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Professional Training of Future Social Workers for R&D Activities

Oksana POVIDAICHYK[1],
Serhii KHOMENKO[2],
Kateryna VOLKOVA[3],
Vira KORNIAT[4],
Svitlana CHERNETA[5],
Lesia MARTIROSIAN[6]

[1] Uzhhorod National University, Uzhhorod, Ukraine, oksana.povidaichyk@uzhnu.edu.ua
[2] Sumy National Agrarian University, Sumy, Ukraine, homenko.symu@gmail.com
[3] Municipal establishment "Kharkiv Humanitarian-Pedagogical Academy" of Kharkiv regional council, Kharkiv, Ukraine, volkova.katya@meta.ua
[4] Ivan Franko National University of Lviv, Lviv, Ukraine, hodzinska@ukr.ner
[5] Lesya Ukrainka Volyn National University, Lutsk, Ukraine, svetlanachernetasu@gmail.com
[6] Lesya Ukrainka Volyn National University, Lutsk, Ukraine, lesja.lutsk57@gmail.com

Abstract: The article describes the conditions, forms, and methods of optimizing research activities of future social workers in the Ukrainian society in unstable times. It aims to offer a methodical model to develop research skills in future social workers and experimentally verify the system of training them for research activities. The research hypothesis is that one can discover more effective forms and methods of research activities due to the reasonable changes in educational conditions and the consideration of current trends in social work, which will lead to qualitative and quantitative results. Research methods are theoretical (generalization, comparison, pedagogical modelling) and practical (diagnostics, formation). The formative stage of the research provided a logical sequence of three stages: initial (1-2 courses); basic (3-4 courses); professional (1-2 courses of master's level). Experimental diagnostics involved the use of standardized methods, questionnaires, tests, expert evaluation. The total number of EG students was 118 people, the total number of CG students - 121. The analysis of the results shows that at the end of the experiment the level of readiness of future social workers for R&D in the experimental sample is much higher than in the control. The number of students with a high level of readiness for R&D in the experimental sample increased by 16.9% and is 24.6% (in the control sample this figure is 13.2%). The effectiveness of the developed system of professional training of future social workers for R&D is ensured by the implementation of certain pedagogical conditions: the formation of motivation for R&D; involvement of first-year students; providing research content of disciplines of fundamental, professional and practical training of social workers; use of differentiated learning technology in the process of research training of masters of social work; use of ICT (information and communication technologies).

Keywords: *motivation formation, research content, differentiated learning, application of ICT, training systems.*

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Introduction

In recent years, the number of crisis phenomena in Ukrainian society is growing, social problems are deepening. At the time of writing this article, many social problems have worsened in Ukraine: the spread of HIV / AIDS (335 people per 100 thousand of the population), drug addiction (148 patients per 100 thousand people), poverty (the number of families with insufficient income in the last five years increased by 50%), unemployment (about 10% of the economically active population), forced internal migration (more than 1,300,000 families who, as a result of the temporary occupation of part of the territory of Ukraine and the military operations in the east of the country, were forced to move to other regions) and etc. All this highlights the importance of social work as one of the most important professions necessary for the sustainable development of society. However, today in the context of global social transformations it is necessary to rethink the role of state social institutions and services and non-governmental organizations in the implementation of social work and ensuring social and legal protection of various categories of the population. It is also vital to constantly participate in performative and actual creation and acquisition of new knowledge by social workers within the limits of one's scientific-cognitive activities. This is because social situations and, consequently, scientific epistemes are extremely dynamic, changeable, and unpredictable.

The relevance of the article also lies in the fact that, in modern society, successful solution of social problems is impossible without the ability of social workers to assess the needs and resources of people, develop and implement social projects, programs and services, determine the effectiveness of various forms of social assistance, search for innovative methods of social support and others. This necessitates the formation of readiness of social workers for research (R&D) in the professional sphere, which involves mastering the logic of research, methods of analysis, design and forecasting of social phenomena and processes, the ability to implement professional functions based on scientific approaches to solving social problems**.** In this context, the problem of improving the general professional training of future social workers and preparation for R&D is actualized, which is reflected in the Laws of Ukraine "On Education" (2017), "On Higher Education" (2014), "On Scientific and Scientific-Technical Activities" (2015), The Bologna Declaration "European Space in Higher Education" (1999), the National Strategy for Education Development in Ukraine until 2021 (2013).

