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## PEDAGOGY STUDENTS' PROFESSIONAL COMPETENCE FORMATION

*The paper deals with the ways of future teacher' professional competence formation, which is of the key importance in the complex integrative structure of teaching activity. In teaching practice, the issue of forming professional competence of a future teacher is actualized as a structural component of the general educational paradigm, the main purpose of which is the formation of a future specialist' ability for independent designing and creative solution of professional tasks under various conditions. The following basic criteria for the formation of professional competence of future teachers have been distinguished: motivational (motives, interests, values orientations, guidelines, needs); cognitive-knowledge (knowledge, intelligence, erudition); operational (skills, ways of activity, professional-significant personal qualities: tolerance, empathy, flexibility of thinking, volitional sphere); creative (planning, forecasting, designing, creative activity); reflexive (self-consciousness, assessment, self-esteem, reflection), which are interconnected. The maturity of professional competence of future specialists is distinguished according to the following levels: high (creative), sufficient (normative), average (imitative), low (indifferent). The experimental technique of future teachers' professional competence formation is presented in the paper, whose efficiency has been proved involving 317 students.*

**Keywords:** *professional competence, organizational-methodical system, pedagogical conditions, integrated-integration technology, future teacher.*

### Introduction

According to the demands of a modern society, the requirements for the personality of a future teacher, his/her ability to use the acquired professional experience in independent practical activity in accordance with universal values and ideological positions, to acquire skills of self-cognition and the surrounding world considerably increase.

Competency-based approach is one of the priorities in the organization of pedagogical education, since the most significant thing is not the student's knowledge, but the ability to solve problems of a professional nature. In this case, the formation of competence in the field of independent cognitive activity, which is based on the ability to acquire knowledge from various sources of information, becomes of special importance. That is, the peculiarity of the competency-based approach is not the assimilation of the ready knowledge, but the students' ability to create their own knowledge and realize it in various types of practical activities.

Competency-based education, in contrast to the reproductive acquisition of knowledge and skills, provides for a new approach and requirements not only to the structure of the educational process, but first of all, to the

personality of a teacher, his/her psychological and pedagogical literacy, professional independence, flexibility, creativity, competence and is focused on practical results, experience of personal activity, development of attitudes, which causes fundamental changes in the organization of training, which is aimed at the development of specific values and essential knowledge and skills of students.

This approach to the training of future teachers implies their special mission in the modern society, since it is focused on the formation of a person capable of navigating in the diversity of contradictions of the modern world, independently acquire competences in the chosen specialty, be ready for changes, identify personal ways of creative self-realization, self-development, self-education and self-affirmation in occupation and life. Therefore, the main task of competency-based professional training is to develop the autonomy of thinking, stimulating the emotional sphere, activating the creative potential of future professionals.

The analysis of professional training of future specialists has made it possible to identify a number of contradictions that have occurred in the process of professional development of future teachers, namely: between the modern requirements for professional training of future specialists

who must strive for creative self-search, self-realization and self-expression, and the traditional content of learning, aimed at providing a certain set of knowledge and skills; between the need for the use of advanced technologies in the process of professional training and the prevalence of traditional forms and methods of training that do not meet the requirements of the present.

The success of solving these issues depends on the formation of professional competence, which is key in the complex integrative structure of the professional pedagogical activity of a future teacher.

#### **Aim and Tasks**

The paper aims to present and test the experimental organizational and methodical system of forming future teachers' professional competence.

In the process of research, the following tasks were addressed:

1) revealing the essence and structure of the professional competence of a future specialist; determining the criteria for the formation of the phenomenon under investigation in future teachers;

2) substantiating and experimentally verifying the effectiveness of the integrated technology for the formation of professional competence of future specialists.

#### **Theoretical Study Results**

The concept of competence is not based only on knowledge or skills, but also integrates value orientations and motives of the teacher's work, the style and culture of interpersonal communication, the ability for self-development, that is, the area of communication between knowledge and practice in real life [2; 3; 4].

