Conditions for the Development of Psychological and Pedagogical Competence of Teachers of Vocational (Professional and Technical) Education

Alla Lukiianchuk
The Bila Tserkva Institute of Continuing Professional Education

Vira Kharahirlo
The Bila Tserkva Institute of Continuing Professional Education

Oleksandr Sakhno
The Bila Tserkva Institute of Continuing Professional Education

Galyna Tataurova-Osyka
Institute of Pedagogical Education and Adult Education NAES of Ukraine

Nadiia Stadnik
Municipal Institution of Kyiv Regional Council "Bila Tserkva Humanitarian and Pedagogical Professional College"

The purpose of the article is to determine and study the conditions of development of psychological and pedagogical competence of teachers of vocational education in the system of continuing education. The leading empirical method is a questionnaire that incorporates a significant number of respondents in different regions of Ukraine in order to analyze the conditions for the development of psychological and pedagogical competence of teacher. The article determines motivation of professional activity and readiness for an innovative activity as main conditions for the development of the said competence. The article substantiates an innovative model of teachers' professional development - the introduction of pedagogical coaching technologies in the system of continuous vocational education. The article considers the Pedagogical Coaching School program and its activity as an innovative model for training of teachers. The article provides results of monitoring studies and assessment of customers' satisfaction level with educational services, quantitative and qualitative indicators of satisfaction among students of the Pedagogical Coaching School, and the analysis of the results obtained.

Keywords: adult education, competence, psychological and pedagogical competence, motivation of professional activity, readiness for innovative activity

INTRODUCTION

In recent years of social and economic development, Ukraine has recognized the need to reform the system of vocational training of skilled workers as the requirements of the labor market are constantly changing not only in Ukraine but also abroad. The present demands from higher education institutions require creating favorable conditions and innovative approaches to the formation and development of key competencies of teachers with a new type of thinking. These include readiness for innovative pedagogical activities, ability to perform constructive actions in various professional situations, ability to work in a digitalized environment, and motivation to increase personal creativity capacity through formal, non-formal, and informal lifelong learning. The main condition for the training of competitive workers is the development of professional competence of a teacher of an Institution of Professional (vocational) Education [IP(V)E].

In the dictionary "Vocational Education," Vyshnyakova (1991) interprets the concept of competence through the prism of possessing it. Thus, competence is a number of powers of a particular institution, person, or a number of cases, issues that are subject to someone's control. The Encyclopedia of Education defines that competence "presupposes a personal characteristic, attitude to the subject of activity," and is the result of the acquisition of competence.

It is also argued that competence, at first, expresses the traditional triad of "knowledge, skills, and abilities," combining them with each other. Second, it is defined as in-depth knowledge of the subject or mastered skill. Third, it is expedient to describe the real level of training of a specialist who is distinguished by the ability to choose the most optimal solution and to have critical thinking. Fourth, it provides constant updating of knowledge, possession of new information for the successful decision of professional tasks now and in certain conditions, and fifth, it includes both semantic (knowledge) and procedural (skills) components (Choshanov, 1996). Competence also motivates the individual to independently participate in the educational process and directs them to successful inclusion in professional activities (Shishov, 2002).

In modern scientific research, there is a tendency to consider the professional competence of the teacher as a set of three components: subject–technological, psychological–pedagogical, and general cultural. Note that pedagogical competence is a nascent concept in higher education literature. Perumal and Maistry (2021) noted that the study of the definition of "pedagogical competence" revealed the relationship of competence with the research activities of the teacher. Undoubtedly, interest in vocational education and training is growing. This can be attributed to global social and economic developments requiring continuously changing knowledge and skills. Adult education and training, particularly in non-formal education, contributes to provide these skills and knowledge for youth and adults. The findings point to the need for the professionalization of educators. This would contribute to the quality of their activities and to their status as professionals (Manuel et al., 2017).

Of course, these definitions and visions are clearly conditioned by the understanding of competence as such; hence, research uses a variety of methods and classifications to determine the differences between specific modeling competencies and which research method is the most effective. The relationship between patterns of competencies and the goals of an organization are explored as the basis for establishing core distinctive competencies, and for developing and exploring the model that will inform strategic direction (Eden & Ackerman, 2020). The structure of professional competence among the significant number of competencies that are important and significant for professional activity and professionalization in general indicates psychological and pedagogical competence. However, analysis of the scientific literature shows the need to study the conditions for the development of psychological and pedagogical competence of teachers of professional (vocational) education, namely, the motivation of professional activity and readiness for innovation activity in the context of humanization of educational process and introduction of pedagogical paradigm of education.

The results of the empirical study indicated the need to create conditions optimal for the development of psychological and pedagogical competence of teachers at IP(V)E. Thus, the technology of coaching was introduced as one of the most effective methods in adult learning. According to K. Collett (Brown et al., 2013), an illustrative example is its opposition to the idea of directive intervention: in coaching, there are

concepts according to which learners must, first of all, master the skill to independently guide and adjust their learning. On the other hand, mentoring involves setting clear goals and focusing more on career advancement. Thus, the founder of coaching, W. Galvey, interprets "coaching - as the art of creating, through interviews and behavior, an environment that ensures the movement of man to a certain goal so that it brings pleasure" (Galvey, 2005). The founder of the school of transformational coaching, P. Vritz, believes that "coaching is the art of promoting the development of other people" while effective coaching helps people realize human potential (Vritsa & Ardui, 2008). In addition, to consider this issue in all aspects, we propose to refer to the works of M. Downey (2008) and O. V. Rudnytsky (2014).

