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INTERACTIVE PEDAGOGICAL TECHNOLOGIES IN THE TRAINING OF SOCIOLOGICAL SPECIALISTS

TECNOLOGÍAS PEDAGÓGICAS INTERACTIVAS EN LA FORMACIÓN DE ESPECIALISTAS SOCIOLÓGICOS

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ABSTRACT:

The article describes the main pedagogical technologies widely used in the professional training of future specialists in the socionomic sphere, which we applied in an experimental study. We considered the main principles that are important in applying interactive pedagogical technologies by future specialists in socionomic specialties, which we relied on in the practical work of higher education. The ascertaining stage of the experiment in the control and experimental groups showed, by all criteria, the dominance of a low level of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities. Therefore, we have identified and substantiated the pedagogical conditions for the formation of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities. The formative stage of the experiment allowed us to state that the level of readiness of future specialists of the EG to use interactive technologies in professional activities is at a high and average level according to all criteria, and the CG – at an average and low level. A change in the levels of readiness of the CG respondents from a low level to an average level, and the EG, from a low level to a high level, was established. The results of the study confirm the positive dynamics of the level of readiness of future specialists of socionomic specialties to use interactive pedagogical technologies in professional activities in the EG.

Keywords:

Training of specialists in socionomic specialties, Interactive pedagogical technologies, Professional activities, Higher school, Students.

RESUMEN:

El artículo describe las principales tecnologías pedagógicas que se utilizan ampliamente en la formación profesional de futuros especialistas en el ámbito socioeconómico

y que aplicamos en un estudio experimental. Analizamos los principios básicos que son importantes en la aplicación de tecnologías pedagógicas interactivas por parte de futuros especialistas en especialidades socioeconómicas, en los que nos apoyamos en el trabajo práctico de la educación superior. La etapa de constatación del experimento en los grupos de control y experimental mostró, según todos los criterios, el predominio de un bajo nivel de preparación de los futuros especialistas en especialidades socioeconómicas para utilizar tecnologías pedagógicas interactivas en su actividad profesional. Por tanto, hemos identificado y fundamentado las condiciones pedagógicas para la formación de la preparación de futuros especialistas en especialidades socioeconómicas para utilizar tecnologías pedagógicas interactivas en sus actividades profesionales. La fase formativa del experimento nos permitió afirmar que el nivel de preparación de los futuros especialistas de EG para utilizar tecnologías interactivas en sus actividades profesionales se encuentra en un nivel alto y medio según todos los criterios, y de CG – en un nivel medio y bajo. Se estableció un cambio en los niveles de preparación de los encuestados del CG de un nivel bajo a un nivel medio, y de los encuestados del GE de un nivel bajo a un nivel alto. Los resultados del estudio confirman la dinámica positiva de la formación de la preparación de los futuros especialistas en especialidades socioeconómicas para utilizar tecnologías pedagógicas interactivas en las actividades profesionales en GE.

Palabras clave:

Formación de especialistas en especialidades socioeconómicas, Tecnologías pedagógicas interactivas, Actividad profesional, Educación superior, Estudiantes.

INTRODUCTION

Modern standards in the educational sector provide for the training of competitive and highly qualified specialists in socio-economic specialties. It is these specialists who must possess innovative technologies, integrate practical skills and acquired theoretical knowledge into a hierarchical holistic system of life, think critically, integrate into a dynamic society, generate new ideas, make the right decisions in non-standard situations and be responsible for them, model educational and training situations, clearly distribute responsibilities, and work in a team. Solving such tasks is facilitated by the use of interactive pedagogical technologies and concepts of project-based learning technologies (Demeshko, 2023).

The improvement of interactive educational pedagogical technologies today involves changing the structure, essence, conditions, goals, functions, tasks, and mission of modern higher education. Today, interactive pedagogical technologies are a branch of science that, with the least cost and maximum efficiency in practice, helps to realize a specific goal and develops and scientifically studies substantiated means of obtaining the results of educational activities. Their task is to identify patterns to use and determine effective processes in practice. Interactive pedagogical technologies involve the nature of the use and stimulation of human labor, the system of organizing the production process, and the science of organizing the training of specialists for innovative professional activities (Sapozhnykov & Bykova, 2023).

The fundamental characteristic of the training of specialists, the professional activity of specialists working in a team, is the social nature, which involves interpersonal active interaction. The most purposeful training for interaction is required by the professional group of socionomic specialties, which researchers in the classification of professions refer to as the type “person–person”. In modern society, people deal with representatives of such professions in various spheres of social practice.

At the present stage, it is relevant to improve the training of specialists in socionomic specialties, that is, the sphere of “person–person”, to use interactive pedagogical technologies in professional activity, which has the following modifications: training, education, organization, etc. Therefore, today, preference is given to the introduction into the practice of professional activity of such interactive pedagogical technologies that contribute to the formation of an individual style of communication of specialists in the sphere of “person–to–person” (Branitska, 2012). Therefore, the training of socionomic specialists in the use of interactive pedagogical technologies in professional activities is necessary for research.

