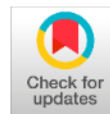


Developing research competence in students through the study of socio-humanitarian subjects



Olena Hryn^a  | Hanna Domanova^b  | Liudmyla Pavlenko^b  | Olena Striliuk^b  | Liubov Shara^b 

^aDepartment of History of Ukraine, Archeology and Local History, O. M. Lazarevsky Educational and Research Institute of History, Social Sciences and Humanities, T. H. Shevchenko National University "Chernihiv Colehium", Chernihiv, Ukraine.

^bDepartment of World History and International Relations, O. M. Lazarevsky Educational and Research Institute of History, Social Sciences and Humanities, T. H. Shevchenko National University "Chernihiv Colehium", Chernihiv, Ukraine.

Abstract In today's world, employers value knowledge and the ability to apply it in practice, analyse data and propose solutions. Research competence is becoming an essential factor in professional training. The study aims to develop students' social sciences and humanities research competence. To achieve the aim of the study, various methods were used: theoretical, synthesis, statistical analysis, survey and observation, and correlation analysis. It has been established that it is necessary to train students to conduct research and critically analyse social phenomena in the context of globalisation, innovative changes, and the growing importance of science and technology. It is outlined that funding for the humanities in Ukraine is less than for the technical sciences, but the state, international grants, and private foundations support it. Changes in spending reflect economic and social processes. The survey showed that students feel prepared for social sciences and humanities research but have gaps in experiments and surveys. They are satisfied with the support of teachers but need more practical tasks and resources to improve their skills. The analysis of the curricula showed that there are essential elements for developing research competence. However, there is room for improvement, mainly through more practical training, the use of accurate data and the expansion of methodological support. The correlation analysis showed that the quality of teaching materials and teacher support positively impact students' research competence. This highlights the importance of quality teaching materials and student support for developing research skills. A list of recommended pedagogical technologies for effectively developing students' research competence is presented. It has been established that integrating these recommendations will improve the development of research skills in students studying social sciences and humanities.

Keywords: communicativeness, analytical work, education seekers, pedagogical technologies, critical thinking, methodology

1. Introduction

The importance of a competency-based approach to education, including developing research competence, is growing today. This allows students to acquire knowledge and actively apply it in new situations, think critically, conduct research and draw conclusions on their own. Employers increasingly value knowledge and the ability to apply it in practice, conduct research, analyse data, and propose solutions based on the results obtained. This makes research competence an essential element of professional training. Socio-humanitarian disciplines play an important role in forming personality, developing critical thinking, and understanding social processes, cultural phenomena and values. They have great potential for developing research skills in students, as they allow them to analyse various sources of information and work with different approaches and research methods. Modern approaches to teaching, such as project-based learning, the use of information technology, and the active involvement of students in research activities, require a rethinking of traditional teaching methods. Developing research competence is an essential component of these innovative educational technologies.

Thus, the study of this problem is of great importance for the development of modern education, improving its quality and compliance with the requirements of modern society and the labour market.

The research aim is to develop theoretical and methodological foundations and practical recommendations for forming students' research competence in teaching social sciences and humanities.

The literature analysis on the problem of forming students' research competence in teaching social sciences and humanities demonstrates the diversity of approaches to this issue. The main focus is on such aspects as the role of critical thinking, integrating research methods into the educational process and the importance of interdisciplinary connections. Many authors emphasise that forming research competence is closely related to developing critical thinking, the ability to analyse and evaluate scientific texts, formulate reasoned conclusions and solve complex issues. The role of research competence in the career development of scientific and pedagogical staff and its importance for the European integration of national science



are revealed. The research competence of a scientist is defined as a condition and result of professional activity, which consists of cognitive, activity and value components (awareness of the importance of science and academic integrity (Yaroshenko, 2019).

It is noted that forming students' communicative competence is a process resulting from their professional training. It includes motivational and cognitive components (awareness of the needs and motives of the individual, positive attitude towards colleagues), content (knowledge of the norms of communication and conflict resolution), and reflective components (effective use of communication skills in interaction). Identifying these components allows the development of a technology for forming students' communicative competence and implementation in the university's educational process (Xiao, 2018). The study showed that students with a high level of resilience can develop in any condition, perceiving adverse events and critical situations as new challenges. Researchers are advised to integrate these scientific findings into educational, organisational and training processes (Koval et al., 2024).

According to scientists from Kazakhstan, the formation of research competence of future mathematics teachers, taking into account the modern educational model and the development of information technologies, requires improving student training, readiness for practical work at school and participation in social and economic life, as well as the introduction of innovative teaching methods in pedagogical universities. The results showed that students are willing to use information technologies in scientific research. The article discusses the methods of using information technologies in research activities and suggests their use for developing students' research competence (Kaskatayeva et al., 2018). Scientists have proposed a structural and functional model for the formation of research competence of master's students majoring in "Social Pedagogy and Psychology of Self-Knowledge", which will improve the research process at the university in order to form the research competence of future specialists in various fields (Ismuratova et al., 2018). At the same time, special attention should be paid to research practice, which contributes to developing teacher-researcher skills, mastering modern methods of analysing scientific information and solving pedagogical problems (Katende, 2023). A diagnostic of the critical thinking skills of university students based on the levels of literal, inferential, and critical reading has been proposed (Zuluaga et al., 2020), founded on their competence in teaching socially sensitive issues in secondary school. The sample included 39 future teachers and nine teachers taking a methodology course. The mixed-methods study showed that the participants considered themselves competent but did not acquire the necessary skills in the course. The impact of contextual and personal factors on teaching these topics was identified. Based on the results, the author created a competency framework for transformational pedagogy and curriculum development (Zayed et al., 2019). The scientific publications highlight the importance of professional communication as a complex socio-psychological phenomenon associated with the training of future engineers and reflect the level of their integrative knowledge, professional skills and abilities. The need to develop creative thinking, initiative in decision-making and teamwork skills for effective problem-solving is emphasised (Palahniuk, 2022).