In Ukraine, the works of T. Borova (2011), O. Borodienko (2014), N. Goruk (2013), O. Nezhynska (2017), O. Protsenko (2015), and S. Romanova (2010) are devoted to the research and implementation of coaching technology in vocational education and training. B. Sidorenko (2014, 2019) interprets pedagogical coaching as an innovative technology of scientific and methodological support of professional and personal development of teachers in the system of postgraduate education. The scientist considers pedagogical coaching (from English coaching: to instruct, inspire, train for special purposes, prepare for solving certain tasks) as a system of andragogical, acmesynergetic principles, and techniques that promote the development of the potential of individuals and groups of people working together (teams, organizations), and ensure maximum disclosure and effective realization of this potential.

MATERIALS AND METHODS

The following methods were used in the research: theoretical: analysis and synthesis in order to identify the essence of the phenomenon under study and identify factors that affect the training of competitive in the labor market teacher of vocational (vocational) education; method of terminological analysis related to determining the categorical status of psychological and pedagogical competence in the system of pedagogical and psychological definitions; abstraction, formalization, and generalization to systematize and formulate conclusions and determine areas for further study of the problem; empirical: surveys, questionnaires, study of the results of professional activity at refresher courses (final creative works, projects, professional cases, technological portfolios, etc.); observational (direct and indirect observation of the development of psychological and pedagogical competence of self-observation); pedagogical experiment; and methods of mathematical statistics to process and summarize the results of experimental work and establish the dependence of quantitative and qualitative indicators in control and experimental groups on the introduction of the experimental factor, and to determine their probability and reliability, including correlation analysis.

The research was conducted at the Bila Tserkva Institute of Continuing Vocational Education. Experimental work was carried out comprehensively in professional (vocational) educational institutions of the Volyn, Rivne, Zakarpattia, Zhytomyr, Kyiv, Chernihiv, Sumy, Kirovohrad, Poltava, Dnipropetrovsk, Odesa, Mykolaiv, Zhytomyr, Donetsk, and Luhansk regions. Research participants comprised 266 people of the categories of teachers of professional and theoretical training and masters of industrial training at IP(V)E. The experimental research was organized according to the rule of a single difference, which provided the same composition of research subjects for all essential factor criteria for the study of organizational and pedagogical conditions for the development of psychological and pedagogical competence of teachers, identical conditions, and simultaneous variation of factors influencing object of the research. The experimental work was introduced in two modifications:

Modification A: the control group (CG), comprising teachers of vocational and theoretical training and masters of industrial training of vocational education institutions, was provided advanced training according to the traditional models of training and educational and methodological support of advanced training (plans, programs, technologies) but without innovative scientific and methodological support of professional development. Therefore, there was no targeted influence on the control group.

Modification B: the experimental group (EG), comprising teachers of professional and theoretical training, and masters of industrial training of vocational education institutions, provided for the creation of organizational and pedagogical conditions and experimental verification of the effectiveness of favorable

conditions, namely, motivation of professional activity and readiness for innovative use of pedagogical coaching technology. The research was conducted in three stages:

- Stage one: the theoretical analysis of existing methodological approaches in psychological and pedagogical scientific literature, dissertations on the problem as well as the theory of psychological and pedagogical research; problems, purpose, and methods of research were defined, and the plan of experimental research made.
- Stage two: the conditions of development of psychological and pedagogical competence of teachers of institutions of professional (vocational) education were defined and the program of development of psychological and pedagogical competence as a component of professional competence substantiated; an empirical study was conducted and a quantitative and qualitative analysis of the obtained data was performed.
- Stage three: the experimental work was completed, theoretical and practical conclusions were specified, and the obtained results were generalized and systematized.

CHARACTERISTICS OF CONDITIONS FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PEDAGOGICAL COMPETENCE

The main conceptual idea is that psychological and pedagogical competence is the basic system-forming component of a teacher's professional competence that ensures the effectiveness of multicomponent system of professional competence, ensures the quality of professional and pedagogical activities, and determines the style of work of each teacher. We believe this component to be the most effective and efficient means of developing psychological and pedagogical competence of pedagogical staff of IP(V)E that aim to integrate the professional, psychological, and pedagogical training of teachers. Conceptual provisions are realized through methodological approaches to the development of psychological and pedagogical competence of these workers, e.g., general scientific, concrete–scientific personality-oriented, and concrete–scientific professionally oriented. Approaches in a complex combination create preconditions for deep understanding of the process of development of psychological and pedagogical competence of pedagogical workers of IP(V)E, and are based on general didactic, andragogical, and specific principles, allowing analysis of the whole set of the most significant problems of continuing education.

Given that the psychological and pedagogical competence of teachers of IP(V)E is a systemic education, we have identified the main conditions for its development: motivation for the development of psychological and pedagogical competence and the development of readiness of teachers for innovation activities. Let us consider in more detail the characteristics of each condition for the development of psychological and pedagogical competence. Motivation is a system-forming core of competency development for pedagogical workers. Today, it is impossible to build the educational process effectively without a high level of motivation of professional activity of teachers. In the days of administrative-command economics, solving motivation problems was largely formal and based solely on the minds of employees. This attitude has led to a decrease in the level of initiative and indifference of employees. The main motivating factors are still the level of wages and career opportunities. Among the intangible incentives for employees in the first place is a social package with compulsory health insurance, participation in training, and payment of transportation costs and mobile communications. Modern managers need to look for ways to encourage staff to work not only for income but also to meet, self-actualize, and realize their own work and creative potential.