Literature review

The psychological and pedagogical literature presents a significant number of scientific investigations devoted to modern aspects of the organization of interactive learning in educational and professional activities.

A comprehensive and thorough analysis of the main pedagogical technologies that are common in the system of training future specialists in the socionomic sphere was carried out by Sapozhnykov & Bykova (2023). Among them: the project method, modular-rating technology of training, integrative-modular technologies, case technologies, problem-based learning technology, computer distance learning technologies, and information and communication technologies. The ways of designing mechanisms for the development of personality and management, professional skills using pedagogical technologies used in a higher education institution for the professional training of future specialists in the socionomic sphere are shown. Provided that the set of instrumental and cognitive

actions of students and teachers is combined, it is possible to develop such technologies, designing highly effective managerial activities of teachers, highly productive educational activities of students in their creative and educational-professional interaction.

Volkova's (2018) scientific activity is aimed at methodological and methodological support for the process of introducing interactive learning technologies into the activities of higher educational institutions. Considerable attention is paid to such learning technologies as: training, situational, dialogical-discussive, game, information-communication, facilitative, as well as organizational-methodical approaches to their use in higher education. The emphasis is on the priority of integrating modern information-communication technologies into professional education to form professional experience in future specialists in the socionomic sphere. Reforming the process of training future specialists in the socionomic sphere in higher educational institutions should be aimed at exerting a significant influence on the motivational sphere of the personality, including students in the active process of cognition and the cognitive, psychophysiological and emotional-volitional spheres of their personality, thereby ensuring spiritual growth and further professional growth.

Professionally-oriented training of socionomic specialists is considered by Demeshko (2023). To prepare a competitive specialist, students are offered the creation of a system of tasks, a set of exercises, innovative professionally-oriented activities, and industrial practice for faster adaptation to professional activity. For students, future specialists in the socionomic sphere, the use of interactive methods is considered: situational problem tasks, electronic educational publications, trainings, master classes, multimedia practical classes and lectures, game training, round tables, press conferences, case methods in the implementation of a competency-based approach, using interactive technologies, a competency-based learning model, STEAM-methods, which forms the ability to apply knowledge to solve specific tasks, critical thinking skills, teamwork, and leads to independence, creativity, and responsibility for decisions made.

The effective formation of professional competence in future specialists of socionomic professions in higher education institutions is possible when using interactive pedagogical technologies. Therefore, Rebukha (2020). introduces affective, cognitive, operational and behavioral components into the structure of formation of professional competence in future specialists of socionomic professions and, using game pedagogical technologies, justifies possible ways of formation of professional competence of future specialists; proves the inexhaustible and significant role in training students of socionomic professions of pedagogical games, as they are characterized by significant practical and scientific potential. The practical orientation of the application of interactive pedagogical technologies for the professional training of specialists in socionomic professions is determined.

Thus, the psychological and pedagogical literature presents a significant number of scientific investigations devoted to modern aspects of the organization of interactive learning in educational and professional activities. At the same time, despite the diverse intensive research of scientists, the problem of training specialists in socionomic specialties to use interactive pedagogical technologies in professional activities remains insufficiently studied; in particular, the role of interactive pedagogical technologies in the professional training of future specialists in the socionomic sphere has not been fully studied.

Research objective: improving the professional training of students to form the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities.

MATERIALS AND METHODS

To achieve the research objective, the following methods were used: theoretical – analysis of psychological and pedagogical sources to clarify the essence of the main concepts of the study; empirical – pedagogical observation, interviews, questionnaires to identify the levels of readiness to use interactive pedagogical technologies of future specialists in socionomic specialties in professional activities; pedagogical experiment to test the effectiveness of pedagogical conditions for forming readiness to use interactive pedagogical technologies in the professional activities of future specialists in socionomic specialties; statistical – quantitative and qualitative analysis of empirical data (statistical processing of indicators, identification of reliability and plausibility).

In the experimental work, we paid great attention to the principles of: modeling, activity, openness, "here and now", trustworthiness, research position, objectification of behavior, the content of which is disclosed above.

We have defined and substantiated the criteria, indicators and levels of formation of readiness of specialists in socionomic specialties for the application of interactive pedagogical technologies in professional activities, which allowed us to check the level of readiness of specialists in socionomic specialties for the application of interactive pedagogical technologies in professional activities and, accordingly, made it possible to determine the level of its formation.

Under the structure of readiness, we have defined the criteria (motivational, cognitive, technological) and the corresponding diagnostic levels and indicators.

The integration of the manifestations of indicators is the qualitative characteristics of the levels (high, medium, low). The determined criteria for the readiness of future specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities, as well as their content characteristics by levels of manifestation, became the basis for our experimental study.

302 students, future specialists in socio-economic specialties, who are studying at the first (bachelor's) level of higher education, participated in the study. 152 people were selected for the control group, and 150 students for the experimental group. Future specialists of both groups studied under the same conditions and worked with teachers of the same qualification level.

