Revista Românească pentru Educație Multidimensională
ISSN: 2066-7329 | e-ISSN: 2067-9270
Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2022, Volume 14, Issue 4, pages: 449-462 | https://doi.org/10.18662/rrem/14.4/650
Submitted: February 7th, 2022 | *Accepted for publication:* August 11th, 2022

Analysis of the Essence of the Concepts of "Competence" and "Competency" in the System of Psychological and Pedagogical Categories

Viktoriia SHCHUR[1], Nataliia ARKAVENKO[2], Olena LITINSKA[3], Yuliia BOIKO-BUZYL[4], Olha DAVYDOVA[5], Oksana PRYSHLIAK[6]

[1] Municipal Institution " Balta Pedagogical Vocational College", Odessa Regional Academy of In-Service Education, Odessa, Ukraine, v.shchur2@gmail.com
[2] Municipal Institution " Balta Pedagogical Vocational College",Odessa Regional Academy of In-Service Education, Odessa, Ukraine, arkavenkonatala6@gmail.com
[3] Izmail State Humanitarian University, Izmail, Ukraine; Litinskaya34@gmail.com
[4] State Research Institute of the Ministry of Internal Affairs of Ukraine, Kyiv, Ukraine, b-byy@ukr.net, ORCID ID: https://orcid.org/0000-0002-1715-4327
[5] State Research Institute of the Ministry of Internal Affairs of Ukraine, Kyiv, Ukraine, davydovaolga94@gmail.com, ORCID ID: https://orcid.org/0000-0002-1349-3997
[6] Ternopil Volodymyr Hnatiuk National Pedagogical University , Ternopil, Ukraine, pryshlyak_o@yahoo.com, ORCID ID: https://orcid.org/0000-0003-3108-502X

Abstract: The importance of the topic of the article is that nowadays there is a need to update methods and techniques of teaching in the educational process, the use of innovations in student teaching, because it is not important how much knowledge a student receives, but how one can use them in practice. The purpose of the article is the need to study and justify the importance of studying the essence of the concepts of "the competence" and "the competency" in the system of psychological and pedagogical categories. The article gives a theoretical justification for the concepts of "competence" and "competency" of the teacher in the pedagogical context; the similarity and difference of the concepts "the competence" and "the competency" in the system of psychological and pedagogical categories are investigated; the concept of professional competency and its categorical essence as a set of professional knowledge, skills, abilities necessary for both teachers and students in the XXI century is given. Nowadays, the purpose of school education is determined by the entirety of knowledge, skills and abilities that a student shouldacquire. In the XXI century, such a perspective is insufficient for society, because professional educational institutions, industry, families do not need weisenheimers, but graduates who are ready tointegrate in the real life, who have the ability to quickly and easily approach life and professional problems, which appear before them, so that getting into a problem situation, they could find several ways to solve it, to choose a practical way, justifying one's decision.

Keywords: *Innovativeness of education; self-development of personality; ability to find a practical way out; self-improvement of a teacher; advanced training.*

How to cite: Shchur, V., Arkavenko, N., Litinska, O., Boiko-Buzyl, Y., Davydova, O., & Pryshliak, O. (2022). Analysis of the Essence of the Concepts of "Competence" and "Competency" in the System of Psychological and Pedagogical Categories. *Revista Românească pentru Educație Multidimensională, 14*(4), 449-462. https://doi.org/10.18662/rrem/14.4/650

©2022 Published by LUMEN Publishing. This is an open access article under the CC BY-NC-ND license http://creativecommons.org/licenses/by-nc-nd/4.0/

Introduction

The relevance of the research topic in the international context of similar research in this field is that changes in the nature of education are becoming excellent for the XXI century, namely, its focus on objectives, content, orienting all-round development of personality, creativity, student autonomy, competitiveness and responsiveness in decision-making of future professionals. Therefore, the task of a today's educational institution is to educate a competent student who can successfully cope with all societal challenges.

The importance of the research topic lies in the dictionary interpretation of the studied definitions of "competence" and " competency":

Now let's analyze the options for the use of these words in the pedagogical discourse of recent decades.