The training of qualified lawyers is particularly relevant to the Ukrainian legal profession, which is facing the challenges of ensuring the development of the rule of law and protecting citizens' rights violated by military aggression. The article analyses the problems of lawyer training and their causes and suggests approaches to creating a realistic model of legal education development (Antoshkina et al., 2023). Using the philosophical dialectic method, the authors examine the state of legal education and propose directions for its reform, mainly through the prism of legal practice's needs.

American scholars discuss the interrelationships between the US education system, textbook supply, and publishing and highlight the mechanisms for managing these processes (Ciraso-Calí et al., 2022). The analysis helped clarify the role of textbooks in the development of American education, trends in the provision of textbooks to schools, mechanisms of interaction at different levels, and the role of actors in textbook approval (Elbrekht et al., 2022).

Ukrainian scientists conducted a reading skills diagnosis and statistical data analysis to identify differences in reading comprehension, speed and reading method in children diagnosed with ASD compared to children with normative development. A correlation was found between the degree of ASD and reading skills: the higher the severity of the disorder, the lower the reading scores. The study results aim to develop support programmes for children with ASD in inclusive education (Kucherenko et al., 2024).

The results of the pedagogical experiment confirmed the effectiveness of innovative forms of theoretical training, such as lectures and seminars, for creating research competence for future specialists in humanities classes. They allowed us to identify the main directions for improving lectures and seminars to develop students' research competence based on the effective organisation of cognitive activities in theoretical and practical classes. Further research can focus on developing a person's research culture in the context of lifelong learning (Marushkevych et al., 2022).

Latvian scientists believe that doctoral students play a vital role in the sustainable development of society, which requires adequate research competences. The authors identify three groups of competences: informative, communicative, and instrumental. A study among doctoral students at Daugavpils University (Latvia) showed the strengths and weaknesses of their research potential and the most important competences for future researchers (Olehnovica et al., 2015).

Statistical analysis revealed a positive correlation between research competence and teacher engagement, particularly regarding training and position. However, teachers' work was hampered by a heavy workload. The results highlight the need to develop research skills to improve the quality of education (Comon & Corpuz, 2024).

Recent research shows that fostering positive attitudes and engaging students in social and political practices are important educational assets, especially in project-based learning schools. A democratic school culture contributes to the effective development of ethical behaviour. The social and political activities of project-based learning provide students with opportunities for long-term engagement, contributing to effective decision-making and the integrity of school life. The article explores ways to introduce new ethical participation through project-based learning, analysing the challenges and prospects of this approach with a focus on a meta-analysis of existing research (El Bakkali, 2020). The formation of research competence in a master of pedagogical university ensures readiness for innovation in the education and training of highly qualified personnel, which is crucial (Shtonda et al., 2022).

2. Methods

Various research methods were used to achieve the purpose of this study. The theoretical method was used to analyse the works of scholars in pedagogy, psychology, sociology and other social sciences and humanities related to the development of research competence. In order to combine different theoretical approaches to form a holistic view of the process of research competence development, the synthesis method was employed. Statistical analysis was used to identify changes in the number of researchers involved in research and development in Ukraine and to determine trends in spending on research and experimental development in the social sciences and humanities. Based on a survey of students and teachers, the research competence level and the effectiveness of the teaching methods were determined. The participants of the study were students (50 people) and teachers (12 people) of the Department of History of Ukraine, Archeology and Local History of the Educational and Research Institute of History, Social Sciences, Humanities and Arts named after O.M. Lazarevsky of the Chernihiv National University named after T.G. Shevchenko "Chernihiv Collegium", Chernihiv (Ukraine). The observation method was used to study the educational process and interaction between students and teachers in the context of research competence development. The analytical study of curricula, plans, lecture materials, and practical classes in the discipline "Fundamentals of Sociology and Political Science" was used to identify the elements contributing to forming research competence based on the content analysis method. The correlation analysis was used to determine the relationship between various indicators that characterise the level of research competence and the factors that influence it. These combined methods allowed us to comprehensively study the process of forming research competence in students and develop recommendations for using practical pedagogical approaches to improve them.

3. Results

The development of research competence in students studying social sciences and humanities in Ukrainian universities is a critical element in the development of modern education. In the context of globalisation, innovative changes, and the growing role of science and technology, it is essential to train students capable of conducting independent research and critical analysis of social phenomena. The number of researchers in Ukraine has decreased dramatically over the past 15 years (Figure 1).