The ascertaining stage of the experiment showed that the interest and motivation of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities are formed at a very low level, because the higher the interest of specialists in the application of interactive pedagogical technologies in practical activities, the more optimal the motivational complex: high significance of external and internal positive motivation and low – external negative.

To determine the level of professional knowledge about the application of pedagogical interactive technologies in professional activities, we conducted a questionnaire that showed the level of information awareness of respondents. Using factor analysis using the Pearson criterion, data processing was carried out based on calculating the coefficient of significance of questionnaire data.

The ascertaining stage of the experiment in the control and experimental groups showed, according to all criteria, the dominance of a low level of formation of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities. Based on the analysis of the obtained results of the ascertaining experiment, through a survey, it was established that the majority of respondents experience difficulties during practical and professional activities in organizing, choosing, and applying interactive technologies.

Therefore, we have identified and substantiated the pedagogical conditions for forming the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities.

To test the effectiveness of the proposed pedagogical conditions for forming the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities, a formative experiment was conducted.

The data of the conducted experimental diagnostics confirm that in the future, specialists in the socionomic specialties of the experimental group, there was a significant increase in the levels of all criteria of readiness for the application of interactive pedagogical technologies in professional activities. The data in the control group indicate insignificant dynamics.

To confirm (levels of readiness) the results of the conducted research in the experimental and control groups, the statistical one-sided criterion of Student's t-distribution was used.

The effectiveness of the pedagogical conditions proposed by us for the formation of the readiness of future specialists of socionomic specialties for the application of interactive pedagogical technologies in professional activities is evidenced by the obtained results, since $t < t_{st}$, which we obtained in the study, because $0.10 < 1.53$.

The results of the study also indicate the productivity of the system of levels, criteria, and indicators in evaluating the results of the study.

Thus, we state that the level of readiness of future specialists of the EG to use interactive technologies in professional activities is at a high and medium level according to all criteria, and the CG – at a medium and low level. A change in the levels of readiness of the CG respondents from a low level to a medium level, and the EG, from a low level to a high level, has been established. The results of the study confirm the positive dynamics of the level of readiness of future specialists of socionomic specialties to use interactive pedagogical technologies in professional activities in the EG.

RESULTS AND DISCUSSION

The main pedagogical technologies that are widely used in the professional training of future specialists in the socionomic sphere.

Let's reveal the essence of important pedagogical technologies that should be introduced into higher education. These include: the project method (project technology), modular-rating technology of the educational process, integrative-modular technologies, problem-based learning technology, case technologies, computer distance learning technologies, and information and communication technologies.

The project method (project technology) in higher education institutions is a fairly modern and effective teaching method, especially in the training of future specialists in the socio-economic sphere. The project

method is a teaching technology that, when used by higher education students acquire skills and knowledge in the course of implementing and planning projects (practical tasks), which are constantly becoming more and more complicated (Knysh et al., 2024).

Project-based learning uses a large number of didactic approaches and is focused on personal development: brainstorming, business games, learning in practice, discussion, problem-based and heuristic learning, working with many sources of information, which allows you to actively develop your own experience, motivates you to engage in cognitive activity, allows you to feel satisfaction from the results of your work, and intensively learn the experience of others (Kuchai et al., 2022).

Modular rating technology for future socionomic specialists is that it: activates students' independent work, makes it systematic and rhythmic; stimulates students' initiative, independence, creativity, responsibility, care and competitiveness; contributes to the formation of positive motivation for their own scientific and research system; promotes individual personality development; causes future socionomic specialists to feel a sense of satisfaction from personal involvement in the educational process (Sapozhnykov, 2019).

Integrative-modular technologies provide high-quality professional training for future specialists in the socio-economic sphere and are characteristic of both established systems and those that are emerging (Vozniuk, 2014). The value of the technology of the integrative-modular type is that it unites theory and practice into a single whole, integrates and implements interdisciplinary connections, allows the student himself to be an active participant in the educational process, carrying out self-analysis, self-diagnosis, determining his own educational trajectory, contributes to the translation of professional theoretical knowledge into the practical plane, helping in the development of his own professionalism, reflects the unity of goals, forms, principles, and content of the educational proces (Sapozhnykov & Bykova, 2023).

The technology of problem-based learning in the process of professional training of future specialists in the socio-economic sphere is the most effective and involves the creation of problem situations under the guidance of a teacher and active independent work of students, the development of personal thinking abilities, creative mastery of professional knowledge, skills and abilities (Mytnyk et al., 2024).

Case technologies that train future specialists in the socio-economic sphere in the educational process of higher education institutions make it possible to teach how to analyze a specific professional situation, that is, students feel themselves to be the most responsible participants in the production process when considering production cases and business situations. Therefore, the development of cases significantly improves the degree of practical preparedness of a specialist, which contributes to the formation of their professional competence.