The importance of research activities of social workers is noted in the program document "Regulations on research in social work" (IASSW, 2014), adopted by members of the International Association of Schools of Social Work, which emphasizes the need to combine training and research in social work. Therefore, student research should become an integral part of social education at all levels.

The article aims to experimentally verify the system of training future social workers for R&D in typical (controlled) and specially created (optimized) educational conditions in Ukrainian educational institutions.

Concerning ethical requirements, both students and teachers gave their informed consent to participate in the diagnostic-formative experiment. Before this, they were informed about the right to withdraw from the experiment without other consequences for their status. Ethical committees of educational institutions approved the experiment and contributed to the implementation of the proposed methods for improving research activities of future social workers, as a pilot educational project, into the educational process.

The international relevance of the article lies in several aspects: a) for the first time, the issue of developing research skills in future social workers in Ukraine have been analyzed to disclose characteristics of sociological education in Eastern Europe; b) attempts have been made to adjust the latest trends to existing educational conditions in the post-totalitarian country by means of educational modelling (from top-down to individual, with the maximum choice of optional courses and flexible forms of education). The article may also be of interest to theorists and methodologists of sociological education, as well as specialists in comparative education.

Literature Review

It was also essential to study general trends in theoretical and methodological works of Ukrainian scholars to find out the reasons behind rather ineffective research activities of future social workers. The obtained results point out to existing contradictions at the propaedeutic stage. The authors of the article analyzed only works included in the recommended reading materials for future social workers.

The issue of research training of specialists in various professional fields in higher education institutions is studied by many scientists. Holub (2013) investigates the organization of research training of students in higher education institutions by means of a foreign language; the works of Vernydub (2012), Lysenko (2002), Uysimbayeva (2010) are devoted to the

problem of formation of research competence of specialists; the influence of research work on the formation of the personality of the future specialist is studied by Romashchenko (2014). Still, these works do not cover the issue of research activities of future social workers or, at least, sociological research methods.

At the same time, the analysis of the scientific literature shows that scientists do not pay enough attention to the problem of professional training of social workers for R&D. Only some aspects of the research question are covered in the works of domestic (Bukach, 2016; Lukashevych & Tulenkov, 2007) and foreign (Adams & Schvaneveldt, 1991; Bisman, 1994; Gerasymova et al., 2019; Nerubasska & Maksymchuk, 2020; Melnyk et al., 2019; Sheremet et al., 2019).

Theoretical analysis of the researched problem and study of the state of formation of readiness of social workers for R&D allowed to reveal a number of contradictions between:

– the presence of significant problems in the social sphere at the present stage of development of society and their lack of understanding from the standpoint of science;

– the objective need of society for social workers capable of carrying out research activities, and the insufficient level of their readiness for R&D in professional activities;

– strong potential of social and humanitarian, fundamental disciplines, practical training, volunteer and extracurricular activities of higher education institutions for the preparation of social workers for R&D and insufficient level of its implementation;

– the need to form the readiness of future social workers for R&D and the lack of a scientifically sound system of training social workers for such activities.

The authors of the article have also analyzed the main trends in the development of research skills in social workers based on the most-cited publications in Scopus. This has made it possible a) to identify the above-mentioned trends; b) to compare them with the existing problems of social work in Ukraine (differences and difficulties); c) to form a theoretical basis for creating the author's model to improve research skills in future social workers.

One of the scientific and practical problems in post-Soviet sociology is a large gap between theory and practice. Instead, many Western researchers already began to address this problem in the 1980s. Witkin and Gottschalk (1989) attempted to coordinate traditional sociology, social pedagogy, and psychology in the context of new prospects of real social

work. They justified a model of "open science" that would be less academic and follow real problems of support (Witkin & Gottschalk, 1989). They promoted "a scientific social work" based on the needs of social workers who sought scientific support to strengthen the knowledge gained via empirical experience.

Other researchers considered social workers' pre-research activities in terms of their professional reflection (Richey et al., 1987). This is mainly related to those institutions on whose behalf social workers provide support. Such institutions should stimulate social workers to evaluate their projects, key performance factors, adequacy of decision-making, planning and reporting in practice.