The concept of "competence" was formulated by Volikova (2019) as the main limit related to quality, effective work and combines skills, motives, social roles and potential resources of the individual as well.

Ermolovich (2011) is the researcher, who considered competence not only as the ability to solve general problems, but also as the ability to apply knowledge, skills, abilities, to act effectively on the basis of life experience in a certain broad field. Teacher-researchers E. Fedorova, S. Metelev, A. Solovyov, and E. Shlyakova (2011) highlight in competence mobilization abilities to synthesize knowledge and implement actions and focus on borrowing the implementation of competence of foreign experience.

The world community is deeply involved in the processes of globalization and modernization presented reports by Chapman (2008), Gibbons (2002), Shahina (2017), Ovcharuk (2021), Gerasymova et al. (2019), Maksymchuk (2020a; 2020b) which listed some groups of competences needed by a contemporary individual in the interpersonal, intercultural and political communications. The starting point for their development should be: independence, self-actualization, self-education, responsibility, ability to dialogue and critical appraisal (Zhurat et al., 2020). In the research of S. Garvis (2012), competence is an area of issues in which someone is perfectly knowledgeable; the range of someone's authority, rights. The term "competence" is found in the pages of the dictionary as a noun formed from the word competent: knowledgeable, knowable, authoritative. W. Shaalan

(2019) in his scholarly work explains competence as having awareness in a certain area, and competent refers to competence.

Teachers-researchers Fedorova, Metelev, Solovyov, and Shlyakova (2011), highlight mobilizing abilities to synthesize knowledge in the competence and implement actions and focus on borrowing the implementation of the competence approach in teaching foreign experience.

The purpose of the article is the need to study and justify the importance of studying the essence of the concepts of competence and competence in the system of psychological and pedagogical categories; to determine the similarity and difference between these categories.

Similarities and differences between the concepts of "the competence" and "the competency" in the system of psychological and pedagogical categories

Also, the definition of "the competence" is based on values acquired through teaching, experience, knowledge, inclinations, but the specialist demonstrates one's competencies only in professional activities, in the context of certain events.

Alekhina (2015) suggests that competence is a commonality of mental and personal qualities of the subject, vector-oriented in a particular area, able to ensure highly productive activities.

Zimnyaya (2004) formulated the definition of competence as integrative, internalized qualities and adapted to the universal use of knowledge and skills that promote mobility and human evolution, increase their adaptive survival properties. In the statements her "competence" appears as a procedural concept, which includes technological, social, cognitive, motivational, ethical, behavioral components; ability to mobilize the acquired knowledge, skills and the model of behavior in the conditions of pedagogical activity and is formed within the framework of formal, non-formal and informal education.

The theoretical platform of our work consists of basic ideas of psychology, methodology, pedagogy:

Zimnyaya (2004) classifies ten core competences, grouping them into three clusters:

1) competences that belong personally to the subject, reflect his / her attitude to various spheres of life and worldview in general;

2) competences of social interaction and communication related to human integration into the social sphere;

3) competences of cognitive and other activities, as well as competences of information technologies related to human activities.

Garvis (2012) also classifies competences and skills into three types: 1) instrumental competences - functional capabilities of mental, cognitive and mnestic processes; organizational and methodological, related to goal setting and building social contacts; ability to apply IT technologies and linguistic skills;

2) interpersonal competences - the ability to self-analysis, self-regulation, ethical regulations that ensure social inclusion and effective cooperation;

3) system (professional) competences - synthesis, analysis, deduction, induction, innovation, planned improvement of the existing system.

The basis of the third type are the established criteria of the first two types of competences (Gurevych et al., 2020).

Hypothesizing the process of competence formation, Simen-Severskaya (2018) draws attention to the fact that competences set in and begin to evolve in the course of interpersonal interaction in the professional field, due to technological organizational and pedagogical content (projects, models, slides and mannequin-shows, etc.).

Examining competences in the context of a person's professional activity, Professor Raven (2002) defines key competences as "knowledge, skills and abilities that are essential for adaptation and active participation in different professional communities".