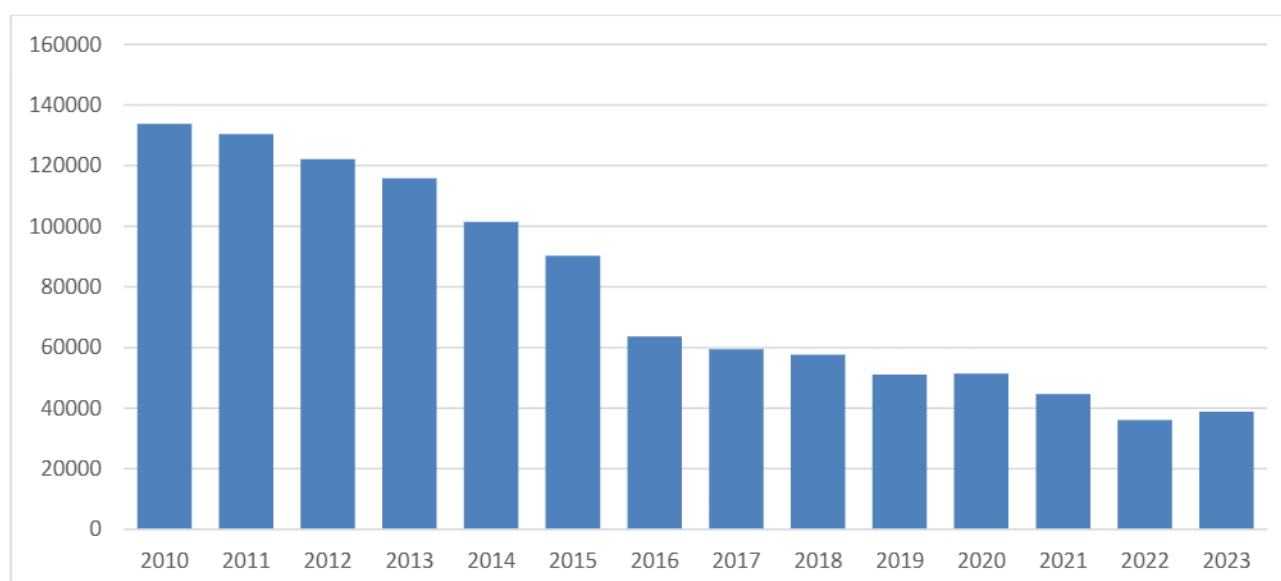


Figure 1 Number of researchers involved in R&D in Ukraine (2010-2023), persons. *Source:* SSSU (2024).

Funding for research and experimental development in Ukraine's social sciences and humanities is less extensive than in the technical and natural sciences. However, it is also supported through several important channels: state funding,

international grants and programmes, international organisations and private foundations that support research in the social sciences and humanities, and private charitable foundations and initiatives. Universities often receive support through international cooperation projects and national competitions for social sciences and humanities research. This includes grants to support young researchers, conferences, and participation in international symposia. Although funding for the humanities is less developed in Ukraine, a number of national and international sources of support contribute to the development of these disciplines. Trends in spending on research and experimental development in the social sciences and humanities in Ukraine reflect the country's complex economic, political, and social processes (Figure 2).

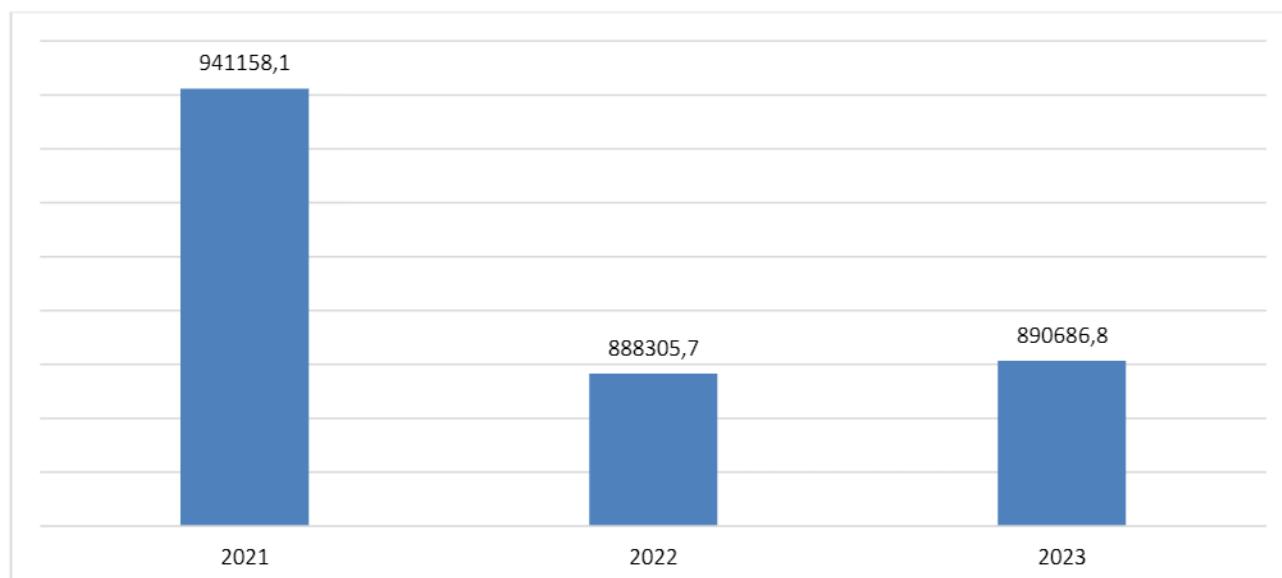


Figure 2 Expenditures on research and experimental development in social sciences and humanities, UAH thousand. *Source:* SSSU (2024).

The main trends include a general decline in state funding, a change in the structure of funding, an increase in the share of alternative sources, a shift in emphasis to interdisciplinary projects, regional disparities in funding, a decrease in the number of research projects, dependence on international assistance, the bureaucratisation of the funding process, and a shift in focus to socially oriented research. These trends point to the problems science faces in Ukraine, especially in the social sciences and humanities. However, despite the difficulties, there is still a desire to adapt and find new research opportunities that can contribute to the development of science and society.

The curricula actively include courses on research methodology and quantitative and qualitative analysis methods, providing students with a theoretical basis for research. A growing number of interdisciplinary courses combine social sciences and humanities with other fields, allowing students to apply research skills in different contexts. Special attention is paid to practical classes where students work on real research projects, including data analysis and report writing. Research projects are made compulsory, which helps to develop independence in choosing topics and collecting data. The COVID-19 pandemic has accelerated the integration of digital technologies, allowing students to conduct research remotely using online resources and data analysis software (Vasylieva et al., 2022).