A detailed analysis of available studies on research activities (of social workers is now extremely relevant, especially for developing countries. This allows one to implement best practices in the "immature" system of a scientific social work in Ukraine. Ghanem et al. (2018) studied the evidence-based practice in social work, namely, how novice and experienced social workers solve professional problems and "differ in the reasoning processes they engage in as they are confronted with social work problems". The obtained results indicate that "experts differ from novices with respect to both their knowledge bases and the epistemic activities in which they engage" (Ghanem et al., 2018). Thus, it is essential to ensure interaction between novices and experts in finding scientific evidence-based solutions and stimulate individual and group search for scientific explanations of different phenomena. Also, it is important "to improve the practical problem-solving skills of students through situated teaching methods" (Ghanem et al., 2018).

As noted by Terziev et al. (2017), the need for research activities of social workers "is challenged by the dynamically changing economic and social environment, growing requirements to their qualifications and competences and the needs of gaining new skills and permanent development and improvement" (Terziev et al., 2017, p. 638). The scholars consider it necessary to lifelong learning and study the latest epistemological achievements of sociology and social work and incorporate them into personal pedagogical styles.

There are also suggestions on how to change social workers' attitude towards new knowledge through advance care planning which is mostly fragmentary or formal. Wang et al. (2018) distinguish the following six research themes relevant to both advance care planning and social worker: "social workers' attitudes toward advance care planning; social workers' knowledge, education and training regarding advance care planning; social

workers' involvement in advance care planning; social workers' perceptions of their roles; ethical issues relevant to advance care planning; and the effect of social work intervention on advance care planning engagement". Thus, one can conclude that reflection, self-organization, planning and vision in different socio-cultural contexts acts as the basis of links between daily practice and current sociological science.

It is also advisable to analyze the validity, acceptability, and thematic range of existing theories to promote high-quality research activities. Martínez et al. (2015) conducted "the first science mapping analysis of the social work field, which shows its conceptual structure and scientific evolution". The researchers claim that socially-oriented publications published for the last 70 years in the journals indexed in Web of Science fit into eight meta-topics, such as "children, social services, health care, violence, women, HIV/AIDS, social workers, and education" (Martínez et al., 2015, p. 257). In recent years, many new relevant segments have emerged within these meta-themes. However, they have not been sufficiently covered yet.

At the same time, one should find out how much novices are interested in the above-mentioned topics. Therefore, it is necessary to study a separate cluster of scientific theories in the context of improving general sociological and psycho-pedagogical erudition.

Materials and methods

The ascertaining and formative experiment was preceded by the definition of control and experimental samples for research work. Even though educational institutions involved in the experiment were chosen randomly, the only criterion for their selection was their provision of degree programmes on social work. The method of blind sampling (drawing) allowed to divide them into control and experimental. In particular, the preschool educational institution "Uzhgorod National University", as well as the Carpathian Institute of Entrepreneurship of the Open International University of Human Development "Ukraine" and the Melitopol State Pedagogical University named after Bogdan Khmelnitsky were chosen as the basis for in-depth research - experimental groups were formed in these institutions, the total number of students in which amounted to 118 people. Control groups were created at the Drohobych State Pedagogical University named after Ivan Franko, Dnipro National University named after Oles Honchar, Zaporozhye National University (total number of students - 121).

According to the developed system of professional training of future social workers for R&D, the formative experiment provided a logical

sequence of three stages: initial (1-2 courses of bachelor's level); basic (3-4 courses of bachelor's level); professional (1-2 courses of master's level).

Research methods. The pre-experimental stage employed such methods as generalization and comparison (trends and theories of social workers' research activities), as well as pedagogical modelling (of educational conditions). The following pedagogical forms and methods were used during the formative-diagnostic experiment: lectures-provocations, binary, construction, seminar-conference (involves the use of methods of opponents, moderation, Delphi), seminar-discussion (methods of brainstorming, Delbeck, business game). The practical classes consolidated theoretical material through the formation of R&D thesaurus, heuristic conversation, case technology, projects, discussion of research results of leading institutes and sociological groups, development of research portfolio, problem solving, laboratory work, where students improve research skills, master the methods of processing research results, develop skills in the design of research results in various forms. The authors of the article also conducted a comprehensive assessment of each type and form of activity before and after the implementation of new educational conditions in the framework of these methods. The quantitatively presented results were compared at the end of the experiment.

The implementation of these forms, methods and technologies was ensured through the use of certain teaching aids - printed (illustrative and handouts, laboratory work), technical and information and communication (multimedia projector, computers, software, cloud technologies). The latter, as well as the widespread use of ICT by social workers-practitioners both in the social management system and directly when working with people with disabilities, led to the introduction of the pedagogical condition "Application of ICT in research training of social workers."