Professional competence includes not only scientific knowledge, but also value orientations of a specialist, the style of communication, the general, ethical and linguistic culture of interpersonal communication, the ability to develop creative potential, which in the context of our study is of particular importance; characterizes the motivational sphere of a person, his/her interests, needs, attitude to work and social environment, knowledge, skills; depends on the ability for conscious, adequate, purposeful application of the acquired knowledge, skills, methods of activity in accordance with a certain interdisciplinary circle of issues; is an evaluation category that characterizes a person as a subject of professional activity, his/her ability to perform duties [4], to think critically, to carry out professional activities.

In the scientific works of I. Bekh [1], I. Zymnia [2], I. Ziaziun [3], I. Pidlasyi [6], L. Horuzha [7], it is noted that professional competence is provided by the development of professionally significant personal qualities, which determine the teacher's ability for professional teaching activities. Such professional personal qualities are as follows: logical thinking, reflection, organization, accuracy, punctuality, emotional stability, curiosity, observation skills, creative thinking, sociability, persistence, which in combination with a stable system of moral values form the basis for the formation of the components necessary for specialists of any field.

The analysis of various scientific approaches to the definition of the essence of "competence" have made it possible to systematize and distinguish the most essential characteristics of the concept under study, namely, experience, personal qualities, value orientations, the relationships between knowledge and practice; behavioral relationships; mobility of theoretical knowledge, practical skills, methods of their implementation in the process of communication, ability for development and self-development; the ability to think critically, the constant updating of knowledge, the ability to master new information, the ability for actual performance; ability to find and make decisions, to evaluate the consequences of actions, to work in a team, to develop joint creative projects, to organize and carry out pedagogical activity and pedagogical communication at a high level; ways of activity, experience of creative activity, competence in self-organization, motives of activity; continuous self-improvement, development of initiative, formation of personal style of educational activity, ability to innovate.

We share the opinion of scientists that every professional should use an individual style in his/her work, providing every student with a unique, personal meaning and personal attitude, which is based on sensitivity, care, compassion and empathy [1], tolerance, affiliate interaction, benevolent attitude, positive thinking [8].

When defining professional competence of a specialist, researchers emphasize such an approach, the essence of which manifests itself in the priority of non-subject knowledge and skills beyond the subject knowledge, arguing that professional competence reveals human potential, the ability to use it, generates new personality traits that enable an individual to be successful in life. In the structure of professional competence, the following professional-significant personal qualities are distinguished: creativity, self-control, contact, autonomy, which are related to the structural components of key competencies, which, in turn, are universal and indispensable for the implementation of productive activities in various professional communities. In accordance with the general education of a person, new constructs (key competencies) are universal metacultural qualities that can provide an adaptation of an individual to complicate and enhance the dynamics of social and professional life [4].

On the basis of the analysis of scientific works, it can be argued that:

1) professional competence is an integrative professionally significant quality of a teacher, which includes various groups of professional qualities;

2) the main components that characterize the level of ability of a future specialist for the successful theoretical and practical teaching of his/her students and the degree of his/her readiness for professional development and self-development in changing conditions are as follows: motivational, cognitive, operational, creative, reflexive;

3) the role of professional competencies as internal components of the polystructural, multifunctional socio-psychological phenomenon – professional competence – is

the implementation of specific types of professional activity.

The suggested *organizational-methodical system* contains pedagogical conditions, integrated technology of future specialists' professional competence formation, and provides for the use of active and interactive teaching methods. It implies the formation of the following pedagogical conditions: *providing creative environment* on the basis of competent, student-centered teaching, which is a perspective direction of the development of pedagogical education, is aimed at the introduction of various forms of dialogical communication, partnership relations and creative interaction between a teacher and a student; *individually-differentiated and variational approaches* that are such an organization of pedagogical influence that involves taking into account individual characteristics, evaluation of personality-typological characteristics and abilities of students, the introduction of innovative technologies, tasks of varying complexity, providing opportunities for choosing an individual trajectory of learning for self-realization and self-expression of students in the work, aimed at future teaching activity; *the priority of independent practical activity*, which is the driving force in the process of the formation of professional competences and students' acquisition of experience; *the gradual assimilation of theoretical and practical educational material by students*, which makes it possible to complicate and solve tasks gradually aimed at forming the outlined components of the professional competence of future specialists.