Today, the leading technologies are information and communication technologies (ICT), which are based on the achievements of artificial intelligence, and are used in the educational process of higher education to solve problems using telecommunications and computers, and process information (Semenikhina et al., 2020). Based on the description of the problem statement entered into the system in a professional language understandable to him, automation of procedures for building programs that are interesting to users is the main idea used in modern information and communication technologies (Hrynevych et al., 2021).

Today, the basis for building automated labor management mechanisms is interactive programs that are organically embedded in graphic and text documents. There is an opportunity to change pedagogical technologies and parameters, and to independently manage processes. The COVID-19 epidemic has become a catalyst for the comprehensive use of computer distance learning technologies by future specialists in the socionomic sphere, when the teacher and the student are spatially separated (Ishchenko et al., 2020). The basis of the educational process of future specialists in the socio-economic sphere, in particular, distance education, is the controlled and purposeful work of the student, according to an individual schedule, at a time convenient for him, in a place convenient for him, having with him a set of special teaching aids and e-mail, messenger, etc. Synchronous interaction today involves conference classes, distance lectures, telematics – telecommunication, audiovisual, radio, and television systems. The exchange of electronic messages, listening to distance lectures involves asynchronous interaction of the teacher with the audience (e-mail, telecommunication information systems, Web pages, information carriers, memory cards, flash drives, GPS navigators) (Sapozhnykov & Bykova, 2023). It is these basic pedagogical technologies that are widely used in the professional training of future specialists in the socionomic sphere that we used in the experimental study.

Basic principles in the application of interactive pedagogical technologies by future specialists in socionomic specialties.

The participation of future specialists in socionomic specialties in the application of interactive pedagogical

technologies is based on the fact that all participants in the educational process must adhere to the principles:

the principle of modeling (modeling various situations in an interactive exercise where students demonstrate inappropriate and correct forms of behavior);

the principle of activity (covering all students with a game situation to assess the effectiveness of their own activities and the actions of all participants);

the principle of openness (the ability of each student to determine the degree of their openness);

the principle of "here and now" (allows future specialists in socionomic specialties to discuss the current problem presented in the game situation without being distracted by other issues);

the principle of trustworthiness (enables future specialists in socionomic specialties, taking into account the values, interests, experiences, and feelings of each of them, to show respect for other participants;

the principle of the research position (stimulates participants in the educational process to introspect, contributes to the creation of a creative environment, and the search for new solutions to problems);

the principle of objectification of behavior (directs the transition of the behavior of participants in education, which is necessary for the personal and professional growth of the individual, from an unconscious-impulsive to a conscious level) (Puhach et al., 2021).

Feedback in a simulated interactive situation is the main means that allows future specialists in socionomic specialties to determine the extent to which they comply with the outlined principles. In our study, we relied on these basic principles in the application of interactive pedagogical technologies by future specialists in socionomic specialties.

Analysis of the readiness of specialists in socionomic specialties to use interactive pedagogical technologies in professional activities.

In the research and experimental work, we paid great attention to the principles of: modeling, activity, openness, «here and now», trustworthiness, research position, objectification of behavior, the content of which is disclosed above.

We have defined and substantiated the criteria, indicators and levels of formation of readiness of specialists of socionomic specialties to use interactive pedagogical technologies in professional activities, which allowed us to check the level of readiness of specialists of socionomic specialties to use interactive pedagogical technologies in professional activities and, accordingly, made it possible to determine the level of its formation.

In particular, by the structure of readiness, we have defined the criteria (motivational, cognitive, technological) and the corresponding diagnostic levels and indicators.

The motivational criterion provides for the goals and motives of the conscious attitude of future specialists in socionomic specialties to interactive pedagogical technologies, determining their role and place in solving current educational problems and the educational process of higher education. This criterion is the core around which the main motivated goals are clarified, and the aspirations of future teachers to form them as professionals in obtaining higher education are gathered. The motivational criterion involves the development of satisfaction and prestige from professional activity, professional interest, constant self-improvement, and creative implementation of interactive technologies in professional activity.

As indicators of the motivational criterion, we have chosen:

social: communicative competencies, motivated socialization in the educational space, interest in pedagogical activity, professional goals, interest in interaction;

educational: involves the need for motivation to effectively apply skills, abilities, and knowledge in professional activity, the need for skills to apply interactive pedagogical technologies, and in professional skills in professional activity; development of motivation and goals of self-development and professional growth;

professional: self-improvement, professional motivation for self-education, implementation of pedagogical goals of using interactive technologies in practical activities.

The cognitive criterion assumes a positive attitude of future specialists of socionomic specialties to learning and cognition, which is consistently methodically accumulated, enriched in higher education institutions and improved during the educational process, affects the formation of students' readiness in professional activities to use interactive pedagogical technologies, on self-education, self-development and self-directed orientation of future specialists of socionomic specialties in the systematicity of pedagogical and professional knowledge; to solve professional tasks – reproduction of the system of concepts of a professional branch of science; application of integrated skills and knowledge obtained during the study of professional disciplines; ability to generalize, reproduce, implement theoretical and practical knowledge about methods of interaction in professional activities.