They contribute to the successful adaptation in the social and professional spheres, being the key to the social mobility.

The scientist identified five key competences:

- social competence is the ability to take responsibility, make decisions and implement them, tolerance, consistency of personal interests with the needs of the society;
- communicative competence comprises mastery of oral and written speech technologies, including computer programming and communication via the Internet;
- social-information competence is the information technology skills and critical thinking related to social information, which is replicated in the media;
- cognitive competence is the intrinsic motivation to improve the professional level, the ambition to materialize personal resources, trends in self-education and self-development;
- special competence is the readiness for an independent professional activity, the ability to self-analysis and reflection (Hiemstra, 1994).

In the process of considering different ideas of scientists and researchers about the nature of competence it can be defined as the ability of an individual to adopt an arsenal of accumulated knowledge, skills, abilities and the model of professional response, both in standard and problematic situations outlined by functional responsibilities.

Despite their similarity, the concepts of "the competence" and "the competency" are by no means synonymous, in the context of scientific sources they are cause-and-effect related, interdependent and often complement each other (Kosholap et al., 2021). However, in English-language scientific sources, these definitions are often used synonymously (Samaras, 2006).

According to Shiryaeva (2015), competence is, first of all, the possession, the appropriation by the subject of the appropriate honed skills to which a person feels emotional and personal attraction, as well as the object of effort.

Yudakova (2010) came to similar conclusions in her reasoning, proving that competence is what the subject has, and competency is the sum of what he / she has. To paraphrase, the competence is an introverted resource of the individual, and the competency is its extroverted materialization (realization).

Psychologist Moradi (2018) applied a psychological approach to this topic, noting a significant increase in the definition of competency as a set of mental qualities and states that promote independent and responsible activity (effective competency) in the implementation of labor function.

As a result, it is possible to defend the opinion that competency is a personal quality (or a combination of personal qualities) of a person (a teacher), enriched by the experience of professional activity.

Referring to authoritative research, we can identify the integrative basis of the presented phenomenon, as it attracts close and very similar skills and knowledge. Competency is characterized "as based on knowledge, intellectually and personally-determined socio-professional life of an individual" (Towle & Cottrell, 1996).

After the introduction of the Concept of modernization of education in the period up to 2010, the concept of key competencies entered the scientific life. They can be used as algorithms of ways of action that facilitate understanding of the situation and contribute to the achievement of optimal results in the profession. Key competencies are acquired in the process of obtaining education and find their manifestation in the course of effective research activities.

Key competencies in the following areas were proposed:

1) self-educational activities (independent learning and digestion of new knowledge from all available sources of information);

2) public and civil activities (acceptance and implementation of social roles);

3) social and labor activities (ability to analyze the labor market, self-analysis of one's capabilities, compliance with professional standards, mastery of the mechanism of self-organization);

4) everyday sphere (interiorization of health values and family life);

5) cultural and leisure activities (optimization and trajectories of leisure development, with the aim of spiritual growth of the individual).

It follows that the concept of competency is a multidimensional conglomerate that combines all spheres of human life (conscious, communicative, social, moral, activity, value-motivational, etc.).

From the above theoretical approaches to the study of competency it is clear that the arguments are substantial enough to interpret it as a commonality of knowledge, skills, abilities, experience in professional activities and personal qualities of the individual, and meaningful value attitude to them and the subject of activity that contribute to effective solutions of tasks, of both social and professional activities (Wagner, 2011).

The concept of professional competency and its categorical essence as a set of professional knowledge, skills, abilities

In further research, we will use the formulated definition of competency. Sydorchuk (2015) carefully analyzed the concept of professional competency and derived its categorical essence as a set of professional knowledge, skills and abilities to perform professional activities.

Zimnyaya (2004) gave an original interpretation of the problem of professional competency development in her study. She presented this concept as a holistic multifaceted object that combines not only professional basic knowledge and skills of a specialist, but also an apparatus enriched with value attitudes, motivational readiness to achieve the goal, permeated by the relationship of self-awareness and the surrounding world, honed style of relations with the society, merging with the world culture, the trajectory of development of internal creative potential.

