bulletin of the National Defense University of Ukraine*, no. 6 (64), 164-175. DOI: 10.33099/2617-6858-21-64-6-164-175 [in Ukrainian].

15. Yagupov, Vasyly, & Zhembrovsky, Serhiy. (2020). Perspektyvna systema diahnostuvannia fizychnoi pidhotovlenosti viiskovosluzhbovtsiv Zbroinykh syl Ukrainy: teoretyko-metodolohichne obgruntuvannia [A promising system for diagnosing the physical fitness of servicemen of the Armed Forces of Ukraine: theoretical and methodological justification]. *Viiskova osvita: zb. nauk. pr. Natsionalnoho universytetu oborony Ukrainy – Military education: coll. of science avenue of the National University of Defense of Ukraine*, no. 2 (42), 378-392. DOI: <https://doi.org/10.33099/2617-1783/2020-2/378-392> [in Ukrainian].

16. Deci, E.L., & Ryan, R.M. (2008). Self-determination theory: A macro theory of human motivation, development and health. *Canadian Psychology*, t. 49, 182-185 [in English].

17. Yahupov, V., & Kyrychenko, O. (2022). Diagnostic competence of future officers-specialists in speaking and sport of the armed forces of Ukraine: concepts, contents and content. *Innovative Solutions In Modern Science*, may № 1 (53), 18-35. DOI: 10.26886/2414-634X.1(53)2022.2 [in English].

18. Yahupov, V., Zastelo, O., Svystun, V., Korchynska, N., Chorna, O., & Krykun, V. (2020). Development of Foreign Language Teachers' Diagnostic Competence in the System of Military Education. *TEM Journal (Technology, Education, Management, Informatics)*, vol. 9, is. 3, 1213-1220. DOI: 10.18421/TEM93-49. Retrieved from: http://www.temjournal.com/content/93/TEMJournalAugust_1213_1220.pdf [in English].

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