The following indicators of the cognitive criterion were selected:

theoretical and scientific knowledge – cognitive relationships, the formation of types of mental processes,

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psychological and pedagogical, and didactic-technological and methodological readiness, which is not static;

practical and professional knowledge – provide for the professional self-development of future specialists in socionomic specialties; ensuring students' awareness of the use of interactive technologies, increasing professional skills in the use of interactive technologies.

The technological criterion reflects the formation (during practice and practical classes) of readiness to use interactive technologies, search and research work, independent scientific work, increasing the professional level of formation of oneself as a subject of interactive activity, self-interpretation, self-development of oneself, and others.

The following indicators of the technological criterion were selected:

the ability to apply interactive pedagogical technologies – the formation of the implementation and application in practical activity of interactive technologies, the ability to determine the content and tasks of educational activity when using interactive technologies;

the ability to show creativity in the choice of interactive technologies – the formation of students' abilities, skills to organize work creatively, to create creative conditions for the application of interactive technologies in practical activities, to solve creative professional tasks and situations, to plan their own professional activities.

The integration of the manifestations of indicators is the qualitative characteristics of the levels (high, medium, low). The determined criteria for the readiness of future specialists of socio-economic specialties to use interactive pedagogical technologies in professional activities, as well as their content characteristics by levels of manifestation, became the basis for our experimental study.

The ascertaining stage of the experiment.

At the ascertaining stage of the experiment, we determined the levels of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities. The study involved 302 students, future specialists in socionomic specialties, who are studying at the first (bachelor's) level of higher education. 152 people were selected for the control group, and 150 students for the experimental group. Future specialists in both groups studied under the same conditions and worked with teachers of the same qualification level.

Diagnostics of professional motivation of future specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities showed that only in 14% of participants in the experimental group and 15% of respondents in the control group, indicators of internal motivation (the desire to get satisfaction from professional activity, from the educational process, the possibility of self-development, self-realization and the focus on the use of interactive technologies in professional activities) prevail over indicators of positive external motivation (the possibility of career growth, salary, creation of working conditions in the workplace, the need for respect for the work performed by others, the need to increase social prestige), and negative external motivation (the desire to avoid criticism from the administration, management, colleagues; the desire to avoid possible failures and conflict situations in the team from the introduction of interactive technologies in professional activities) determines professional activity to a very small extent. 30% of the participants in the experimental group and 31% of the control group assess the role of external and internal positive motivations in professional activity as such, which outweigh external negative motivation, as equally significant.

In contrast, 56% of the respondents in the experimental group and 54% of the control group have a decrease in the indicators of internal and external positive motivation and an increase in the indicators of external negative motivation. This indicates that the interest and motivation of future specialists in socio-economic specialties to the use of interactive pedagogical technologies in professional activity are formed at a very low level, because the higher the interest of specialists in the use of interactive pedagogical technologies in practical activity, the more optimal the motivational complex: high significance of external and internal positive motivation and low – external negative.

To determine the level of professional knowledge about the use of pedagogical interactive technologies in professional activity, we conducted a questionnaire that showed the level of information awareness of the respondents. Using factor analysis using the Pearson criterion, data processing was carried out based on calculating the significance coefficient of questionnaire data (Herasymenko et al., 2000).

The results of the survey conducted at the ascertaining stage of the study showed that (Figure. 1):

low level of awareness – 54% of respondents in the CG have it, and 70% of respondents in the EG;

average level of awareness – 31% of respondents in the CG have it, and 19% of respondents in the EG;

high level of awareness – 15% of respondents in the CG have it, and 11% of respondents in the EG.

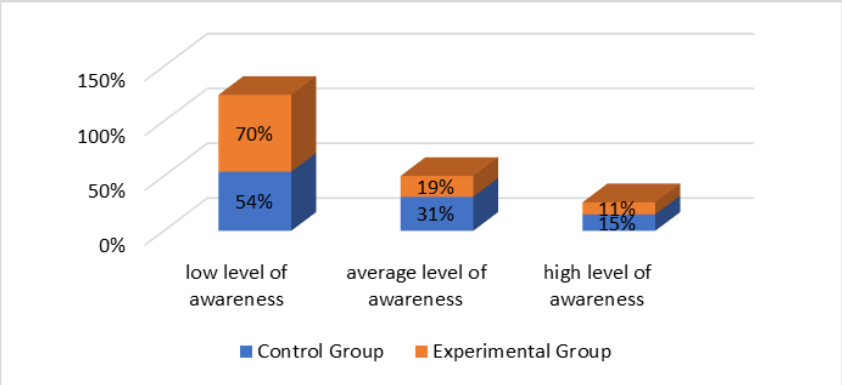

Figure 1: Awareness Levels in Control and Experimental Groups

Thus, there are difficulties in higher education institutions in forming the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in their professional activities, which is due to the following reasons:

lack of formation of knowledge and skills, and significant abilities of future specialists in socionomic specialties during the educational process;

low level of formation of the appropriate attitude and motives for choosing a future profession;

personal barriers and negative attitudes towards the use of interactive pedagogical technologies in their professional activities;

weak awareness of the knowledge gained by future specialists, special qualities, and values of the chosen specialty.