The application of the studied concept is discussed in numerous works by domestic authors. Generalized definition, which is often found in scientific works on psychology and pedagogy (Thornton, 2010).

In their works Fedorova, Metelev, Solovyov, Shlyakova (2011) give an interpretation of professional competency as an integral characteristic of

the specialist, which determines their ability to effectively cope with professional tasks in real life situations, applying knowledge, value attitudes and life experience. In this context, the psychological and pedagogical literacy of the specialist in combination with professional skills and personal experience, defining professional competency as an integrative property of the individual are becoming more and more prominent.

Samaras (2006), examining the professional competency of a teacher, concluded that it is the ability to effectively perform professional activities, which is determined by the requirements of the position, based on the fundamental scientific education and emotional and value attitude to teaching activity. The paper points to the multilevel structure of professional competency, where along with knowledge and skills value-oriented attitudes, motivational reasons for achievements, characteristics of the world culture should be formed in the teacher, which are reflected in the language and style of the specialist, in the projected attitude to oneself, one's professional activity, related sciences and the people around.

For discussion in psychological and pedagogical discussions Moradi (2018) offers his classification of types of professional competency:

1) special competency – a tactical implementation of one's profession at a high level and the availability of the strategy for its further development;

2) social competency – a manifestation of professionalism of joint, collective work, focus on team style of interaction and compliance with the corporate etiquette, high personal responsibility for the results of work;

3) personal competency – the ability to holistic professional self-presentation, the presence of motivation for self-development and methods of prevention of professional deformity;

4) individual competence – the actualization of creative potential, the use of innovative technologies in one's work, enrichment of project activities with the author's spiritual content, realization of work on emotional uplift, "infection" of students with creative presentation of ideas.

The researcher draws attention to the presence of cross-cutting professional competencies and common categorical features, this phenomenon is a constant for a wide range of professions and does not depend on changes in the derived and social environment.

Researcher Shiryaeva (2015) created her own structural product of professional competency, identifying a number of key professional components:

- a professional-content or a basic component, states the necessary level of theoretical knowledge, which provides a conscious, competent content of the labor process;

- a professional activity or a practical component, which includes proven experimentally tested knowledge, skills and abilities that have proven themselves with the most effective indicators;

- a professional and personal component, which is an arsenal of personal and professional qualities that regulate the life position of the teacher, the nature of her / his social roles in the activity.

Based on the field of realization of personal professional activity, it fills the classification with the following functional components, which are determined by the spheres of realization. Thus, special competency is fixed in the teacher's activity; the methodical corresponds to the work of a methodologist, a tutor; the communication area is marked by socio-psychological skills; most of all the attitude to students has the differential psychological competence, which stimulates the development of abilities; the auto psychological competency is responsible for self-analysis and self-regulation, emphasizing achievements and correcting mistakes.

It becomes obvious that the presence of competency can be determined only at the moment of its "manifestation" in the activity, the context of the task being performed becomes especially important.

Chapman (2008) quite clearly describes the semantic content of professional competency of a teacher, emphasizing its empirical value, formed in implementation and honed in practice, and classifies as basic the following elements:

1. A communicative competency of the teacher – a generalizing complex consisting of skills of verbal and nonverbal communication, emotional stability, mastery of presentation, leadership skills, expressed adaptive abilities, directed beyond the energy of personal achievements;

2. An information competency – a full awareness of the teacher, both about oneself and the people in the circle of professional communication;

3. A regulatory competency of the teacher implies a high level of self-regulation. It includes: purposefulness, tactical and strategic planning, stress resistance and composure, introspection and reflexivity. At the head are the moral and value attitudes of the individual that regulate the direction of one's activities;

4. An intellectual and pedagogical competency is the possession of a cognitive complex of mental operations, logical tools, analytical skills, critical thinking, and even actualized creative potential of the individual;

5. An operational competency is a set of skills required to a teacher in the process of performing functional duties.

It should be noted that each of the competencies under consideration goes far beyond the concept of "skill" and includes a wide range of constructs. The nature of competency is manifested in unity with human values, i.e., in the presence of a direct personal interest in one's profession.