The designed integrated training technology involves the use of a wide range of active and interactive teaching methods: the method of analysis; analogue method; problem-searching methods; creating problem situations; problem tasks; modeling method; interdisciplinary and intercultural communication; activating creative potential, which is used in the process of teaching professional disciplines and special course "Fundamentals of Future Teacher's Professional Competence". The proposed technology provides the formation of future specialists' professional competence through the implementation of the above-mentioned pedagogical conditions.

### Research Methods

The experiment involved 317 students of pedagogical specialties (majoring in Psychology, Primary Education, Special Education, and Arts) aged from 18 to 20 years.

We have distinguished the following criteria of the maturity of future teachers' professional competence: a motivational one involves the focus on vocational and pedagogical activities, axiological attitude to the future profession, understanding its importance in personal development, the development of needs, motives and interests of students, the degree of self-actualization, the formation of value orientations, emotional and motivational sphere, attitude to the environment, as well as self-attitude as a subject of life-creativity. According to this criterion the indicators were assessed by means of observation, questionnaires, testing, and interviewing.

The cognitive criterion determines the degree of the cognitive-intellectual sphere of a future specialist

(knowledge, their systematicity and sufficiency, erudition, theoretical and methodological skills, analytical thinking). Its indicators can be developed using creative tasks, analysis and synthesis.

The operational criterion is characterized by the degree of creative activity, the possession of professional competencies, autonomy and individual style of thinking, pedagogical skills. It provides the use of methods of creative tasks and projects.

The creative criterion is characterized by the ability for independent creative-searching and designing activities, planning, forecasting, organization of activities; involves the use of a method of observation, analysis, and expert evaluation.

The reflective one implies the development of value-personality sphere, independence and objectivity of judgments, flexibility of thinking, tolerance, ability for empathy and reflection; involves using an essay method, assessment and self-assessment, analysis, and self-analysis.

The experimental work on the formation of professional competence was performed according to the above presented criteria and indicators.

We used specially designed questionnaires consisting of statements aiming to assess the respondents' motivation for studying and obtaining an academic degree in their specialty, as well as to evaluate their attitude towards their future profession. Every statement could be assessed according to 5-point Likert scale. Besides, the students were also interviewed as part of extracurricular activities in order to assess the strive for self-development in the future occupation.

According to the cognitive criterion, the students were suggested testing tasks which helped to assess their general and professional knowledge. These results were independent and did not influence their official academic success. The questions of the first block involved general issues, and the questions of the second one were related to their fields of knowledge. The testing, as well as questioning according to the first indicator, were anonymous.

According to the operational and creative criteria (they were combined) the students were suggested to perform creative tasks as part of their self-study activities in their specialties. The works were assessed by the experts, whose role was performed by independent university teachers (of corresponding fields). Every student's work could be assessed according to the scale from one to five points.

And according to the last criterion, the respondents were offered to write essays on topics concerning their role in the future of the society according to their occupations and fill in some of specially designed questionnaires helping to assess their self-esteem and reflexive skills. The essays were evaluated by the students themselves and then by the experts, and the results were compared then.

The scores according to all the tasks were summarized, which in total was an indicative of the level of the respondents' professional competence maturity.

The research outcomes were then processed by means of Student's t-test.

### Empirical Research Results

According to the results of the summative assessment (both groups were involved) it has been found that a high (creative) level of the maturity of professional competence was found in 6.6% of students; adequate (normative) level was found in 26.7% of the respondents; the average (imitative) level was peculiar for 50.2% of the students and the low (indifferent) one was found in 16.5% of the respondents. The research outcomes have shown the prevalence of the average level of the maturity of professional competence in future teachers, which has given grounds to implement the designed system of professional competence formation. The students were randomly divided into control and experimental groups. The CG was taught according to the traditional system and the EG students' training was based on the suggested technique. The work on the experimental formation of professional competence was carried out in the following three stages: motivational, creative-activity and creative-representative. At the end of every stage of the experiment final assessments were performed, which involved the above described tasks.

In order to check the effectiveness of the suggested technique, the dynamics of changes in the levels of the maturity of professional competence of the respondents before and after its implementation were analyzed.