The course of the formative experiment. The experimental work covered the following stages: preparatory (2012–2013), basic (2013–2019), generalizing (2019–2020).

At the first stage, the theoretical analysis of a problem is carried out, initial starting points of research are developed. At the beginning of the second stage, a statement experiment was performed and a formative one was started.

The formative experiment began in the first year of student study. At this stage, there was an adjustment of the work programs of the disciplines of fundamental, professional and practical training through the inclusion of issues of research content, development of educational and methodological support, its placement in Moodle, VONDS. Students received a general idea

of R&D, its structure, areas of application of research knowledge and skills, realized the importance and value of R&D for the progressive development of society, its place in professional activities. In order for future social workers to be actively involved in R&D, it was necessary to interest them in new activities. To this end, the research work was aimed at motivating future social workers to research through their encouragement, interest, personal example of teachers and more. The practice was aimed at mastering by students the basic methodological skills (during the study and analysis of social institutions, diary keeping), system and information (the use of ICT in the process of R&D), technical (preparation of a report on practice), etc..

The leading idea of the initial stage of the formative experiment was to ensure the logical continuity of the subject of student research through the development of the problem chosen in the first year, and its research during the following years of study. At this stage, the work of the scientific circle began, students participated in volunteer activities, mass actions, student scientific conferences, etc..

The basic stage involved students mastering the theory and methods of R&D, the development of research skills, accompanied by the complication of educational material, practice-oriented research tasks. The role of independent work was growing. Lecture forms of work were introduced, which provided for the involvement of students in their conduct (discussion, binary, heuristic conversation, construction, lecture-provocation). Preparation for seminars and practical classes required the development of a number of scientific sources, methodological literature, provided work with information resources. To help students to study the disciplines of natural science training ("Social and demographic statistics") developed and implemented educational and methodological program for independent preparation for classes. Future social workers performed research on the basis of social institutions and services and presented the results in term papers and bachelor's theses. Practical and laboratory classes were based on the principle of research modeling. For this purpose methods of cases, projects, portfolios which promote development of critical thinking were applied.

Practical training at this stage gave students the opportunity to get acquainted in more detail with the activities of social institutions and services; they could study any case of a specific solution to the situation on the basis of the institution, analyze it and evaluate (practice in the specialty); develop a social project (research). There was an increase in student activity in the preparation of reports, speeches at conferences and publications in student scientific journals compared to the previous stage.

The most enterprising students were involved in the implementation of international projects (some of them had the opportunity to learn about the experience of social work and research in Germany, Turkey, Hungary, the Czech Republic, etc.). Activation of R&D of future social workers, mobilization of their creative potential and self-realization was facilitated by the activity of scientific student society and problem groups, participation in sociological research, R&D in the process of volunteering, Olympiads, competitions of scientific works.

During the *professional stage* of the formative experiment there was a consolidation of knowledge acquired at the previous stage, the development of personal attitudes of students to R & D, the formation of skills to consciously apply research methods in the practice of social institutions and services.

At this stage of the experiment, the pedagogical condition "Use in the process of research training of masters of social work technology of differentiated learning" was introduced. Its implementation took place during the first semester of master's studies and involved identifying students' needs for additional training, development of educational and methodological support, individual counseling of students, elective work. The use of individual and group creative tasks, cases, trainings, problem situations, expert methods, which required interdisciplinary knowledge and creativity in solving problems, increased the motivation of undergraduates to master professional and research knowledge, provided skills development in a team. The formation of students 'research skills was facilitated by filling them with a virtual educational research environment with materials of research content, which increased the importance of undergraduates' work.

Round tables, conferences, seminars-discussions with the participation of professionals, graduates of the specialty "Social Work", leading scientists who have a positive experience in R&D, including foreign ones, were held. The participation of students in the activities of the student scientific society was intensified, they became initiators and organizers of various events (conferences "Humanitarian work with animals", "Modern types of social manipulation", intellectual games "Brain Ring", "What? Where? When?").

During the research practice, students performed independent research (on the basis of a social institution), the results of which were presented at conferences and seminars, including international ones, and in master's theses. Scientific and pedagogical practice is aimed at forming the abilities of students to pedagogical activity. R&D during this practice included the analysis of educational and methodological support (including

electronic), which regulates the training of future social workers, observation, interviews with teachers and students, development of lecture notes, seminars, diary, preparation of a report on the work done.

The growth of the quality of research training of future social workers was facilitated by their participation in academic mobility programs (Gerasymova et al., 2019) (some students studied for one semester at Charles University (Prague, Czech Republic), Pomeranian Academy (Slupsk, Poland) and etc.