This summary substantiates and confirms the statistical analysis of the results of the experiment.

The ascertaining stage of the experiment in the control and experimental groups showed, by all criteria, the dominance of a low level of readiness of future specialists of socionomic specialties to use interactive pedagogical technologies in professional activity. Based on the analysis of the obtained results of the ascertaining experiment, through a survey, it was established that the majority of respondents experience difficulties during practical and professional activity in organizing, choosing, and applying interactive technologies.

Future specialists of socionomic specialties have low professional motivation to use interactive pedagogical technologies – CG students – 52%, EG students – 51%.

Future specialists in socionomic specialties have low theoretical motivation to use interactive pedagogical technologies – CG students – 57%, EG students – 54%.

Future specialists in socionomic specialties (CG students – 52%, EG students – 54%) have low practical and methodological readiness to use interactive pedagogical technologies, which, after conducting an ascertaining experiment, indicates a slight difference in generalized level indicators.

Therefore, we have identified and substantiated the pedagogical conditions for forming the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities.

The first pedagogical condition is the interaction and activation of students and teachers, and the introduction of systematic self-education into the process of professional training of future specialists in socionomic specialties.

To implement this condition, the content of the professional discipline «Innovative Technologies in Education» has been improved, and a special course «Formation of the readiness of future specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities» has been introduced.

The second pedagogical condition is the creation of an innovative practice-oriented educational environment of higher education. To implement the second pedagogical condition, a connection between practice and theory of the educational process has been ensured, and the necessary information, innovative material, and technical base have been created.

Analysis of the results of experimental work at the formative stage of the study.

CG students studied according to the standard methodology, and EG students and higher school teachers at the formative stage of the study introduced pedagogical conditions, a special course into the educational process of professional training, successfully used information and communication technologies after mutual interaction.

In EG, the use of various modern computers and gadgets with access to the Internet during the educational process has significantly increased, which has strengthened active communication and a positive tendency to search. Future specialists in socionomic specialties were engaged in modeling, developing group projects, "Cluster", various types of "Essay", creating "Professional Portfolio", "Stinkwaine", creating video lectures, presentations, and using interactions during the educational process of higher school.

The greatest interest of future specialists in socionomic specialties in applying the acquired professional knowledge was observed during the implementation of "STEAM" in solving real-life situations, which contributed to the creative direction of preparation for professional activity. EG students independently chose materials for interaction and directions of educational activity, using a computer, Internet resources, and information and educational resources, which strengthened their motivation.

To test the effectiveness of the proposed pedagogical conditions for forming the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activity, a formative experiment was conducted.

The obtained results of the study indicate that in the experimental groups at the end of the experiment, the indicators of the motivational criterion (compared to their beginning) were significantly higher:

social sphere – 12% (beginning of the experiment) and 32% (end of the experiment);

educational sphere – 11% (beginning of the experiment) and 29% (end of the experiment);

professional sphere – 8% (beginning of the experiment) and 22% (end of the experiment).

The number of future specialists in socionomic specialties who began to show a stable professional interest and interest in interactive and innovative activities, in the use of interactive technologies, felt the need to deepen practical and professional knowledge and theoretical and scientific knowledge has increased; they sincerely sought self-improvement, self-education, self-development in professional activities.

The data of the conducted experimental diagnostics confirm that in the future, specialists in the socionomic specialties of the experimental group, there was a significant increase in the level of motivational criterion in students' readiness to use interactive pedagogical technologies in professional activities. The data in the control group indicate insignificant dynamics.

The level of formation in the EG of the cognitive criterion of readiness of future specialists of socionomic specialties to use interactive pedagogical technologies in professional activities also showed significant results. In the experimental group, the final stage of the diagnostic section showed a high level of formation:

practical and professional knowledge – 1% (beginning of the experiment) and 22% (end of the experiment);

theoretical and scientific knowledge – 4% (beginning of the experiment) and 28% (end of the experiment).

The data in the control group at the final stage of the study indicate insignificant dynamics:

a high level of the cognitive criterion of readiness of the CG respondents was only 5% (theoretical and scientific knowledge) and 8% (practical and professional knowledge);

53% of students (theoretical and scientific knowledge) and 41% of students (practical and professional knowledge) have a low level of the cognitive readiness criterion of the CG respondents, and in the experimental group the corresponding indicator is 18% (theoretical and scientific knowledge) and 17% (practical and professional knowledge).

The data of the diagnostic section in the EG of the technological criterion of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities is confirmation of the positive component of the experimental work.

By the specified criteria and levels, a diagnosis of the technological criterion of readiness of future specialists in socionomic specialties was carried out at the first (bachelor's) level of higher education.

The advantage of the formation of readiness for the use of interactive technologies according to the technological criterion is shown by comparative data of the diagnostic sections of the experimental group students.