Thus, we consider the motivation of teachers as the ability of the teacher to engage in a positive emotional perception of their professional activity and to learn and integrate their own experience in new situations of professional activity. This includes flexibility, adaptability, and awareness of the purpose of the activity and the desire to constantly improve their educational level and interest in professional development. In turn, motivation is a component of psychological and pedagogical competence of the pedagogical worker IP(V)E, and interests, needs, inclinations, and motives that motivate professional pedagogical activity and determine the professional orientation of the individual. To study the concept of

motivation, we took a close look at the works of domestic and foreign scientists in the field of psychology and management. Analysis of theories and definitions on motivations allowed determining its structural components, namely pedagogical, psychological, and managerial.

The pedagogical component includes the main motives that enable realization of the desire to develop personal qualities, i.e., the structure of personal abilities, character traits, and general culture. This provides motivation for the teacher's penetration into the essence of students' attitude to learning, creating conditions in the educational institution for the emergence of internal motivations (motives, goals, emotions) to learn. The psychological component of motivation of professional activity provides direct reactions or purposeful activity. The motivational process can be considered as a form of emotion. Emotional behavior is expressive, not goal-oriented, and its direction changes with the change of emotional state. Therefore, the stability of the individual is important for the study, which is reflected in the effectiveness of its activities in general and the professional in particular. Thus, if the force of the need that motivates the activity is small, then failure and the associated negative emotion affect mainly the activity of the subject, encouraging them to get out of the situation as soon as possible. If the strength of the need reaches a medium level, then the negative emotions associated with failure are more active, which leads to the mobilization of efforts and increase efficiency. If the force of need is extraordinary, then failure and the associated negative emotions cause such an excess of emotional arousal that there are signs of disorganization of activity and behavior.

The management component includes the ability to self-manage and personality orientation in professional activities. Also in the structure of psychological and pedagogical competence of pedagogical workers of IP(V)E, the readiness of pedagogical workers for innovative activity plays a significant role. Readiness for innovative activity is an internal force that forms the innovative position of a teacher. The structure is a complex integrative education, which covers a variety of qualities, properties, knowledge, and skills of the individual. As one of the important components of professional readiness, it is a prerequisite for the effective activity of the teacher, the maximum realization of their capabilities, and the disclosure of creative potential. Sources of readiness for innovative activity reach the issues of personal development, professional orientation, professional education, upbringing and self-education, and professional self-determination of a teacher. Taking into account all the analyzed scientific and pedagogical sources, and the essence and structure of readiness of pedagogical workers of vocational education institutions, we define the following components of readiness: motivational, cognitive, activity, and reflexive. Let's consider in more detail each of the components of readiness of pedagogical workers of professional (vocational) education institutions for innovative activities.

The motivational component is considered critical because without proper motivation it is impossible to successfully develop and implement innovations in pedagogical practice. Motivation is understood as a set of psychological processes that guide human behavior. In fact, motivation acts as an awareness of the teacher's need to perform a certain activity and turn it into a motive. In the structure of readiness for innovation, the motivational component is defined as a set of motives that reflects the values of self-actualization and humanistic orientation, and focuses on professional self-improvement and self-development.

All motives regarding the content and methods of applying innovations in the educational process can be divided into two groups:

1) Internal motives are manifested in the interest in professional innovation in social transformations and a sense of satisfaction with their own results.
2) External motives motivate teachers to innovate in conditions of change due to reasons beyond its process and related to prestigious motivation and broad social motives.

No less an important component of the structure of teachers' readiness for innovation are the psychological and pedagogical competencies: knowledge, skills, abilities, and capabilities (cognitive component). The cognitive component is closely related to the motivational component of the readiness of teachers of vocational education institutions to innovate. The importance of this component is difficult to overestimate because only that person implements innovations, who has the necessary moral and volitional qualities, has awareness for innovation, understands the essence and goals of the educational process in an

updated paradigm that ensures the development of personality. The cognitive component of teachers' readiness for innovative activities includes the ability to design the educational process using innovative pedagogical technologies in their meaningful selection, analysis, and evaluation. An important prerequisite for the development of readiness for innovation is the formation of the teacher's psychological and pedagogical skills, and the presence of analytical, prognostic, constructive, projective, and reflective skills. Analytical skills include analysis of the pedagogical phenomenon, understanding the role of each element of innovation in the structure of the educational process, comprehensive diagnosis of the pedagogical phenomenon, and the ability to optimally solve pedagogical problems.

The activity component of the readiness of pedagogical workers of vocational education institutions for innovative activities is characterized by a set of professional skills (gnostic, communicative, organizational, projective, didactic, technological, managerial); i.e., qualities that determine the effectiveness of the design of an innovative educational process. This component includes certain subtypes of professional competence: methodological competence (provides knowledge of principles, methods, forms of problem solving, and ability to innovate; integrates the entire system of psychological and pedagogical knowledge and skills in designing an innovative educational process); operational and activity (provides for the formation of knowledge and skills for innovative professional activities); information and communication (includes theoretical knowledge of the basic concepts and methods of the teacher's innovative activity; possession of information technologies); communicative (involves the formation of appropriate skills and qualities of the teacher, which contribute to effective interaction with the subjects of the educational process and the ability to solve productive tasks in the process of communication and interpersonal interaction, finding adequate style and tone of communication); managerial (involves the formation of knowledge about the basics of the theory of management of innovation processes; the ability to design their own innovation activities); technological (provides motivation to master the knowledge and skills of using innovative pedagogical technologies in the educational process).