The study of the disciplines of the first group provided for the introduction of the pedagogical condition "Ensuring the research content of the disciplines of fundamental, professional and practical training of social workers." This was realized through problem lectures, discussions, a lecture - a round table, where there was an acquaintance with the basic concepts of theory and research methods. To consolidate theoretical knowledge, a seminar was held (in particular, during the study of "Introduction to the specialty" students get acquainted with the basics of scientific work in HEI, as well as basic knowledge of R&D in social work), seminar-tour (venue in the library), seminar-debate ("Modern young man - what does he like?", "Choosing a profession: prestige or vocation?", "HIV / AIDS – is it a problem of society or personality?", etc.).

Practical classes were aimed at consolidating theoretical knowledge, mastering the conceptual and terminological apparatus of the discipline and research (compilation of a dictionary, interaction, method of metaphors). In the context of the implementation of the technology of development of critical thinking, the method of text analysis was used. In particular, students were asked to read an excerpt from the work "Reflections on the method to properly direct their minds and seek truth in the sciences" (Descartes, 2015) (discipline "Philosophy") and answer the following questions: "What is science?", "Basic rules of the method "," What is meant by the method of R. Descartes? ". The students recorded the answers in the form of an essay. In addition, students performed various research tasks (for example, to study the level of intercultural competence of the population determined the number of streets in Uzhgorod, named after prominent figures - representatives of national minorities in Transcarpathia, found out the availability of literature in minority languages in bookstores and libraries).

The development of students' research skills took place through writing essays, abstracts, theses, interviews, questionnaires ("Socialization of foreign students", "Study of students and social workers-practitioners on the importance of sociological knowledge in their activities"), performing adapted research tasks, the need to develop which is due to the introduction

of the pedagogical condition of involving students in R&D from the first year. Its implementation in the process of classroom work also provided pedagogical assistance to students through individual and group consultations, instruction.

Direct R&D training of future social workers was carried out during the study of research disciplines: "Fundamentals of Scientific Research", "Methods and Organization of Social Research", "Research Seminar", "Social Design and Forecasting" and others. In the process of mastering them, the methodology and research methods are mastered, search skills are developed (including on the Internet), work with scientific literature, its analysis, ability to develop social projects, etc.

Independent work included summarizing lectures, developing a mini-dictionary, working with textbooks, Internet resources, writing essays, preparing for seminars, tests, exams, research tasks (for example: to conduct a content analysis of the proposed article "Deviant behavior of adolescents", to draw conclusions about hidden information, draw up in the form of an abstract).

During the course and qualification works, the cross-cutting problems studied by students from the initial courses were taken into account. The possibility of long-term work on the problem contributed to the mastery of students' knowledge of research, as well as the accumulation of some empirical material, which is reflected in the experimental part of these works. For example, during the master's thesis on the adaptation of visually impaired people to society, students developed a menu for some cafes and restaurants in Uzhgorod in Braille and others.

An important role in the process of research training of future social workers belongs to practice. During the practical training there is a formation of students' worldview and mastering of knowledge about the social sphere, problems, social processes in society and forms of assistance to different categories of people. Through the implementation of various research tasks (description of the social institution according to the scheme: subjects - management - purpose - functions - resources - content - objects (introductory practice), development of a model of social institution (psychological and pedagogical), research-case description (practice in the specialty), social project (research), sociological research (research), development of lecture notes and practical classes (scientific and pedagogical), research skills of future social workers are formed.

R&D activities were carried out during volunteer work. For example, in recent years, as part of the actions "16 days against violence", "Choose health - save lives", etc., which were conducted by social institutions and

services in Uzhgorod, student volunteers together with social workers-practitioners conducted surveys and interviews among different age categories of the city's citizens to study the opinion of the population on current social issues (violence, drug addiction, alcoholism, etc.). The students recorded the results of their activities in individual and group presentation portfolios.

Extracurricular research training included holding scientific and practical conferences and seminars ("Social work through the eyes of students and practitioners", "Social work with the homeless"), where students had the opportunity to present the results of research to a wide audience and publish reports in student scientific journals. "Current issues of sociology and social work", "Socio-political studies". During the conferences there were speeches, presentations, watching movies, discussing them.