Thus, at the first stage of the experiment, a high level of professional competence maturity in the CG was found in 6.7% of the students, EG – 7.6%; a sufficient level was demonstrated by 27.4% of the CG respondents, and 32.8% in the EG; the average level was found in the 50.3% of the CG students, and 46.2% in the EG, the low level was shown by 15.6% of the CG students, and 13.4% - by the EG ones. The comparison of the results shows a slight decrease of the low level, from 16.4% to 15.6% in the CG and from 16.8% to 13.4% for the students of the EG. A sufficient level of professional competence development in the EG has increased significantly (26.8% - 32.8%) as compared to CG (from 26.9% to 27.4%).

At the second stage of the experiment there are also positive changes in the increase in the high level in the EG (14.6%), while in the CG this result is only 8.5%. Another results are as follows: sufficient level in the CG – 29.9%, EG – 41.3%; the average level in the CG – 48.8%, EG – 35.4%; the low level in the CG – 12.8, EG – 8.7%. Thus, according to the results of the second stage of the experiment, a sufficient level of the maturity of professional competence in the students of the EG significantly increased (32.8% - 41.3%).

At the third stage of the experiment, there are also qualitative changes in both CG and EG: the high level in the CG is 14.7%, in the EG – 29.9%; the sufficient level in CG – 36.4%, in EG - 45.3%; the average level - in the CG – 41.1%, in the EG – 22.8%; the low level in CG – 7.8, in EG - 2%. As we can see, in the EG, the high level of the maturity of professional competence of future specialists increased considerably, namely from 14.6% to 29.9%.

The results of the formative stage of the experiment confirm that in general the levels of the maturity of the EG students' professional competence have significantly improved. Thus, the number of EG students with the high level of professional competence maturity increased from 7.6% to 29.9%; with sufficient one – from 32.8% to 45.3%; with the average – significantly decreased from 46.2% to 22.8%; with the low – significantly decreased from 13.4% up to 2%.

The research outcomes were processed by means of Students' t-test. The received values confirmed the reliability of the results.

The positive changes that took place in the process of professional training of the future teachers through the introduction of the experimental technique prove its efficiency.

The dynamics of the development of professional competence of the respondents of the experimental group are presented in fig. 1.

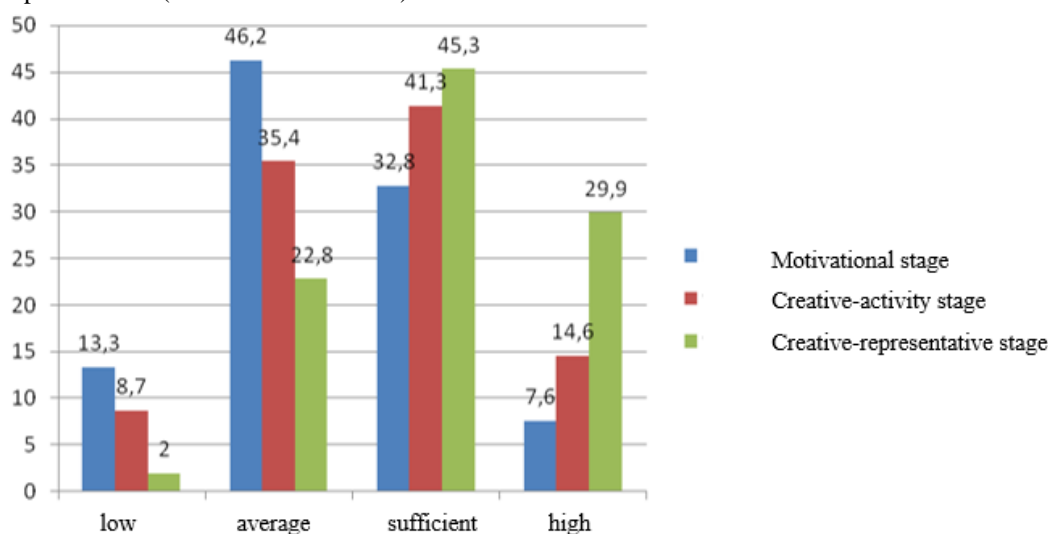


Fig. 1. Dynamics of Levels of the EG Students' Professional Competence Maturity (in %).

### Conclusions

The theoretical analysis of scientific works makes it possible to state that today the competency-based approach in education is of highest priority.

The main components of professional competence are as following: motivational, cognitive, operational, creative, and reflexive.