Higher education institutions actively involve students in scientific conferences, seminars, and roundtables, where they can present their research and receive feedback from colleagues and teachers. Students are taught to critically analyse literature and evaluate the quality of sources, which is the basis for developing research competence. Much attention is paid to developing the ability to formulate reasonable conclusions based on research, raising the overall academic culture. Ukrainian universities actively cooperate with international universities, allowing students to participate in joint research projects, exchange programmes, and internships. The number of academic mobility programmes is growing, allowing students to gain experience in foreign higher education institutions and professors to exchange experiences with colleagues from other countries. More and more attention is being paid to topics of practical importance to society, such as social justice, ecology, gender studies, and human rights. Students are allowed to conduct research that has a real impact on local communities, which increases their motivation for research.

These trends reflect the general desire to improve the quality of education and develop the research competence of students, which is an important step in the training of highly qualified specialists in the fields of social sciences and humanities. A survey of 150 students of the Taras Shevchenko National University of Kyiv on the topic of research competence development in the process of studying social sciences and humanities found that only 18% of respondents feel prepared to conduct independent research, 45% are rather prepared than not, 22% are not sure, 10% are rather unprepared than prepared, and 5%. The following answers were received: "Do your academic assignments include independent research (e.g. writing essays,

term papers, conducting surveys)?”: very often – 35%, often – 40%, sometimes – 15%, rarely – 8%, never – 2%. As for the extent to which the courses helped to develop basic research competence skills, the answers varied greatly (Figure 3).

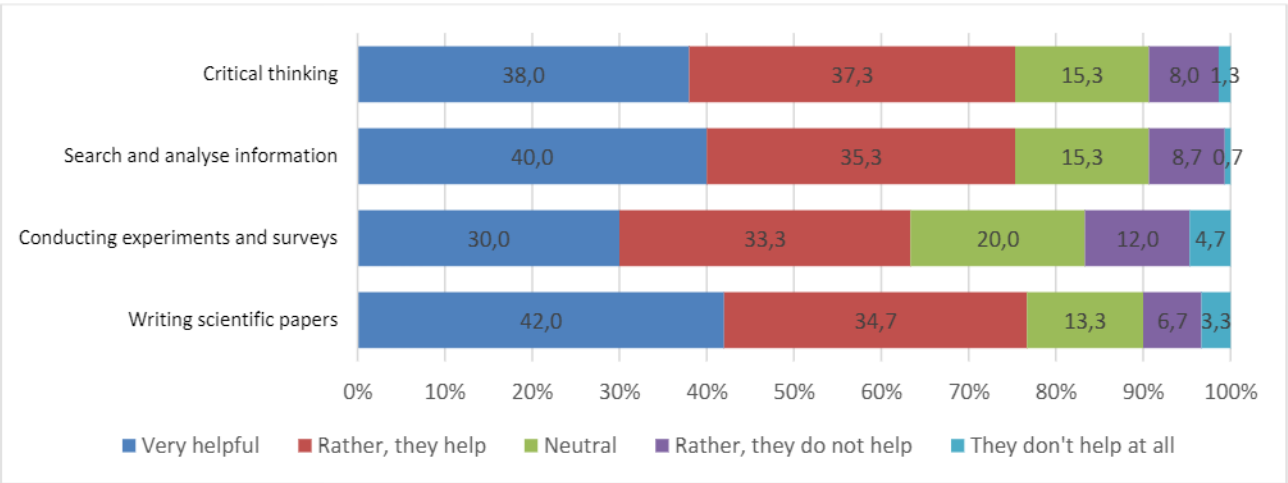


Figure 3 Results of student survey on the degree of assistance of training courses in developing basic research competence skills in the study of social sciences and humanities, %.

The survey results show that most students feel relatively prepared to conduct social sciences and humanities research. However, there are some gaps in certain aspects of training, such as conducting experiments and surveys. Students are primarily satisfied with the support of their professors but point to the need for more practical assignments and access to resources to improve their research skills. The study analysed curricula, syllabi, lecture materials, and practical classes to identify elements contributing to students' formation of research competence (Table 1).

Table 1 Analysis of Materials to Identify Elements of Research Competence Formation on the Example of the Discipline “Fundamentals of Sociology and Political Science”.

Analysis	Recommendations
Curriculum and Syllabus of the course “Fundamentals of Sociology and Political Science”	
The course programme provides 15% of class time for students' independent work, including writing essays and term papers, essential for developing research skills. The topics of the essays and term papers cover the analysis of social and political phenomena, which encourages students to apply theoretical knowledge in practice	Expand the section of the programme on social research methodology, including more practical classes focused on data analysis and the use of statistical methods
Materials of the lecture “Methods of Sociological Research”	
The lecture materials provide an overview of the main methods of sociological research (surveys, interviews, observation, and document analysis). However, most of the lecture is devoted to theoretical aspects with minimal emphasis on the practical application of methods	To supplement lecture materials with examples of specific research projects conducted using these methods, as well as to add a discussion of typical mistakes in research and ways to avoid them
Practical training “Conducting a sociological survey”	
The practical lesson involves a group project in which students have to develop a questionnaire for a sociological survey, survey their classmates and analyse the data obtained. This task directly contributes to the development of research competence, as it covers all stages of research	To increase the effectiveness of practical training, students can be involved in fundamental research projects or joint projects with other universities, which will allow them to gain experience in a broader context
Writing a term paper on a topic related to the analysis of social phenomena	
Coursework is the primary tool for developing research skills. Requirements for term papers include conducting a literature review, justifying the research methodology, analysing and summarising the results	Increase the number of coursework that focuses on empirical research, and involve students in discussing their findings at scientific seminars
Study guide “Sociology: Theory and Practice”	
The textbook contains sections on the methodology and methods of sociological research. There are real-life research examples but only a limited number of practical exercises for self-study	Add more practical tasks and exercises for independent work that will allow students to practice data collection and analysis skills using specific examples

The analysis of the curricula, lecture materials, and practical classes shows that essential elements aim to develop students' research competence. However, there are opportunities for improvement, such as increasing the share of practical classes, increasing the emphasis on using accurate data and research projects and expanding the methodological support for

students' independent work. Integrating these recommendations into the educational process will contribute to the more effective development of research skills among social sciences and humanities students.