An essential aspect of research training is the participation of students in competitions and contests of scientific papers. For the first time, the All-Ukrainian competition of scientific works in the specialty "Social Work" was held in 2018 on the basis of Uzhgorod National University. 73 works of students from 40 institutions of higher education of Ukraine were presented at the competition. 2 students (participants of the formative experiment) received diplomas of I and III degree.

Results

In the course of the research it was found that the greatest opportunities for the formation of research skills of students have disciplines (fundamental, professional and practical training: "Philosophy", "General Sociology", "Fundamentals of pedagogy and psychology in social work", "Introduction to the specialty", " Theory of social work "," Technologies of social work "," Social informatics ", research direction:" Fundamentals of scientific research "," Methods and organization of social research "," Social and demographic statistics "," Social design and forecasting "," Scientific research seminar "," Innovation in social work ") and practice.

The obtained results show that the study of a number of disciplines (for example, "Social Informatics", which is aimed at the formation of information culture) through independent search work on the Internet, calculation of statistical indicators using a spreadsheet editor, research and processing in SPSS, etc. contributed to improving the level of system information skills. To get acquainted with the capabilities of information systems in social institutions and services (ADPS / COMTECH (automated data processing system based on computer technology, operates in the Departments of Social Protection), UIAS (unified information-analytical

system of the employment center), UST (unified service technology) of the unemployed population)) excursions were conducted, during which students were shown the automated workplaces of the institution's specialists and the features of using these systems to perform certain operations.

As part of the implementation of this pedagogical condition developed a virtual educational research environment - Google-disk, which contains teaching materials, guidelines, reports on interesting sociological research, collections of scientific papers of students used by them in preparation for practical and seminar classes, independent work.

During the study of research disciplines at the master's level, the technology of differentiated learning was implemented. Because some students obtained a bachelor's degree in related specialties when entering the master's program, they had a lower level of readiness for R&D. Therefore, master's degree training provided a differentiated approach through the development and application of appropriate training and methodological support (textbooks, guidelines, multilevel tasks for independent work (reproductive, combined, creative)), the introduction of individual and group forms of work, consultations, electives.

The formation of research skills was facilitated by the participation of students in sociological research, which is carried out by teachers of the department, as well as public organizations and social institutions. In particular, a survey was conducted among Uzhgorod National University student youth to determine their level of satisfaction with the quality of educational services, a survey of the population on the problem of improving policing, studied the values and migration attitudes of young people. Various researches were carried out by students within the framework of their participation in the implementation of projects ("Generation 2020", "Really together", "Kolping's case in Ukraine", "Friends", etc.). Students also participated in international sociological research (in 2014, teachers and students of the Department of Sociology and Social Work of Uzhgorod National University and Debrecen University (Hungary) conducted a survey among students of the two countries "Analysis of students' expectations for future work". 2017 - "Study of mental health of students").

The enrichment of research experience was also facilitated by the participation of students majoring in "Social Work" in the certified program "Roma Studies", which was implemented at the Faculty of Social Sciences during 2016-2017 by teachers of Uzhgorod National University together with the public organization "Romani Cherhen". Leading scientists from the Institute for Strategic Studies, domestic and foreign free economic zones

were invited to give lectures. The program included research (questionnaires, interviews with Roma, observations), trainings, master classes. This program contributed to the development of R&D skills in a multicultural environment.

The research proves that extracurricular work plays an important role in the process of preparing social workers for R&D. A scientific circle was held for junior students, where future social workers mastered the basics of scientific work, research practice, and skills of presenting their results. Through the use of methods such as analytical interviews, information searches, conversations, students identified research topics, performed them, and presented the best results at student conferences and seminars. In the senior years, students continued to work in student scientific societies and problem groups ("Social work in a multicultural environment", "Technologies for the development of social projects", etc.).

The formation of students' motivation for R&D was facilitated by the opportunity to apply in practice the knowledge gained during theoretical training, reliance on their life experience, interest, creating a situation of success, emotional support, encouragement, public recognition of achievements, publication (presentation) of their own research.

Regarding quantitative results, one can observe that at the initial stage of the experiment, the diagnosis of the level of readiness of future social workers for R&D (statement section, Table 1) was carried out, which provided for the use of standardized methods, questionnaires, tests, expert assessment. The results of this section showed mostly low and medium level of readiness of students for R&D, which necessitated the introduction of the author's pedagogical system.

At the end of the professional stage, a final section was conducted, which made it possible to identify the dynamics of the levels of readiness of future social workers for R&D during the experimental work (Table 1).