The reflective component of the readiness of teachers of vocational education institutions for innovative activities involves awareness and understanding of the results of their innovative activities or (if necessary) the activities of their colleagues, comparing the achievements against milestones, processing errors, and identifying ways to overcome them. Within this complex, the components we have identified are closely interconnected and complement each other into a coherent system. The described conditions are key to the development of psychological and pedagogical competence of teachers of professional (vocational) education in the system of formal, non-formal, and informal education throughout life.

In total, the research surveyed 266 persons of the categories of teachers of professional and theoretical training and masters of industrial training IP(V)E. To study the motivation of teachers, a questionnaire was developed, consisting of 16 questions aimed at determining the overall level of motivation for work and the dominant motives. The questionnaire included questions intended to reveal the dominance of motives for success and motives for avoidance, covering issues of pedagogical activities, psychological, and managerial activities at the level of self-organization. As social indicators, the state of motivation of professional activity of pedagogical workers of IP(V)E is defined as follows:

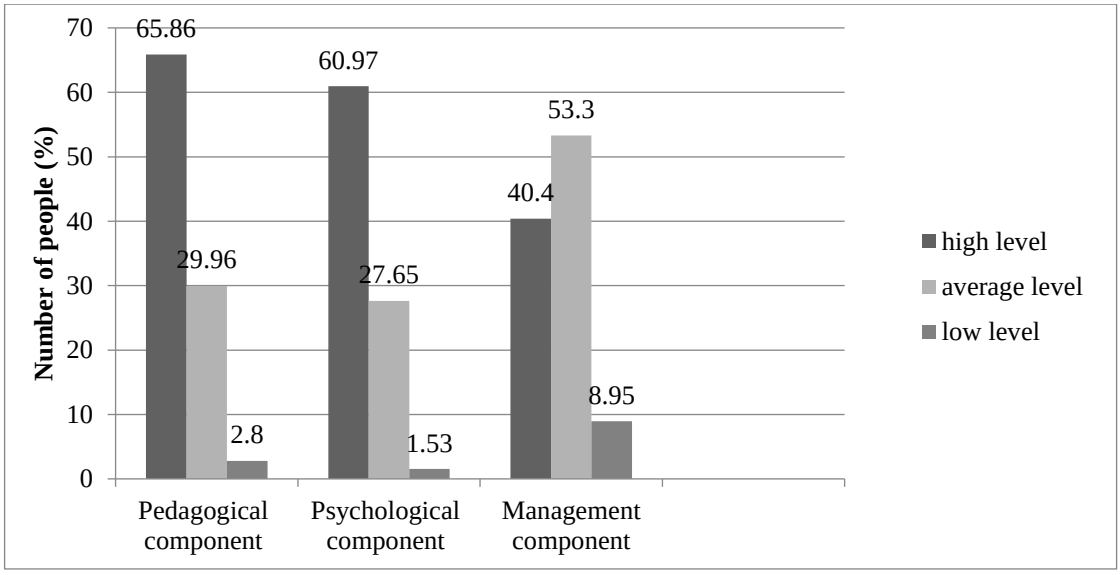
- role of money earnings;
- aspiration to career advancement;
- desire not to be criticized by managers and colleagues;
- desire to avoid possible punishment or trouble;
- focus on prestige and respect from others;
- satisfaction from a job well done;
- social utility of labor.

Analysis of the results of the pedagogical component allowed us to conclude that the majority (65.86%) of respondents have a high level of development of the pedagogical component of motivation for professional activity. Almost one-third (29.96%) found an average level. A small number of subjects (2.8%) have a low level of development of the pedagogical component of motivation of professional activity. A low level of development is characterized by the fact that the motive is characterized by the awareness of

"need" and is usually associated with the external side of the process, i.e., focused on formal success and the achievement of the evaluation result. Averages show a desire to consciously master knowledge and skills, to work in an organized manner, and to make efforts to achieve the desired result; however, help and support are needed from colleagues and administration.

Analysis of the results of the study of the psychological component indicates that the majority (60.97%) has a high level of development of the psychological component of professional motivation while 27.65% have an average level and 1.53% a low level. Attention should be paid to teachers with average and low levels of motivation since it is characterized by the strength of need. Furthermore, it mainly encourages activities of the subject to get out of a situation that threatens the integrity of the teacher. Their personal qualities are unstable, which prevents building favorable relationships in the team and realizing the importance of teaching. Such teachers usually have the motives for avoiding failure dominated. Regarding the analysis of the results obtained regarding the managerial component as the ability to self-management and orientation of the individual in professional activities, almost half (40.3%) of respondents have a high level of managerial motivation while most (53.3%) are medium and (8.95%) have low level of the managerial component of motivation. Medium and low indicators reveal problems of motivation, namely: quality performance of typical tasks motivated by the possibility of recognition and reward for achieving results; problems with the organization of their time; and difficulties in ranking necessary and important tasks (Figure 1).