Approximately the same indicators of the levels of formation were recorded at the initial section (Figure 2):

in the experimental group: 11% – ability to apply interactive technologies; 13% – ability to show creativity in the application of interactive technologies (beginning of the experiment);

in the control group: 10% – ability to apply interactive technologies; 17% – ability to show creativity in the application of interactive technologies) groups (beginning of the experiment).

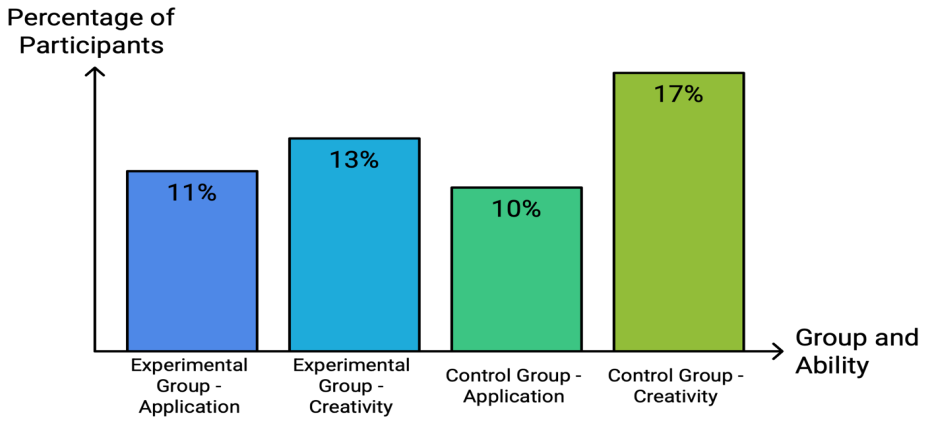

Figure 2: Initial Abilities in Interactive Technologies

A significant increase in the percentage was shown by the final diagnosis in the conditions of experimental learning.

A high level of readiness to apply interactive technologies in the EG was achieved by:

ability to apply interactive technologies – 37%, and in the CG – 18%;

ability to show creativity in the application of interactive technologies in the EG – 38%, and the CG – 18%.

It should be noted that 38% of the CG students did not master the use of interactive technologies in the educational process at all, and in the EG, this indicator was 17%.

To confirm (readiness levels) the obtained results of the conducted study in the experimental and control groups, the statistical one-sided Student's t-distribution criterion was used.

Thus, the effectiveness of the pedagogical conditions we have proposed for the formation of the readiness of future specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities is evidenced by the results obtained, since $t < t_{st}$, which we obtained in the study, because $0.10 < 1.53$.

The results of the study also indicate the productivity of the system of levels, criteria, and indicators in evaluating the results of the study.

As a conclusion, we state that before the experiment (Figure 3):

in the **CG**, according to all indicators, respondents with a high level make up 10%, with an average level make up 38%, and with a low level make up 52%;

in the **EG**, according to all indicators, respondents with a high level make up 10%, with an average level make up 37%, and with a low level make up 53%.

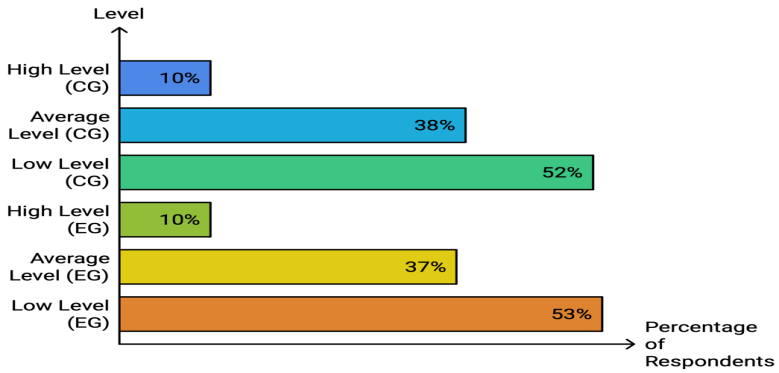

Figure 3: Distribution of Respondents by Level Before Experiment

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The results of the control section, which took place at the end of the experiment, showed changes after its conduct (Figure 4):

in the CG, 18% of respondents have a high level in all indicators, 44% of respondents have an average level, and 38% of respondents have a low level;

in the EG, 37% of respondents have a high level, 46% of respondents have an average level, and 17% of respondents have a low level.