He draws our attention to the fact that the professional competency of a teacher is determined by the interdependence in the work process of special knowledge, skills, professional positions, individual characteristics and the ability to create one's own pedagogical product. There is a significant merger of theoretical and practical aspects of the professional competency of the teacher. Taking into account that competency is an active tool for solving certain life problems and situations, we will continue to clarify the meaning of professional competency of a teacher as a neoformation that combines cognitive and mental qualities, as well as skills and practical experience.

Professional competency not only combines the inherent resource and the possibilities of its use, but also produces high-quality personal and professional neoformations that ensure effective professional activity of the teacher.

Research, analysis and understanding of the categorical apparatus of the terms "the competence", "the competency", "the professional competency of the teacher", suggest one option for interpreting the professional competence of the teacher of a specialized institution for minors as personal education, expressed in unity of scientific and empirical knowledge, developed specialized qualities and readiness to carry out social rehabilitation and educational activities in accordance with the status of the organization.

Gibbons (2002) confirmed the understanding that all competencies can be considered as social, as they are derived from the process of socialization and are formed in the social environment. "They are social in their content, they are manifested in this society".

Afterwards competences are transformed into personal qualities; are influenced by motivational, semantic, communication factors, along with knowledge and experience.

Ermolovich (2011), referring to the work of a team of authors, assigned to the competency a structure-making role, characterizing social competency as the ability to act in society, taking into account positions of other people.

Raven (2002), one of the first developers of the competency approach in British education, in his work on social competency outlines in detail its multilevel structure.

When speculating on the concept, he specifies the following terms:

1) motivational abilities to activities of a more complex level (initiative, personal responsibility, analysis of the functioning of units, political systems);

2) motivational readiness for active, significant actions (influence on the development of one's organization, social movement);

3) analytical readiness (to make a choice of strategy of behavior on the basis of own conclusions);

4) the ability and readiness to develop and support innovative activities (the trajectory of improving efficiency of work);

5) objective and adequate assessment of oneself, one's place and role in the society (understanding of how the organization and society function);

6) the adequate understanding of the structure and relationships of administrative apparatus (risk, efficiency, leadership, responsibility, accountability, prosperity and democracy).

We agree with Professor Raven (2002), who in his work "Competency in Contemporary Society" explains the above components, pointing out that, despite the conditional independence and attribution of the components to different areas (cognitive and emotional), it is possible to replace them to improve efficiency of the activity and behavior. The number of components updated by an individual is directly proportional to the achievement of significant goals.

Conclusion

Thus, the results of the study is that the article investigated the importance of substantiation of the concepts of "competence" and "competency" of the teacher in the pedagogical context; investigated the similarity and difference between the concepts of "competence" and "competency" in the system of psychological and pedagogical categories; gave the concept of professional competence and its categorical essence as a set of professional knowledge, skills, required by both teacher and pupil in the XXI century.

Having analyzed the terms, having worked through the scientific works of foreign researchers in a certain field in the article, a clarification of the concept of competence was made. Competence is a complex and multilevel new formation of personality, which is understood as: adequate

and effective activity to solve difficult life situations; effective goal-setting in social context with application of proven methods; ability to effective interpersonal communication and relationships; successful development strategy as a result of active activity, positive feedback, certifying adequate social behavior.

Further research in this area is relevant because the history of science is rich in examples of the emergence of terms, and the diversity of their interpretations. Terminology naturally develops as the phenomenon is studied and comprehended, the concept usually fixes a set of properties at the moment, the refinement of the definition occurs constantly.