FIGURE 1
LEVEL OF DEVELOPMENT OF MOTIVATION OF TEACHERS



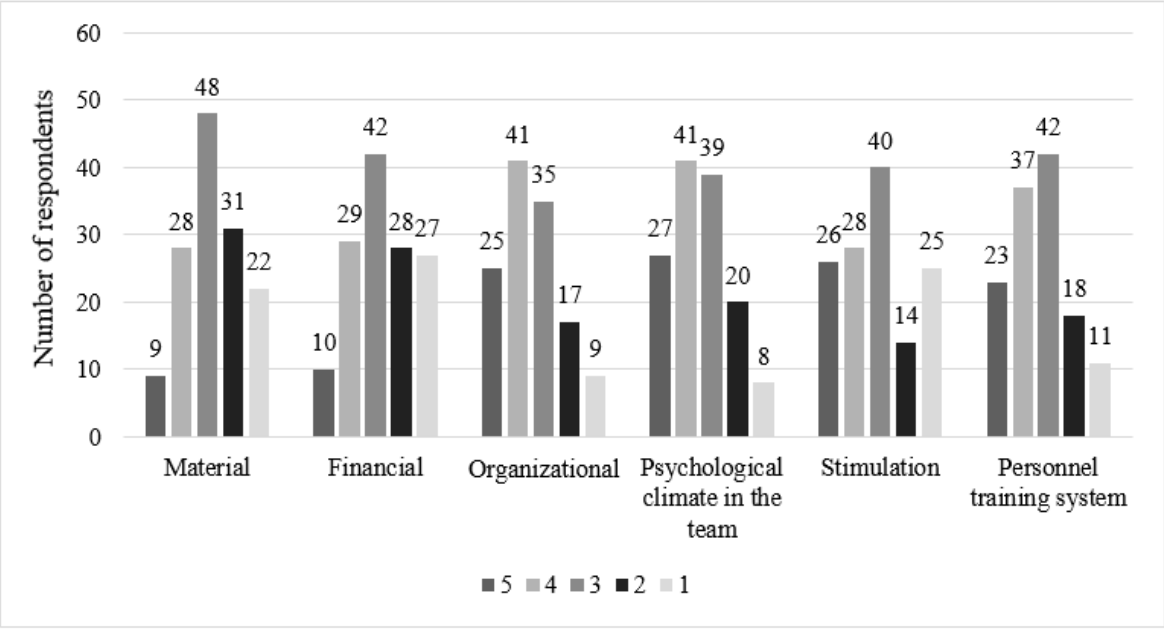
According to the survey results, the corresponding correlation models of the relationships between the listed priorities in terms of motives were built. Based on the value of Pearson's correlation coefficients, it was found that the highest level of correlation was achieved for such a motive as "The desire to express and establish themselves in the profession." Therefore, it is possible to assume that this motive is dominant for the majority of respondents. The following priorities are: "Possibility of the most complete self-realization in this activity," "Desire to be creative at work," "Good attitude, professional understanding of colleagues," "Respect and support from the administration," etc. The lowest level is reached for such a motive as "The desire to avoid criticism from a leader or colleagues" makes it possible to consider it the least important for the respondents. For this motive, the correlation level is 0.44; it is significant, but less than 0.50. Motivation of professional activity promotes self-improvement and an active position on innovative activity.

To measure the level of readiness of pedagogical workers for innovative activities, a survey of pedagogical workers of IP(V)E was conducted. To this aim, a questionnaire was compiled that included a number of questions, namely: Do you feel yourself ready for self-development and self-improvement? Do you agree with the statement that a teacher should not change his own professional activity in view of the persistent stereotype of the traditional paradigm of education? Do you think that you have found your individual style of activity? Do you strive for success in professional activities? Analysis of the results showed that 18.8% of teachers are partially ready for the professional change. A significant group of teachers (39.5%) strives for professional change. However, in our opinion, a large number (41.4%) of teachers partially agrees with the statement that a teacher should not change their own professional activities, i.e., the ability to self-manage and orientation of the individual in professional activities is at an average level.

These surveys make it possible to determine that 58.3% believe that they have found their individual style of professional activity but need to work with teachers (41.7%) who have not yet defined their own style of professional activity. In the answers to the question "What scientific and methodological measures affect the level of professional development and readiness for innovation?", the following were singled out: scientific and practical seminars, conferences; round tables; scientific and practical web-seminars and web-conferences; training; training courses; self-education; internship; and school of a beginning teacher. It should be noted that the highest level of correlation in terms of priority types of scientific and methodological activities, the respondents preferred the following: "Scientific and practical seminars, conferences" and "Round tables." The lowest level of priorities was given to "Internships" and "Self-education." However, these types of activities still have some significance although at 0.66 and 0.55, respectively.

The next request for respondents was: "Assess the quality of conditions for the development of innovation in your educational institution." The following evaluation criteria were proposed: material; financial; organizational; psychological climate in the team; stimulation; and personnel training system. Analysis of the quality of conditions for the development of innovative activities of teachers is presented in a graphical format in Figure 2.

FIGURE 2
RESULTS OF CORRELATION ANALYSIS OF THE QUALITY OF CONDITIONS FOR THE DEVELOPMENT OF INNOVATION



The results of the correlation analysis allow us to draw the following conclusions: respondents' departments prefer motives such as "Incentives," "Organizational," and "Financial." At the same time, "Material" and "Psychological climate in the team" are among the least important. Thus, readiness for innovative activity as a condition for the development of the psychological and pedagogical competence of teachers plays an important role. Daily and systematic work on yourself means for teachers to develop their intellectual abilities, master deep knowledge in pedagogy and psychology. Professional knowledge of the pedagogical worker of IP(V)E is an interconnected set of five attributes: 1) special knowledge on a taught subject; 2) pedagogical knowledge of didactics and theory of education; 3) psychological knowledge to determine the psychological characteristics of teaching special and general technical disciplines; 4) knowledge of age psychology; and 5) knowledge of innovative pedagogical technologies. This combination affects the quality of training of future skilled workers. Thus, the readiness of teachers for innovative activities and the professional development of teachers involve awareness of innovative pedagogical technologies that contribute to the development of their pedagogical competence, diversification of forms of training and extracurricular activities through verbal and nonverbal communication, and expanding the level of awareness of ways, methods, and means of solving professional problems.