Correlation analysis allows us to determine how strongly different indicators characterise the level of students' research competence, and the factors that influence it are related. To establish the relationship between the level of students' research competence and such factors as the number of hours spent on independent study (factor 1, 1-10 points), participation in scientific conferences and seminars (factor 2), quality of methodological support (factor 3, hours/week); level of support from teachers (factor 4, participation in conferences per year); grade received for coursework (factor 5, points). To identify the influence of the factor attributes, 50 students were interviewed. We used Pearson's correlation coefficient to analyse the relationship, which shows the strength and direction of the linear relationship between two variables (Table 2).

Table 2 Results of correlation analysis of research competence of higher education students in the study of social sciences and humanities.

Indicators	Level of research competence (1-10)	Hours of independent study (h/week)	Participation in scientific conferences (times/year)	Quality of methodological support (1-10)	Support for teachers (1-10)	The grade for the coursework (points)
Level of research competence (1-10)	1					
Hours of independent study (h/week)	0,8259	1				
Participation in scientific conferences (times/year)	0,8142	0,7591	1			
Quality of methodological support (1-10)	0,4654	0,5404	0,5162	1		
Support for teachers (1-10)	0,5709	0,6507	0,5749	0,6933	1	
The grade for the coursework (points)	0,8264	0,7000	0,8470	0,4366	0,5742	1

The correlation coefficient of 0.83 indicates a high positive correlation between the number of hours spent on independent study and the level of research competence, i.e. students who spend more time on independent study tend to have a higher level of research competence. Active participation in scientific conferences also contributes to the development of research skills, as evidenced by the correlation coefficient of 0.81 The correlation coefficient of 0.47 indicates a moderate positive relationship between the quality of methodological support and the level of research competence. The correlation coefficient of 0.57 also indicates a significant impact of teacher support on students' research activity. Moreover, the correlation coefficient of 0.83 indicates a strong positive relationship between the coursework grade and the research competence level. High grades can be an indicator of a high level of research competence.

Thus, the results of the correlation analysis show that all the factors considered have a positive relationship with the level of students' research competence. Essential are the quality of methodological support and the support of teachers. This indicates the need for quality teaching materials and adequate support for students and teachers to develop their research skills.

4. Discussion

The prospects for providing quality teaching materials and adequate support for students to develop their research skills in Ukraine depend on several factors, including reforms in the education system, teacher training, access to resources, and innovative approaches to teaching.

Digital transformation creates new educational opportunities by facilitating lifelong learning and preparing teachers for the digital age. Technology's main benefits are increased motivation and continuity of learning. At the same time, challenges include problems with technology adoption, workload, and access to digital resources (Althubyani, 2024). Digital transformation opens up new opportunities for students to develop competence in social sciences and humanities research. Thanks to modern digital tools and technologies, students can quickly analyse large amounts of information, conduct research, process data and collaborate with other researchers. Using digital platforms contributes to developing critical thinking, information handling skills and analytical abilities, which are the basis of research competence. This way, digital tools support integrating innovative methods into teaching and research. The proliferation of digital platforms such as Prometheus, Coursera, and EdX gives students access to many learning materials from leading universities worldwide (Semenikhina et al., 2020). In addition, universities are creating their online courses and digital libraries, facilitating access to modern research and literature. Access to open scientific databases, such as Google Scholar, Scopus, Clarivate, ResearchGate, and the Directory of Open Access Journals (DOAJ), is growing (Sharov et al., 2019). This is important for improving the quality of research, as students can use up-to-date scientific materials.

As teachers play a vital role in developing students' research skills, it is essential to ensure that they are constantly trained and upskilled. Universities are increasingly engaging faculty in international projects and exchange programmes, which allows them to learn new teaching methods and pass them on to students. The research-based learning approach promotes the active participation of students in research projects. The role of teachers is to be mentors and coordinators of such projects. In Ukraine, such programmes are developing, but their number can be increased through the involvement of international partners and grant programmes. By participating in international programmes such as Horizon Europe and Erasmus+, students can participate in global research projects and collaborate with foreign scientists and teachers. This helps to develop their research skills and improve the quality of their work. Academic exchange programmes also play an important role, allowing students and faculty to learn from international experience. Upon returning to Ukraine, they can use new methods and tools in their teaching and research.

Herasymenko et al. (2024) proved through an experiment that the result of the high-quality organization of research work in higher education institutions is a high level of research competence of senior students and graduate students. The study by Kadhim (2024) demonstrates the transformative impact of social media on modern political movements. The author argues that these platforms empower activists, amplify the voices of marginalized communities, and facilitate real-time coordination, but also pose challenges, including the spread of misinformation and the formation of so-called echo chambers. In such an organization of the educational process, students are convinced of the value of knowledge and its practical use, learn to compare, generalize, classify, determine cause and effect relationships, formulate their own opinions, and defend their views, which contributes to their success. Scientists from Kazakhstan argue that using the potential of integrated approaches to the formation of key competencies of a future teacher in terms of credit technologies stimulates students' interest and desire to understand the ways to form the professional competence of future teachers.

We agree with the opinion of Ukrainian researchers that the use of interactive technologies helps to improve the training of future specialists: students prepare more thoroughly for classes and are actively involved in mastering the program material in laboratory practices. This contributes to the formation of partnerships between students and teachers, changing their attitudes toward learning. In such an educational process, students realize the importance and usefulness of knowledge, acquire the ability to compare, generalize, classify, analyze cause and effect relationships, formulate their own opinions, defend their position and succeed in their research, developing research competence (Dobosh6 et al., 2022). Scientists from Qatar have identified effective pedagogical approaches to implementing STEM education to make students innovative thinkers (Ammar et al., 2024). And scientists from the University of Fort Hare (South Africa) specify that rational, innovative pedagogy should combine traditional pedagogy with technical and pedagogical approaches (Chigbu et al., 2023).