The suggested organizational-methodical system contains pedagogical conditions and integrated teaching methods. The pedagogical conditions of future teachers' professional competence formation are as follows: providing creative environment; using dialogical communication, individually-differentiated and variational approaches in the process of forming professional competence of a future specialist; ensuring the priority of practical activity; step-by-step process of professional competence formation.

The offered integrated technology contains three interconnected units, which include a complex of profes-

sional disciplines; special course “Fundamentals of Future Teacher’s Professional Competence”; independent creative-search activity of students. It is aimed at the development of the autonomy of thinking, the ability for creative solution of problems based on acquired experience, expression in various creative activities; involves the use of a wide range of active and interactive teaching methods, traditional and innovative technologies, etc.

The main teaching methods contributing to the development of the components of future teachers' professional competence are as follows: the method of analysis, the analogue method, the method of projects. The effectiveness of the proposed organizational and methodical system has been experimentally proved, which means that it can be used in the educational process of higher pedagogical educational institutions for the formation and development of professional competence of future teachers in different fields.

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#### **ФОРМУВАННЯ ПРОФЕСІЙНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНЬОГО ПЕДАГОГА**

Статтю присвячено проблемі формування професійної компетентності майбутніх учителів, яка в складній інтегративній структурі педагогічної діяльності є ключовою. Визначено основні критерії сформованості професійної компетентності майбутнього педагога: ціннісно-мотиваційний (мотиви, інтереси, ціннісні орієнтації, настанови, потреби); когнітивно-знаннєвий (знання, інтелект, ерудиція); операційно-технологічний (уміння, навички, способи діяльності, професійно-значущі особистісні якості: толерантність, емпатія, гнучкість мислення, вольова сфера); самостійно-творчий (планування, прогнозування, проектування, пошуково-творча діяльність); рефлексивно-оцінювальний (самосвідомість, оцінка, самооцінка, рефлексія), що тісно взаємопов'язані й взаємозумовлюють один одного. Визначено рівні сформованості професійної компетентності майбутніх фахівців, а саме: високий (творчий), достатній (нормативний), середній (наслідувальний), низький (індиферентний). Педагогічними умовами у рамках запропонованої системи формування професійної компетентності виявлено: створення творчого середовища на засадах компетентнісного, особистісно зорієнтованого та розвивального навчання; індивідуально-диференційований та варіативний підходи, які є такою організацією педагогічного впливу, що передбачає урахування індивідуальних особливостей, діагностику особистісно-типологічних характеристик і здібностей студентів, упровадження інноваційних технологій, завдань різної складності; пріоритет самостійної практичної діяльності, яка є рушійною силою в процесі формування професійних компетенцій і набуття досвіду студентами; поетапне засвоєння студентами теоретичного й практичного навчального матеріалу, що надає можливість поступово ускладнювати й розв'язувати завдання, спрямовані на формування окреслених компонентів професійної компетентності майбутніх фахівців. Основними методами розвитку виокремлених структурних компонентів професійної компетентності майбутніх педагогів виявлено: метод аналізу, метод аналогій, метод проектів, які позитивно впливають на формування професійних компетенцій, сприяють вдосконаленню ціннісно-особистісної сфери майбутніх фахівців (здатності до емоційного співпереживання, емпатії, співдії, взаємодопомоги, творчого спілкування, рефлексії). Формувальна робота здійснювалася упродовж трьох етапів: ціннісно-орієнтаційного, творчодіяльнісного, творчо-репрезентативного. Наприкінці кожного з них здійснювалися діагностичні зрізи: творчі завдання, комплексні тести, опрацьовувалися результати різних форм звітностей студентів (колоквиуми, заліки, екзамени, самостійна робота). Ефективність визначеної організаційно-методичної системи перевірялась шляхом проведення до і після формувального експерименту контрольних діагностичних зрізів, які дали можливість простежити динаміку рівнів сформованості професійної компетентності майбутніх фахівців. Експериментально підтверджено ефективність запропонованої організаційно-методичної системи. Підсумкова діагностика свідчить про якісну динаміку рівнів сформованості професійної компетентності у студентів експериментальної групи порівняно із показниками студентів контрольної групи.

**Ключові слова:** професійна компетентність, організаційно-методична система, педагогічні умови, комплексно-інтеграційна технологія, майбутній педагог.

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