CREATING FAVORABLE CONDITIONS FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PEDAGOGICAL COMPETENCE

Motivation for professional activity and teachers' readiness for innovative activity, as key conditions for the development of psychological and pedagogical competence, presuppose awareness and the required skills to apply innovative pedagogical technologies; diversification of forms of training and extracurricular activities through verbal and nonverbal communication; and expanding the level of awareness of ways, methods, and means of solving professional problems. Analysis of different scientific approaches to the definition of pedagogical technologies allows us to conclude that pedagogical coaching is an innovative learning technology that allows teachers to work effectively at the subject–subject level, helps the teacher to move from the zone of professional problem to the zone of effective solution, and creates a special atmosphere of facilitation support professional development and the implementation of their own programs of self-development and self-improvement.

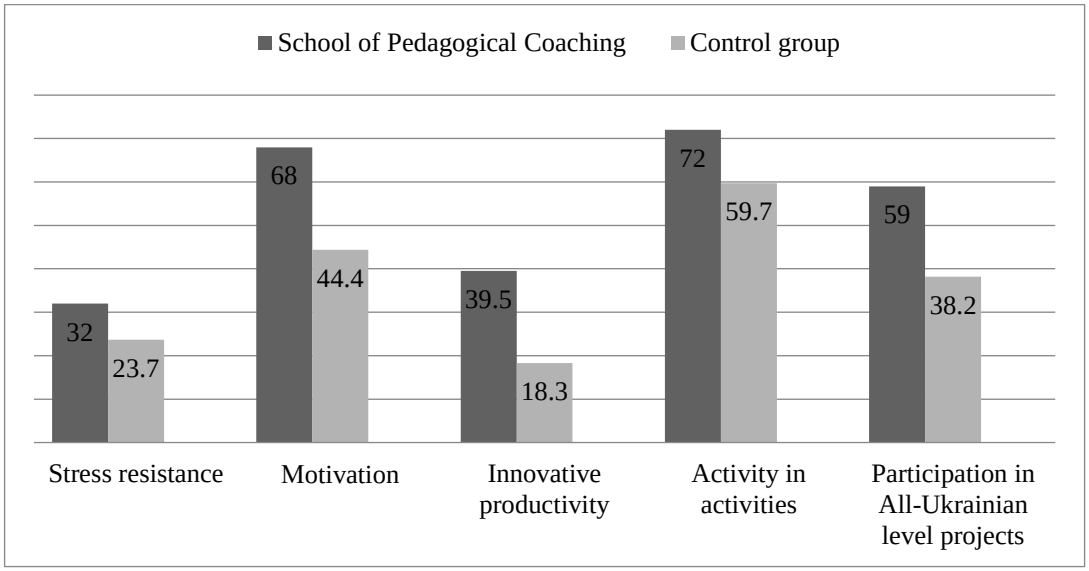
Thus, for the first time in the system of professional vocational education of Ukraine and on the initiative of the scientific and pedagogical staff of the Department of Pedagogy, Psychology and Management, the School of Pedagogical Coaching was launched. An experimental program using pedagogical coaching technologies was developed and the program was tested in the experimental group (based on the Training and Methodological Center of Vocational Education of Rivne region). Approbation of the program showed that it contains scientifically sound content for the development of psychological–pedagogical competence, professional self-development of the teacher, motivation to improve work. The program is aimed at updating and deepening professional knowledge and skills in order to ensure the performance of professional and functional responsibilities of pedagogical staff of IP(V)E.

The productivity of the school of pedagogical coaching for the training of innovative, motivated, competitive teachers of vocational education is confirmed by the following indicators of internal monitoring:

- increase in teachers' professional stress resistance to changes, educational challenges, and activities in the conditions of quarantine measures (by 32%);
- increase of motivation for continuous professional development, which has become systemic, purposeful for realization of own projects (programs) on individual educational trajectory (by 68%);
- increase in the number of professional initiatives, innovative educational and methodical products in the form of authors' personal technologies, teaching methods, cases, and technological portfolios (by 39.5%);
- increase in the activity of teachers in the activities of the intercourse period, including conferences, seminars, round tables, webinars, and training (by 72%);

- more active participation in professional competitions, tournaments, festivals, forums (as participants, jury members, coaches, coaches etc.), innovation programs, projects at the regional and national levels (increased by 59%). A comparative analysis of the indicators of students of the School of Pedagogical Coaching and the control group is presented in Figure 3.

FIGURE 3
ANALYSIS OF INDICATORS OF STUDENTS OF THE SCHOOL OF PEDAGOGICAL COACHING AND THE CONTROL GROUP (NUMBERS AS %)



By the final reflexive stage of training, students of the School had developed and successfully defended individual projects on "Designing and implementing their own trajectory of professional success," which creates conditions for self-improvement in the near-term and future, and increases students' motivation. Analysis of the results showed the effectiveness of the School of Pedagogical Coaching for training innovative, motivated, and competitive teachers of professional (vocational) education; hence, it was decided to further implement an innovative model of professional development of teachers of professional (vocational) education: the School of Pedagogical Coaching.