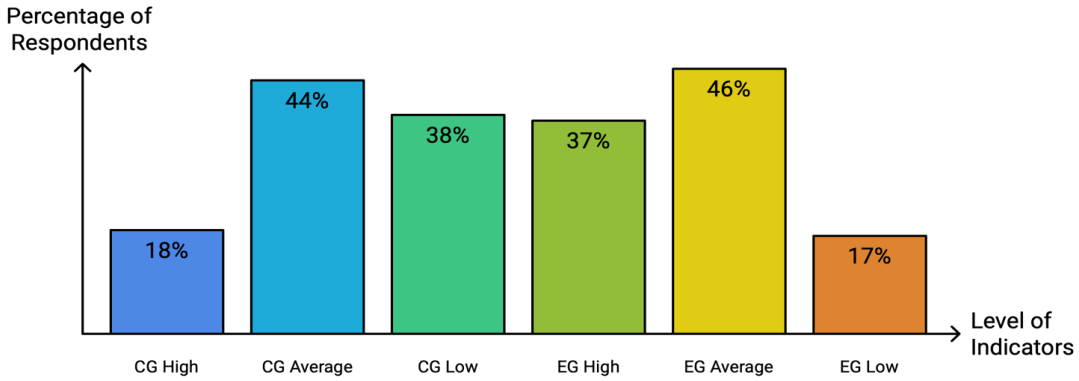

Figure 4: Comparison of Control and Experimental Groups

So, we state that the level of readiness of future EG specialists to use interactive technologies in professional activities is at a high and average level according to all criteria, and in the CG, at an average and low level. A change in the level of readiness of CG respondents from a low level to an average level, and the EG from a low level to a high level, has been established. The results of the study confirm the positive dynamics of the level of readiness of future specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities in the EG.

Given the importance of the problem under study, we recommend introducing thematic special seminars, seminars, pedagogical conditions, and the proposed special course into the system of training future specialists to increase the qualification level of specialists in socio-economic specialties and for the professional application of interactive pedagogical technologies in professional activities.

CONCLUSION

The main pedagogical technologies that are widely used in the professional training of future specialists in the socionomic sphere and which we applied in the experimental study are described. In our study, we considered the main principles that are important in the application of interactive pedagogical technologies by future specialists in socionomic specialties, which we relied on in the practical work of higher education.

At the ascertaining stage of the study, we defined and substantiated the criteria, indicators and levels of formation of the readiness of specialists in socionomic specialties to use interactive pedagogical technologies in professional activity, which allowed us to check the level of readiness of specialists in socionomic specialties to use interactive pedagogical technologies in professional activity and, accordingly, made it possible to determine the level of its formation.

Under the structure of readiness, we defined the criteria (motivational, cognitive, technological) and the corresponding diagnostic levels and indicators.

The integration of the manifestations of indicators is the qualitative characteristics of the levels (high, medium, low). The determined criteria for the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities, as well as their content characteristics by levels of manifestation, became the basis for our experimental study.

302 students, future specialists in socionomic specialties, who are studying at the first (bachelor's) level of higher education, participated in the study. 152 people were selected for the control group, and 150 students for the experimental group. Future specialists in both groups studied under the same conditions and worked with teachers of the same qualification level.

The ascertaining stage of the experiment showed that the interest and motivation of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities are formed at a very low level, because the higher the interest of specialists in the application of interactive pedagogical technologies in practical activities, the more optimal the motivational complex: high significance of external and internal positive motivation and low – external negative.

To determine the level of professional knowledge about the application of pedagogical interactive technologies in professional activities, we conducted a questionnaire that showed the level of information awareness of respondents. Using factor analysis using the Pearson criterion, data processing was carried out based on calculating the coefficient of significance of questionnaire data.

The ascertaining stage of the experiment in the control and experimental groups showed, according to all criteria, the dominance of a low level of formation of readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities. Based on the analysis of the results of the ascertainment experiment and during the student survey, it was found that the majority of respondents experience difficulties during practical and professional activities in organizing, selecting, and using interactive technologies.

Therefore, we have identified and substantiated the pedagogical conditions for the formation of the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities.

To verify the effectiveness of the proposed pedagogical conditions for the formation of the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities, a formative experiment was conducted.

The data of the conducted experimental diagnostics confirm that future specialists in the socionomic specialties of the experimental group experienced a significant increase in the levels of all criteria for readiness to use interactive pedagogical technologies in professional activities. The data in the control group indicate insignificant dynamics.

To confirm (levels of readiness) the results of the study in the experimental and control groups, the statistical one-sided criterion of Student's t-distribution was used.

The effectiveness of the pedagogical conditions we have proposed for the formation of the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities is evidenced by the results obtained, since $t < t_{st}$, which we obtained in the study, because $0.10 < 1.53$.

The results of the study also indicate the productivity of the system of levels, criteria, and indicators in evaluating the results of the study.

So, we state that the formation of the readiness of future specialists in the EG to use interactive technologies in professional activities is at a high and average level according to all criteria, and in the CG, at an average and low level. A change in the readiness levels of respondents in the CG from a low level to an average level, and in the EG, from a low level to a high level, was established. The results of the study confirm the positive dynamics of the formation of the readiness of future specialists in socionomic specialties to use interactive pedagogical technologies in professional activities in the EG.

The conducted research does not exhaust all aspects of the problem of training specialists in socio-economic specialties to use interactive pedagogical technologies in professional activities. We see the prospect of further research in deepening the methodological and theoretical aspects of interactive learning in higher education for students and teachers, and during the educational process of improving the training of future specialists in higher education institutions.

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