References

Alekhina, N. V. (2015). Diskursivno-tsennostnaya kompetentsiya kak pedagogicheskiy fenomen [Discourse-valuable competence as a pedagogical phenomenon]. *Nauchnoe obozrenie. Pedagogicheskie nauki, 1,* 41-42. https://s.science-education.ru/pdf/2014/2/80.pdf

Chapman, O. (2008). *Self-study in mathematics teacher education.* University of Calgary. https://www.unige.ch/math/EnsMath/Rome2008/WG2/Papers/CHAPMAN.pdf

Ermolovich, M. M. (2017). *Kompetentnostnyiy podhod: istoricheskiy aspekt stanovleniya v vyisshem obrazovanii* [Competence-based approach: the historical aspect of formation in higher education]. In Regionalnaya fizicheskaya geografiya v novom stoletii [Regional physical geography in the new century] (p. 126–131). BGU.

Fedorova, E, Metelev, S. E., Solovyov, A. A., Shlyakova, E. V. (2012). *Kompetentnostnyiy podhod v obrazovatelnom protsesse* [Competence-based approach in the educational process]. Omsk.

Garvis, S. A (2012). Self-study in Teacher education: learning to teach in higher education after teaching the arts to young children. *US-China Education Review B, 3,* 298-304. https://files.eric.ed.gov/fulltext/ED532898.pdf

Gerasymova, I., Maksymchuk, B., Bilozerova, M., Chernetska, Yu., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2019). Forming professional mobility in future agricultural specialists: the sociohistorical context. *Revista Romaneasca pentru Educatie Multidimensionala, 11*(4), 345-361. https://doi.org/10.18662/rrem/195

Gibbons, M. (2002). *The self-directed learning handbook: Challenging adolescent students to Excel.* Jossey-Bass A Wiley Imprint.

Gurevych, R. S., Shakhina, I. Y., & Podzygun, O. A. (2020). Google classroom as an effective tool of smart learning and monitoring of students' knowledge

in vocational schools. *Information Technologies and Learning Tools, 79*(5), 59–72. https://doi.org/10.33407/itlt.v79i5.3651

Hiemstra, R. (1994). Self-directed learning. In T. Husen & T. N. Postlethwaite (Eds.), *The International Encyclopedia of Education* (pp. 254-263). Pergamon Press.

Kosholap, A., Maksymchuk, B., Branitska, T., Martynets, L., Boichenko, A., Stoliarenko, O., Matsuk, L., Surovov, O., Stoliarenko, O., & Maksymchuk, I. (2021). Neuropsychological Bases of Self-Improvement of Own Physical Health of Future Teachers in the Course of University Education. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 12*(3), 171-190. https://doi.org/10.18662/brain/12.3/226

Maksymchuk, B., Gurevych, R., Matviichuk, T., Surovov, O., Stepanchenko, N., Opushko, N., Sitovskyi, A., Kosynskyi, E., Bogdanyuk, A., Vakoliuk, A., Solovyov, V., & Maksymchuk, I. (2020a). Training Future Teachers to Organize School Sport. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(4), 310-327. https://doi.org/10.18662/rrem/12.4/347

Maksymchuk, B., Matviichuk, T., Solovyov, V., Davydenko, H., Soichuk, R., Khurtenko, O., Groshovenko, O., Stepanchenko, N., Andriychuk, Y., Grygorenko, T., Duka, T., Pidlypniak, I., Gurevych, R., Kuzmenko, V., & Maksymchuk, I. (2020b). Developing Healthcare Competency in Future Teachers. *Revista Romaneasca Pentru Educatie Multidimensionala*, *12*(3), 24-43. https://doi.org/10.18662/rrem/12.3/307

Moradi, H. (2018). Self-directed learning in language teaching-learning processes. *Modern Journal of Language Teaching Methods, 8*(6), 59-64. https://mjltm.org/article-1-122-en.pdf

Ovcharuk, V., Maksymchuk, B., Ovcharuk, V., Khomenko, O., Khomenko, S., Yevtushenko, Y., Rybalko, P., Pustovit, H., Myronenko, N., Syvokhop, Y., Sheian, M., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2021). Forming Competency in Health Promotion in Technical Specialists Using Physical Education. *Revista Romaneasca Pentru Educatie Multidimensionala, 13*(3). https://doi.org/10.18662/rrem/13.3/437

Raven, J. (2002). *Kompetentnost v sovremennom obshchestve. Vyyavlenie, razvitie i realizaciya* [Competency in Contemporary Society: Its Identification, Development and Release]. Kogito-Tsentr.