In fact, social and humanistic disciplines such as history or sociology are an important direction that encourages students to develop their research competencies, having the knowledge, methods and skill base for critical speech (Marushkevych, 2022). Historical analysis involves evaluating documents, their reliability and place. Students acquire skills in distinguishing between facts, interpretations and biases. Historical methods (primary source analysis, comparison, historiography, synchronic and diachronic) allow students to learn to structure their research (Ideris, et al, 2023). These skills allow them to understand the background of current social, political and economic problems, which facilitates a more detailed analysis in a historical context. History helps to connect different fields of study and disciplines, such as anthropology, economics, political science, which broadens the research scope of students. The basics of sociology are how to collect and analyze data using a variety of tools - surveys, observations, interviews or big data analysis, which develop methodological flexibility (Osbaldiston, 2023). This science teaches students to conceptualize connections, form their own worldview to highlight global trends. Students are taught to identify social problems, determine their causes and consequences in order to solve complex problems. Sociological research usually has an ethical dimension, for example, confidentiality or cultural sensitivity, which allows students to act responsibly. Therefore, these two considered academic disciplines help the student: to learn the research cycle (problem statement → analysis → discussion of results); to develop interpersonal communication skills, teamwork; to be ready to solve interdisciplinary problems, absorbing knowledge from different fields to solve complex tasks. Therefore, history and sociology function as drivers in the formation of research competencies, which is of great importance in these internationalized times for students.

Prospects for developing students' research skills depend on access to quality materials, digital resources, professional support from teachers and active participation in international programmes. Integrating modern teaching methods and cooperating with international partners creates conditions for developing new generations of researchers capable of working effectively in various scientific and professional fields. The development and justification of pedagogical technologies that contribute to the effective formation of research competence in students in the study of social sciences and humanities involves a systematic approach and consideration of theoretical and practical learning aspects. Below is a list of recommended pedagogical technologies to promote the effective development of research competence in students studying socio-humanitarian disciplines and the rationale for their use (Table 3).

Table 3 Recommended pedagogical technologies for promoting the development of research competence in students of social sciences and humanities.

Rationale	Implementation		
	Stages	Tools	The role of the teacher
Provides students with the opportunity to immerse themselves in the research process at different stages	Project technology		
	Choosing a topic, formulating research questions, collecting data, analysing information, writing a report, presenting results	Work with sources, surveys, interviews, document analysis, use of statistical methods	Project coordination, consulting, and evaluation of results
PBL promotes the development of research competence through active student involvement in solving a problem, learning to search for and apply information, and the ability to analyse situations, draw reasonable conclusions, and present their results. It also promotes the development of independent learning skills.	Problem-Based Learning (PBL)		
	Problem statement, discussion of possible solutions, information search, analysis, group discussion, presentation of solutions	The case method, group discussion, brainstorming, and work with scientific sources.	Moderation of the discussion, direction of search activities, support and evaluation.
The workshops provide an opportunity to test your research in a safe environment and receive criticism and suggestions for improvement. This contributes to a deeper understanding of the research process and the development of public presentation, argumentation, and scientific communication skills.	Research seminars		
	Report preparation, presentation, discussion, reflection	Presentations, discussions, written reports, reviews	Leading the seminar, providing feedback, evaluating reports
Expands research opportunities. Students have access to scientific databases, can participate in online research and collaborate with colleagues from other universities, improving their research quality.	Use of electronic educational resources and technologies		
	Researching literature, participating in online discussions, and using specialised data analysis software.	Digital libraries, online courses, and collaboration platforms (Google Scholar, Mendeley, Zoom).	Training in using electronic resources, providing recommendations, and monitoring progress.
It allows you to apply theory in practice, promote the development of analytical skills, and work with real data. The case method also helps to develop argumentation and decision-making skills.	Case study method		
	Case study, problem definition, data analysis, conclusions, and solution presentation.	Written reports, presentations, group work.	Providing cases, guiding discussions, evaluating work.

Source: Larmer (2018); Kozak et al. (2022); Dychkivska et al. (2023), Smith (2024); Mutawakkil (2024); Kyrpa et al. (2024)

One of the goals of social sciences is to educate critical and creative citizens who can question social values and create new ones. An influential citizen should base their decisions on knowledge and reasoning. In order to achieve these goals, it is essential to implement a project-based learning model that helps students find information, use it, apply it in practice, and express their opinions, which will give the class a new dimension (Memişoğlu, 2011).

Integrated pedagogical technologies that combine theoretical learning with practical research are necessary to effectively develop students' research competence in the social sciences and humanities. This allows students to learn the material more deeply and develop critical thinking, independence, analytical skills, and other important skills necessary for successful research.

5. Conclusion

The use of research methods in teaching positively impacts the development of critical thinking and analytical skills, as well as the skills of independent search, processing, and interpretation of information among students. Such methods allow students to actively participate in the learning process, effectively learn the material, and analyse, synthesise, and evaluate the information received.

Project-based learning, actively used in teaching social sciences and humanities, has proven effective in enhancing students' research competence. This approach provides interactive learning that promotes deeper learning through the practical application of knowledge in research projects and contributes to developing critical analysis, data processing, teamwork, and problem-solving skills.

Integrated forms of education, where theory is combined with practice through research projects, discussions, analytical tasks, and modern technologies, significantly impact the development of research competence. This approach helps prepare students for modern challenges, including changes in the labour market, where analytical and research skills are increasingly valued.

Introducing project-based learning in the social sciences and humanities creates conditions for developing students' professional and personal qualities, which helps them adapt more effectively to professional activities. This allows them to develop a high level of research competence and a readiness for continuous self-improvement, which is essential in the modern world.