Thus, the use of pedagogical coaching technology in the system of continuing professional education promotes the development of sustainable acmeological motivation for further improvement with the choice of content, form, timing, learning parameters, and professional development of an acmeprofessional teacher because it can help them act effectively, learn, realize responsibility, develop psychological and pedagogical competence, and design the trajectory of their professional development. The result of the experiment was the adjustment of the content and procedural components of the educational process of professional development according to innovative models. Accordingly, selected special courses aimed at developing the motivation and readiness of teachers to apply innovative pedagogical technologies in the educational process of IP(V)E, particularly technologies of pedagogical coaching in the professional training of students, were developed and tested:

1. "Motivation of professional activity of a pedagogical worker" (compiled by Lukiianchuk A.M.).
2. "Development of teachers' readiness for innovative activities in the system of continuing professional education" (compiled by Kharagirlo V.E.). The approbation of work programs of special courses showed that they contain scientifically sound content for professional self-development of a teacher and are aimed at updating and deepening professional knowledge and

skills that ensure the performance of professional and functional duties of teachers of professional (vocational) education.

DISCUSSION

The study of psychological and pedagogical scientific literature allowed stating that a few researchers dedicated their works to the detailed analysis of the professional competence of teachers. However, the formation of teachers' professional competence is considered in detail in some studies. The essence and structure of teachers' professional competence, the content of learned concepts, and the types of professional competence and basic requirements for pedagogical skills are revealed (Koshonko, 2016; Shmygol, 2011). Professional competence is considered as follows: a set of knowledge and skills that determines the effectiveness of professional work (Doktorovich, 2010); a complex of professional knowledge and professionally significant personal qualities (Karpova, 2004); or a manifestation of the unity of professional and general culture of the individual (Taranenko, 2000).

The essence and content of psychological and pedagogical competence of the teacher is considered a formation of personality that combines theoretical knowledge, practical skills, experience and personal qualities that ensure the effectiveness of psychological and pedagogical aspects of teacher interaction with other subjects of the educational process. The structure of psychological and pedagogical competence consists of the following components: 1) cognitive - basic and special psychological and pedagogical knowledge; 2) professional - masterful mastery of methods of teaching disciplines, methods and techniques of teaching, and compliance of professional activity with the principles of higher education; 3) motivational - the focus of the individual on self-improvement in professional activities; 4) personal - the presence of professionally important personal qualities for teaching; and 5) behavioral - the use of knowledge, skills, abilities, experience, and established patterns of behavior to solve pedagogical problems of different levels and direction in professional activities (Kholkovskaya, 2017).

Regarding the development of psychological and pedagogical competence, Ya. Sytnikov (2017) identifies pedagogical conditions, namely: deep pedagogical knowledge, thorough general, technological, and industrial culture, communication skills, self-esteem, analytical thinking, and the ability to adapt flexibly, take responsibility, show initiative, and be able to make adequate decisions.

The study of the conditions for the development of psychological and pedagogical competence includes a theoretical clarification of the concept of "psychological and pedagogical competence" as a component of professional competence. It is determined that the conditions for the development of psychological and pedagogical competence of teachers of professional (vocational) institutions are the motivation of professional activity and readiness for innovative activity of teachers. Identifying and studying the components of motivation (psychological, pedagogical, managerial) can reveal the main problems that may become barriers in the professional activities of teachers. Readiness for innovative activity presupposes the teacher's ability to determine the features of their own professional activity and to evaluate their achievements and opportunities in professional activity. The obtained results contributed to the creation of a modern model of professional development based on the technology of pedagogical coaching.

The research carried out in the article complements previous findings, clarifies the basic concepts, and reveals the main problems that reduce the professional quality of teachers of professional, vocational, and technical education.

To promote promising areas of research, we consider it appropriate to include the following issues: the organization of network interactions; a single educational space for continuous professional self-improvement of a teacher of vocational education throughout life; and selection of innovative technologies for training teachers–andragogues, coaches, and moderators for continuous professional development in the system of professional (vocational) education.

CONCLUSIONS

The study provides a comprehensive scientific analysis of the conditions for the development of psychological and pedagogical competence in professional (vocational) education, developed, experimentally tested, and implemented in the training of teachers using an innovative model of professional development. The School of Pedagogical Coaching has introduced scientific and methodological support, and educational and methodological support in the system of course and post-course teacher training. Theoretical analysis of the research problem and the results of research and experimental work confirm the effectiveness of solving the tasks and give grounds for formulating general conclusions:

1. The analysis of scientific literature testified to the high social value and scientific and applied significance of the phenomenon of development of psychological and pedagogical competence. The complexity and multidimensionality of the concept, the presence of various scientific approaches, and views on the interpretation of the scientific category are proved.
2. The development of psychological and pedagogical competencies in the system of vocational education is interpreted as a specially organized, continuous, systemic, differentiated, and prolonged and cyclical process, which depends on the created organizational and pedagogical conditions.