Samaras, A. (2006). Self-Study of Teaching Practices. In *College of Education and Human Development* (p. 12-14). Peter Lang. http://mason.gmu.edu/~asamaras/docs/CEHD_mag_Bookmarks.pdf

Shaalan, I. E. N. A. W. (2019). Remodeling teachers' and students' roles in self-directed learning environments: The case of Saudi context. *Journal of Language Teaching and Research, 10*(3), 549-556. https://www.academypublication.com/issues2/jltr/vol10/03/19.pdf

Shaalan, W. (2019). Remodeling Teachers' and Students' Roles in Self-directed Learning Environments: The Case of Saudi Context. Journal of Language Teaching and Research, 10(3), 549-556. https://www.academypublication.com/issues2/jltr/vol10/03/19.pdf

Shahina, I. Y. (2017). Organization of educational process using electronic educational-methodical complexes for preparation computer technologies specialists. *Information Technologies and Learning Tools, 58*(2), 141–154. https://doi.org/10.33407/itlt.v58i2.1568

Shiryaeva, V. A. (2003). *Problemyi i perspektivyi realizatsii kompetentnostnogo podhoda v obrazovanii* [Problems and prospects for the implementation of the competence-based approach in education]. https://www.sgu.ru/sites/default/files/textdocsfiles/2013/07/15/shiriaeva.pdf

Simen-Severskaya, O. V. (2018). *Pedagogicheskaya kompetentnost i professionalizm uchitelya* [Pedagogical competence and professionalism of the teacher]. Fsio. https://fsio.npu.edu.ua/file/26.pdf

Sydorchuk, N. H. (2015). Porivnialnyi analiz poniat «kompetentsiia» ta "kompetentnist" yak skladnykh psykholoho-pedahohichnykh fenomeniv [Comparative analysis of the concepts of "competence" and "competency" as complex psychological and pedagogical phenomena]. In *Problemy osvity: zbirnyk naukovykh prats* [Problems of education: a collection of scientific works] (pp. 78-81). Vinnytsia-Kyiv.

Thornton, K. (2010). Supporting self-directed learning: A framework for teachers. *Language Education in Asia, 1*(1), 158-170. http://dx.doi.org/10.5746/LEiA/10/V1/A14/Thornton

Towle, A., & Cottrell, D. (1996). Self-directed learning. *Archives of Disease in Childhood, 74,* 357-359. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1511490/pdf/archdisch00614-0087.pdf

Volikova, M. M. (2019). *Sutnist poniat "kompetentsiia" ta "kompetentnist" v naukovomu dyskursi* [The essence of the concepts of "competence" and "competency" in scientific discourse]. In Research Discoure (pp. 37-43). https://doi.org/10.5281/zenodo.3667121

Wagner, S. (2011). *After the final bell: The self-directed learning practices of elementary teachers* [Unpublished Doctoral Dissertation]. University of Tennessee.

Yudakova, S. V. (2010). *Professionalno-pedagogicheskoe samoobrazovanie* [Professional and pedagogical self-education]. VGGU.

Zhurat, Y., Lipshyts, L., Soter, M., Chumak, L., Tarasenko, H., Valchuk-Orkusha, Iryna O., Melnyk, I. (2020). Developing Professional Subjectivity in Future Primary School Teachers in the Context of a Neuropedagogical Approach.

Brain. Broad Research in Artificial Intelligence and Neuroscience, 11(2Sup.1) 64-81. https://doi.org/10.18662/brain/11.2Sup1/95

Zimnyaya, I. A. (2004). *Klyuchevyye kompetentnosti kak rezultativno-tselevaya osnova kompetentnostnogo podkhoda v obrazovanii* [Key competencies as an effective-target basis of a competence-based approach in education]. Research Centre for the Problems of the Quality of Training of Specialists. http://fgosvo.ru/uploadfiles/npo/20120325214132.pdf