Thus, the study confirms that the formation of students' research competence through the social sciences and humanities is an essential stage in the training of future professionals, as it not only increases the level of professional knowledge but also contributes to the development of the ability to critically evaluate and adapt to new challenges in the professional environment.

Ethical Considerations

We confirm that we have obtained all consent required by applicable law to publish any personal details of research participants. We agree to provide Multidisciplinary Reviews with copies of the consent or evidence that such consent was obtained if requested

Conflict of Interest

The authors declare no conflicts of interest.

Funding

This research did not receive any financial support.

References

- Althubayani, A. R. (2024). Digital Competence of Teachers and the Factors Affecting Their Competence Level: A Nationwide Mixed-Methods Study. *Sustainability*, 16(7), 2796. <https://doi.org/10.3390/su16072796>
- Ammar, M., Al-Thani, N. J., & Ahmad, Z. (2024). Role of pedagogical approaches in fostering innovation among K-12 students in STEM education. *Social Sciences & Humanities Open*, 9, 100839. <https://doi.org/10.1016/j.ssaho.2024.100839>
- Antoshkina, V. K., Shevchenko, A. Y., Skryl, S. A., Sadovyi, S. M., & Kuznichenko, O. V. (2023). Problems of legal education development in Ukraine. *International Journal of the Legal Profession*, 31(2), 175–185. <https://doi.org/10.1080/09695958.2023.2279758>
- Chigbu, B. I., Ngwevu, V., & Jojo, A. (2023). The effectiveness of innovative pedagogy in the industry 4.0: Educational ecosystem perspective. *Social Sciences & Humanities Open*, 7(1), 100419. <https://doi.org/10.1016/j.ssaho.2023.100419>. Accessed on November 9, 2024
- Ciraso-Calí, A., Martínez-Fernández, J. R., París-Mañas, G., Sánchez-Martí, A., & García-Ravidá, L. B. (2022). The Research Competence: Acquisition and Development Among Undergraduates in Education Sciences. *Frontiers in Education*, 7. <https://doi.org/10.3389/educ.2022.836165>
- Comon, J., & Corpuz, G. (2024). Teachers' Research Competence and Engagement: A Framework for Research Development Plan. *American Journal of Arts and Human Science*, 3(1), 24–44. <https://doi.org/10.54536/ajahs.v3i1.2340>
- Dobosh, O., Koval, D., Paslavskaya, N., et.al. (2022) Formation of Research Competence Using Innovative Technologies to Improve the Quality of Training Future Specialists. *IJCSNS International Journal of Computer Science and Network Security*, 22(12), 91-98. <http://dspace-s.msu.edu.ua>. Accessed on November 9, 2024.
- Dychkivska, I. M., Pavlyuk, T. O., & Mykhalchuk, R. Y. (2023). Formation of professional competence of future teachers by means of project activities. In: *Topical aspects of social science disciplines and innovative methods and technologies of their learning and teaching*, pp. 54–78. Izdevniecība "Baltija Publishing". <https://doi.org/10.30525/978-9934-26-315-6-4>
- El Bakkali, A. (2020). Using Project-Based Learning to Develop Social and Political Practices as Life-Long Learning Skills. *International Journal of Language and Literary Studies*, 2(4), 138–150. <https://doi.org/10.36892/ijlls.v2i4.438>
- Elbrekht, O., Bakhov, I., Sytnik, T., & Radziievskaya, I. (2022). Theory and practice of interaction of subjects of the system of supplying textbooks to educational institutions in the USA. *Relacoes Internacionais no Mundo Atual*, 3(36). <https://doi.org/10.21902/Revrima.v3i36.5729>
- Herasymenko, O., Hrytsai, N., Karskanova, S., Pliushch, V., & Protsenko, I. (2024). Development of research competence in university students through cloud-oriented technologies: a pedagogical experiment. *Revista Amazonia Investiga*, 13(77), 66–80. <https://doi.org/10.34069/ai/2024.77.05.5>
- Ideris, F., Sa'ari, H., Idrus, M. (2023). Diligent in searching for reliable historical sources: the pattern of historians' information seeking behaviour. *European Chemical Bulletin*. 12. 4609 – 4625. <http://dx.doi.org/10.31838/ecb/2023.12.s3.522>
- Ismuratova, S. I., Slambekova T. S., Kazhimova K. R. et al. (2018). Model of Forming Future Specialists' Research Competence. *Revista Espacios*, 39(35), 24. <https://www.revistaespacios.com/a18v39n35/a18v39n35p24.pdf>. Accessed on September 2, 2024.
- Kadhim M. J.(2024) Social Networks' Place in Contemporary Political Movements. *International Journal of Social Trends*, 2(2), 51-59. <https://www.researchgate.net/publication/382641349>. Accessed on November 9, 2024.
- Karazhigitova K.N., Stycheva O.A, Sartaeva H.M., et.al. (2019) Ways of Formation of Professional Competences of Students of Pedagogical Higher Education Institutions. *Amazonia-Investiga*. ISSN 2322- 6307. <https://core.ac.uk/download/pdf/328004524.pdf>. Accessed on November 9, 2024.
- Kaskatayeva, B., Andassova, M., & Andassov, M. (2018). Formation of Research Competence of Students on the Basis of Information Technologies. In: *Rural environment. Education. Personality*, 11, 179–184. Jelgava: Latvia University of Life Sciences and Technologies. <https://doi.org/10.22616/REEP.2018.021>