It is found that organizational and pedagogical conditions, in particular motivation of professional activity, readiness of teachers for innovative activity, and application of pedagogical coaching technologies, help characterize and describe determinants of differentiated professional space for the development of psychological and pedagogical competence of specialists in postgraduate education–specialist educational services market; for example:

1. The productivity of the School of Pedagogical Coaching, as a modern model for training innovative, motivated, and competitive teachers of professional education, has been experimentally tested and the results presented at the Presidium of the National Academy of Pedagogical Sciences of Ukraine (December 17, 2020).
2. The professional development of teachers of vocational education in the context of formation and development of their psychological and pedagogical competence helps develop a comprehensive competence system of assessment, correction, modeling, and the development of a professional subject of professional activity as a conscious movement of a specialist to a professional standard with lifelong self-improvement through formal and non-formal postgraduate education. During the study of the conditions of development of psychological and pedagogical competence of teachers, it was determined that they enable continuous professional development of a specialist of the knowledge society as a subject of self-improvement and self-realization, and who is ready to solve innovative educational tasks and choose the trajectory of their professional and personal development and non-formal education.

REFERENCES

Borodienko, O.V. (2014). Coaching as a personal development technology. Peculiarities of application of the coaching approach in the process of development of professional competence of managers. *Humanitarian Bulletin of the Higher Educational Institution*. *Thematic Issue "Problems of Empirical Research in Psychology"*, *10*, 19–26.

Borova, T.A. (2011). *Theoretical principles of adaptive management of professional development of scientific and pedagogical workers of higher education* (p.384). Kharkiv: SMITH Company.

Brown, Al., Browne, L., Collett, K., Devereux, C., & Jameson, J. (2013). *The role of coaching in vocational education and training*. Retrieved from https://warwick.ac.uk/fac/soc/ier/publications/2013/brown_2013_insights-the-role-of-coaching-in-ve.pdf

Choshanov, M.A. (1996). *Flexible technology of problem-modular learning.* Moscow: Public Education, p.160.

Doktorovich, M.O. (2010). Professional competence of a social pedagogue. *Bulletin of the Glukhiv State Pedagogical University*, *15*, 64–69.
Downey, M. (2008). *Effective coaching: Coach coaching lessons* (p.288). Moscow: Dobraya Kniga.
Eden, C., & Acker, F. (2020). Mapping distinctive competencies: A systemic approach. *Journal of the Operational Research Society*, *51*, 12–20. https://doi.org/10.1057/palgrave.jors.2600909
Galvey, U.T. (2005). *Work as an internal game. Focus, learning, fun and mobility in the workplace* (p.194). Moscow: Alpina Business Books.
Goruk, N.M. (2013). Empirical research of the organization of informal education of women in the USA. *Pedagogical Education: Theory and Practice*, *14*, 60–66.
Karpova, L.G. (2004). *Formation of professional competence of the teacher of comprehensive school* (p.295). Kharkiv: Kharkiv State University.
Kholkovskaya, I.L. (2017). *Professional and pedagogical competence of a teacher of higher education: A textbook* (p.144). Vinnytsia: Nilan Ltd.
Koshonko, G.A. (2016). *The essence and structure of professional competence of a teacher*. Retrieved from http://elar.khnu.km.ua/jspui/handle/123456789/4991
Manuel, A., van der Linden, J., & Popov, O. (2016). Educators in non-formal vocational education and training in Mozambique: A plea for recognition and professionalisation. *International Journal of Lifelong Education*, *36*(3), 324–338. https://doi.org/10.1080/02601370.2016.1241311
Nezhynska, O.O., & Tymenko, V.M. (2017) *Fundamentals of coaching: A textbook* (p.220). Kyiv, Kharkiv: DISA PLUS LLC.
Perumal, K., & Maistry, S. (2021). *Pedagogical Competencies of South African Marketing Educators*. Retrieved from https://www.tandfonline.com/doi/ref/10.1080/18146627.2021.1878377?scroll=top
Protsenko, O.B. (2015). Professional training of higher school teachers in master's degree: The experience of European countries. *Educational Discourse*, *3*, 238–247.
Romanova, S.M. (2010). Coaching as a new technology in vocational education. *Bulletin of the National Aviation University. Series: Pedagogy. Psychology*, *3*, 83–86.
Rudnytsky, O.V. (2014). Coaching as an interactive technology in education. Bulletin of the Dnepropetrovsk Alfred Nobel University. *Series: Pedagogy and Psychology*, *2*(8), 173–176.
Shishov, S.E. (2002). Competence approach to education: A whim or a necessity? *Standards and Monitoring in Education*, *2*, 60–64.
Shmygol, I. (2011). The essence and structure of professional competence of a teacher. *Problems of Training a Modern Teacher*, *4*(1), 197–204.
Sidorenko, V.V. (2014). Pedagogical coaching as an innovative technology of scientific and methodological support of professional and personal development of teachers in the system of postgraduate education. *Scientific Treasury of Education of Donetsk Region*, *3*(14), 13–19.
Sidorenko, V.V. (2019). *Regulations on the school of pedagogical coaching in the system of postgraduate education* (p.15). Bila Tserkva: BINPO.
Sytnikov, Ya. (2017). Pedagogical conditions of development of psychological and pedagogical competence of pedagogical employees of the institution of professional education in context continuing professional education. *Postgraduate Education in Ukraine*, *2*, 98–101.
Taranenko, I. (2000). *Development of life competence and social integration: the experience of European countries. Steps to competence and integration into society* (p.336). Kyiv: Context.
Vritsa, P., & Ardui, J. (2008). *When the quality of action meets the alignment. Compass for coaches* (p.18). Moscow: International Academy of Transformational Coaching and Leadership.
Vyshnyakova, S.M. (1991). *Professional education: Dictionary. Key concepts, terms, current vocabulary* (p.538). Moscow: NMC SPO.