Table 1. *Generalized results of formation of readiness of future social workers for research activity (%)*

Source: Authors' own conception

Section	Samples	Equable			
		Low	Medium	Sufficient	High
Beginning of the experiment	Control	29,8	39,7	22,3	8,2
	Experimental	30,5	38,1	23,7	7,7
End of the experiment	Control	18,2	38,0	30,6	13,2
	Experimental	8,5	23,7	43,2	24,6

The analysis of the obtained results shows that at the end of the experiment the level of readiness of future social workers for R&D in the experimental sample is much higher than in the control. Thus, the number of students with a high level of readiness for R&D in the experimental sample increased by 16.9% and is 24.6% (in the control sample this figure is 13.2%). The number of future social workers in the experimental sample with a sufficient level of readiness for R&D increased to 43.2%, in the control group this figure is 30.6%. In the experimental sample, the indicators of low and medium level of readiness for R&D decreased to 8.5% and 23.7%. In the control group, these figures are higher - 18.2% and 38%, respectively. The application of statistical criteria and Wilcoxon allowed to confirm with a probability of 0.95 that before the experiment the students of the control and experimental samples did not differ in their level of readiness for R&D, and as a result of the formative experiment the level of readiness of future social workers for R&D in the experimental group is much higher. than in the control. Thus, the results of the study testify to the effectiveness and efficiency of the system of professional training of future social workers for R&D.

Discussion

The scientific novelty of the obtained results is that the theoretical and methodological bases of professional training of future social workers for R&D in modern Ukraine have been, for the first time, comprehensively defined and substantiated, namely:

– *for the first time* a system of professional training of future social workers for R&D was developed and tested, the main components of which are: target (the purpose of professional training of future social workers for R&D); theoretical and methodological (is the conceptual basis for the formation of readiness of social workers for R&D, based on the integration of methodological approaches, general and specific principles that determine the direction of implementation of theoretical and practical aspects of R&D), procedural (stages and content of training for future social employees to R&D through the use of the potential of academic disciplines, practice, independent work and qualification research, extracurricular activities, volunteer work), technological (didactic support of the educational process through the implementation of forms, methods, technologies and teaching aids taking into account the specifics of training future social workers for R&D), analytical and effective (forms and methods of diagnosis and assessment of readiness of social work specialists for R&D, levels of readiness, criteria and indicators of their definition, result); the pedagogical

conditions of professional training of future social workers for R&D are determined: formation of motivation of future social workers for research activity; involvement of first-year students in R&D; providing research content of disciplines of fundamental, professional and practical training of social workers; use of differentiated learning technology in the process of research training of masters of social work; application of ICT in the process of research training of future social workers;

– *specified:* the content of the concepts "research activities of social workers", "readiness of future social workers for R&D"; methodological functions of R&D; a set of socio-economic, managerial and pedagogical factors that actualize the research activities of social workers; the structure of the model of the research environment of social work;

– *improved:* content, forms, methods, technologies and means of training future social workers for R&D.

The classification of research skills of social work specialists (methodological, information-analytical, diagnostic, projective, prognostic, organizational, communicative, system-informational, technical) has been further developed; the essence of the research roles of future social workers, the assimilation of which is a mechanism for forming their readiness for R&D.

Besides, the article justifies the use of educational technologies (thematic, integrated) based on personality-oriented learning. Such technologies allow one to implement practical and cognitive-scientific activities into the framework of both proactive interaction and "continuing professional development" that lead to self-development, self-correction, and self-identity" (Savelchuk, 2013). These forms of work also involve innovative professional and cognitive activities with studying the classics of sociological science, as well as the latest epistemology that has emerged from the analysis of recent practices of social support in different countries.

The article proves that an optimal combination of production and research is possible only in the context of continuing education. The only obstacles are "the issue of trust" in innovative social theories, psychological comfort when using them in practice and recognition of scientific work as part of professionalization by students and novices.

Importantly, the article confirms the opinion of Harvey et al. (2013) on the need for a strategy "to build practitioner research capacity to increase the research base for social work". Thus, research activities should correspond to the subject of social work, which is the focus of the environment" (Harvey et al., 2013).

This article can be a starting point for the introduction of sustainable development principles into the system of professional training of future social workers based on an integrated systemic-synergetic approach (Kabus, 2017). "Pure science" is of no interest to anyone and should not only be integrated with practice. Science should be open, predictable and demonstrate the prospects for improving both social work and the social worker's personality.