- Katende, E. (2023). Critical Thinking and Higher Education: A Historical, Theoretical and Conceptual Perspective. *Journal of Education and Practice*, 7(8), 19–39. <https://doi.org/10.47941/jep.1565>
- Koval, O., Fomina, I., Golub, I., & Ozerov, D. (2024). Resilience in the Changed Conditions of Educational and Professional Training of Future Specialists of a Socioeconomic Profile. *Insight: The Psychological Dimensions of Society*, (11), 204–221. <https://doi.org/10.32999/2663-970X/2024-11-11>
- Kozak, L., Vrublevska, T., Matusevych, L., et al. (2022). The use of project technologies in the training of students. *AD ALTA: Journal of Interdisciplinary Research*, pp. 160–166. https://elibrary.kubg.edu.ua/id/eprint/43271/1/Kozak__WEB.pdf. Accessed on September 2, 2024.
- Kucherenko, I., Raievska, Y., Verzhikovska, O., Hnoievska, O., & Savitskayae, M. (2024). Building Reading Skills in Junior Schoolchildren with Autism Spectrum Disorders in the Context of Inclusive Education. *International Electronic Journal of Elementary Education*, 16(3), 427–436. <https://doi.org/10.26822/iejee.2024.343>
- Kyrpa, A., Stepanenko, O., Zinchenko, V., Datsiuk, T., Karpan, I., & Tilniak, N. (2024). Artificial intelligence tools in teaching social and humanitarian disciplines. *Information Technologies and Learning Tools*, 100(2), 162–179. <https://doi.org/10.33407/itlt.v100i2.5563>
- Larmer, J. (2018). Project-Based Learning in Social Studies. Social Education. *Project-Based Learning, National Council for the Social Studies*, 82(1), 20–23. https://www.socialstudies.org/system/files/publications/articles/se_820120.pdf. Accessed on September 2, 2024.
- Loaiza Zuluaga, Y. E., Gil Duque, G. M., & David Narváez, F. A. (2020). A study of critical thinking in higher education students. *Latinoamericana de Estudios Educativos*, 16(2), 256–279. <https://doi.org/10.17151/rlee.2020.16.2.13>. Accessed on September 2, 2024.
- Marushkevych, A. A., Zvarych, I. M., Romanyshyna, O. Y., Malaniuk, N. M., & Grynevych, O. L. (2022). Development of Students' Research Competence in the Study of the Humanities in Higher Educational Institutions. *Journal of Curriculum and Teaching*, 11(1), 15–24. <https://doi.org/10.5430/jct.v11n1p15>
- Memişoğlu, H. (2011). The Effect of Project Based Learning Approach in Social Sciences Class on the Student Success and Memorability. *International Journal of Humanities and Social Science*, 1(21), 295–307. <https://www.ijhssnet.com>. Accessed on September 1, 2024.
- Mutawakkil, M. (2024). Assessing the Effectiveness of Project-Based Learning in Social Studies Education. *West Science Social and Humanities Studies*, 2(05), 722–727. <https://doi.org/10.58812/wsshs.v2i05.882>
- Olehnovica, E., Bolgzda, I., & Kravale-Pauliņa, M. (2015). Individual Potential of Doctoral Students: Structure of Research Competences and Self-assessment. *Procedia – Social and Behavioural Sciences*, 174, 3557–3564. <https://doi.org/10.1016/j.sbspro.2015.01.1072>
- Osbaldiston, N. (2023). Understanding Social Research Methods and Perspectives in Sociology. Open Educational Resources Collective – A Council of Australian University Librarians Initiative. <https://oercollective.caul.edu.au/exploringsociology/chapter/understanding-social-research-methods-and-perspectives-in-sociology/> Accessed on November 26, 2024.
- Palahniuk, M. (2022). Improvement of the Quality of Future Engineers' Social and Humanitarian Training in the Higher Technical Education Institution. *Journal of Vasyl Stefanyk Precarpathian National University*, 9(1), 58–68. <https://doi.org/10.15330/jpnu.9.1.58-68>
- Semenikhina, O. V., Yurchenko, A. O., Sbruieva, A. A., Kuzminskyi, A. I., Kuchai, O. V., & Bida, O. A. (2020). The open digital educational resources in it-technologies: quantity analysis. *Information Technologies and Learning Tools*, 75(1), 331–348. <https://doi.org/10.33407/itlt.v75i1.3114>
- Sharov, S., Liapunova, V., & Sharova, T. (2019). Analysis of the Opportunities of the Prometheus Platform for the Professional. *Development of Future Teachers*, 8(4), 1469–1476. <https://doi.org/10.18421/TEM84-52>
- Shtonda, O., Biletska, S., & Proskurnia, O. (2022). Formation of research competence of masters of teaching universities in the process of scientific and research practice. *Scientific Notes of the Pedagogical Department*, (51), 105–112. <https://doi.org/10.26565/2074-8167-2022-51-12>
- Smith, B. (2024). Teaching & Learning: The Case for Project-Based Learning in the Humanities. National Association of Independent Schools (NAIS). <https://www.nais.org>. Accessed on October 31, 2024.
- SSSU (2024). Economic statistics. Science, technology and innovation. State Statistics Service of Ukraine. <https://www.ukrstat.gov.ua>. Accessed on October 31, 2024.
- Vasylieva, T. A., Petrushenko, Y. M. et al. (2022). Digital Technologies in Education: Modern Experience, Problems and Prospects. Sumy: Sumy State University. <https://essuir.sumdu.edu.ua>. Accessed on September 2, 2024.
- Xiao, T. (2018). Essence and Structure of the Formation of Communicative Competence of Students. *Professional Education: Methodology, Theory and Technologies*, (8), 225–237. <https://doi.org/10.31470/2415-3729-2018-8-225-237>
- Yaroshenko, O. (2019). Research competence component structure of academic and scientific staff. *Continuing Professional Education: Theory and Practice*, (3), 7–12. <https://doi.org/10.28925/1609-8595.2019.3.712>
- Zayed, K., Jeyaseelan, L., Al-Adawi, S., et al. (2019). Differences Among Self-Esteem in a Nationally Representative Sample of 15-17-Year-Old Omani Adolescents. *Journal of Psychology Research*, 9(2), 66–76. <https://www.researchgate.net>. Accessed on September 2, 2024.