Finally, the article does not disclose all the aspects of the issue in question. Rather, it continues to formulate a list of the already existing "12 grand challenges for social work" (Gehlert et al., 2017). In this regard, the authors of this article find it necessary to create a transdisciplinary team science, research partnership, community involvement, considering the complexity of social phenomena proposed by Gehlert et al. (2017). However, it is expedient to supplement this issue with the challenges of the Ukrainian post-Soviet society, which, unfortunately, still exists on the margins of social theory and practice.

Conclusions

The developed system of professional training of future social workers for R&D reflects the structural and functional interaction of the main components of training: target (goal aimed at forming the readiness of future social workers for R&D), theoretical and methodological (methodological approaches, general and specific principles, methodological functions of R&D), procedural and semantic (stages (initial, basic, professional), academic disciplines: fundamental, professional and practical training: "Philosophy", "General Sociology", "Fundamentals of Psychology and Pedagogy in Social Work", "Introduction to the specialty", "Theory social work "," Technologies of social work "," Social informatics ", research direction:" Fundamentals of scientific research "," Methods and organization of social research "," Social and demographic statistics "," Social design and forecasting "," Research seminar "," Innovations in social work "), practice (introductory, psychological and pedagogical ochichna (volunteer), specialty, research, scientific-pedagogical, scientific-research), independent, volunteer work; technological (forms: lectures (problem, conference, binary, provocation, design, discussion, round table), seminars (proseminar, excursion, conversation, briefing, debate, business game), practical and laboratory classes, individual, group work, electives, consultation, preparation of an abstract, course, bachelor's, master's thesis, scientific article, joint publication of a teacher and a student, methods: annotation of texts, practice diary, analytical interview, information search, "Living

Library", interaction, method of metaphors, thesaurus formation R&D (use of pedagogical narrative, "exhaustion" of the concept of existing meanings, differentiation of concepts, "imaginative" actions, etc.), method of opponents, moderation, problem solving, research tasks (adapted, differentiated), creative work, discussion of results research conducted by leading institutes, sociological groups, methods of Delphi, Delbeck, technologies: problem, differentiated, concentrated learning, development of critical thinking, project, game, training, portfolio, cases, success situations; means: educational and methodical complexes of disciplines; normative documents on professional activity and R&D; ICT tools (multimedia technologies, audio and video fragments of situations for analysis, movies to watch, search engines, Web-pages of social and educational institutions, government organizations, Moodle system, VONDS, SPSS, office applications). Extracurricular activities: meetings with specialists from social institutions and services, leading scientists, research group, problem group, student scientific society, excursion, workshop, internship (including foreign free economic zones), summer school, conference, seminar, round table, mass actions, volunteer work, Olympiad, competition of scientific works, training, master class, participation in projects, sociological researches which are realized by department, social establishments, joint research with students of other specialties); analytical and effective (criteria, indicators and levels, readiness of future social workers for R&D; result (readiness of future social workers for R&D).

The effectiveness of the developed system of professional training of future social workers for R&D is ensured by the implementation of certain pedagogical conditions: the formation of motivation of future social workers for R&D; involvement of first-year students in R&D; providing research content of disciplines of fundamental, professional and practical training of social workers; use of differentiated learning technology in the process of research training of masters of social work; application of ICT in the process of research training of future social workers.

The analysis of the results of the formative experiment showed that the application of the developed system of training future social workers for R&D, which is implemented under certain pedagogical conditions, is appropriate because it provides a higher level of readiness for R&D than under the traditional education system. Thus, the number of students with a high level of readiness for R&D in the experimental sample increased by 16.9% and is 24.6% (in the control sample this figure is 13.2%). The number of future social workers in the experimental sample with a sufficient level of readiness for R&D increased to 43.2%, in the control group this figure is

30.6%. In the experimental sample, the indicators of low and medium level of readiness for R&D decreased to 8.5% and 23.7%. In the control group, these figures are higher - 18.2% and 38%, respectively. Using the methods of mathematical statistics (criteria and Wilcoxon) proved the reliability and reliability of the results, which indicates the effectiveness of the system of professional training of future social workers for R&D.

The results obtained in the course of research work do not claim to be an exhaustive solution to the researched problem. Further study of the following aspects is necessary: development and implementation of complex technologies of research training; creation of a creative research environment in HEI, which contributes to the formation of the personality of the research specialist; ensuring the construction of training courses with a research trajectory; creating favorable conditions for the presentation and dissemination of research results of future social workers.

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