

Natalia Nedvetska*

Assistant

National University of Life and Environmental Sciences of Ukraine

03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

<https://orcid.org/0000-0002-4233-168X>

Interactive technologies as modern tools for preparing higher education lecturers for career guidance activities

Article's History:

Received: 05.01.2026

Revised: 27.04.2026

Accepted: 25.05.2026

Published: 29.06.2026

Suggested Citation:

Nedvetska, N. (2026). Interactive technologies as modern tools for preparing higher education lecturers for career guidance activities. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"*, 12(2), 65-74. doi: 10.52534/msu-pp2.2026.65.

Abstract. This article examines the issue of preparing future higher education lecturers to carry out career guidance activities within the context of the modern educational environment. The aim of the study was to substantiate the impact of interactive technologies on the development of future higher education lecturers' readiness for career guidance activities and to determine the potential for their application in the targeted development of the relevant competences. The research was carried out in stages using methods of analysis, synthesis, generalisation, systematisation, comparison, classification and theoretical modelling based on a structural-functional approach. The feasibility of using interactive technologies as a means of developing the relevant competence has been substantiated. As a result of the analysis of academic works, the essence of interactive technologies has been clarified and they have been categorised according to their functional purpose. Groups of technologies have been identified that contribute to the development of analytical and critical thinking, communication skills, research competences, professional activity modelling, motivation and digital literacy. Based on a synthesis of academic approaches, a framework for career guidance competence in higher education institutions has been proposed, encompassing cognitive, motivational-value-based and operational-activity-based components. Theoretical modelling of the process of preparing future lecturers for career guidance activities using interactive technologies has been carried out. It has been established that the cognitive component is developed through the case study method, problem-based learning and the analysis of pedagogical situations; the motivational-value component – through discussions, training sessions, the "round table" method and debates; and the operational-activity component – through business and role-playing games, project-based technologies and the simulation of professional situations. The system of interrelationships between the components of career guidance competence and interactive technologies has been summarised, and a comprehensive model for developing a teacher's readiness for career guidance activities has been presented. As a result of the theoretical research conducted, the content and structure of a prospective higher education teacher's readiness for career guidance activities have been clarified

Keywords: innovative technology; interactive methods; career guidance competence; professional training; discussion; case study method; brainstorming

*Corresponding author (tatcashakun@gmail.com)

INTRODUCTION

Career guidance activities in higher education institutions have traditionally been regarded as a supplementary area, focused primarily on the pre-career choice stage. In the

context of a dynamic labour market and the diversity of career paths, it is evolving into a means of supporting students' ongoing career self-determination, their adaptation



to the demands of their chosen profession, and their orientation within the employment sector. It has been established that career guidance work in higher education institutions (HEIs) is directed not towards the choice of a profession, but towards ensuring effective self-fulfilment within the chosen specialism, which highlights the need for its systematic implementation from the very early stages of study. An analysis of current scientific research indicates a gradual expansion of this field; however, most studies focus on individual aspects of the issue.

In particular, V. Boichuk *et al.* (2023) investigated the development of career guidance competence among lecturers within the postgraduate education system. The authors experimentally demonstrated the effectiveness of organisational and pedagogical conditions that provide pedagogical support, individualisation of the educational process, a credit-based modular structure of learning, and the professional readiness of postgraduate education lecturers to carry out career guidance activities. As a result, a positive trend was observed in the development of the motivational, cognitive, activity-based and reflective components of teachers' career guidance competence. C. Joho *et al.* (2024) made an important contribution to research into teachers' professional readiness for career guidance work. Based on a systematic analysis of 31 empirical studies, they summarised contemporary approaches to the structure of lecturers' competences in the field of career guidance and found that teachers have a positive attitude towards performing career guidance functions, but feel they lack specialist knowledge and practical skills. The researchers also highlighted the insufficient development of theoretical models of professional competence and the under-representation of motivational and self-regulatory components in previous studies.

The issue of preparing teachers to carry out career guidance activities in the context of a shortage of professional career counsellors was investigated by O. Bersan *et al.* (2024). These researchers implemented an international teacher training programme in Romania and Serbia and assessed its effectiveness over a two-year period using a mixed-methods approach. The results demonstrated that organising group career guidance sessions proved to be significantly more complex than individual counselling. However, ways of improving teacher training using modern interactive technologies remained outside the scope of the study. The issue of integrating the career guidance component directly into university courses was examined by E. Gorni *et al.* (2024). Based on interviews with lecturers, educational programme coordinators and career centre staff, the researchers identified significant differences in lecturers' readiness to provide career guidance support to students, which depends largely on their professional experience and awareness of their own role in this process. On this basis, a typology of lecturers was proposed, along with practical recommendations for integrating elements of career education into academic courses.

A comprehensive analysis of the current state of career guidance in higher education was presented by C. Xie *et al.* (2026). The findings indicate a steady increase in interest in career guidance in higher education and its gradual expansion due to digital technologies. However, the study is predominantly analytical in nature and does not explore specific pedagogical mechanisms for training lecturers in career guidance activities. The importance of career guidance support for the professional development of students was substantiated by S. David & L. Mohebi (2026). Based on a thematic analysis of interviews with students and staff at HEIs in the United Arab Emirates, the authors found that effective career counselling increases awareness of career choices, promotes the personal development of students and fosters a readiness for continuous professional learning.

The researchers convincingly demonstrated that professional self-determination is significantly influenced by the family environment and the characteristics of the national labour market. An important area of contemporary research relates to the use of digital interactive technologies in career guidance. For instance, V. Tkachuk *et al.* (2024) investigated the potential of social media as a career guidance tool in HEIs. The researchers proposed a framework for utilising social platforms, covering the stages of planning, implementation, monitoring and evaluating the effectiveness of career guidance activities. Furthermore, the positive impact of social media on students' career self-determination has been experimentally confirmed. However, the researchers' primary focus was predominantly on the technological aspects of organising career guidance work.

Despite significant academic interest in the issues of career guidance and the professional training of teachers, an analysis of the sources reviewed has revealed a number of under-explored aspects of the problem under investigation. In particular, most studies focus on the development of teachers' career guidance competence, the organisational and pedagogical conditions for its development, the integration of career education into the educational process, and the use of digital tools and social media in career guidance work. However, the issue of targeted training for higher education lecturers in career guidance activities has not been sufficiently addressed, and there is virtually no comprehensive justification of the potential of interactive technologies as a means of developing their readiness to perform such functions. The pedagogical conditions and methodological approaches to the systematic use of interactive technologies in this process have not been sufficiently defined. The need to address these shortcomings determined the choice of topic and defined the aim of this study.

The aim of the study was to provide a theoretical justification of the impact of interactive technologies on developing the readiness of future higher education lecturers for career guidance activities. To achieve this aim, the following objectives were established: to analyse the current state of research on the problem; to define the nature and characteristics of interactive technologies in the context of

lecturers' professional preparation; to identify their potential for career guidance activities; and to determine their capacity to support the development of career guidance competence among HEI lecturers. The scientific novelty of the study lies in the theoretical substantiation of the potential of interactive technologies as a means of developing the career guidance competence of HEI lecturers and in clarifying the possibilities for their application within the context of professional training.

MATERIALS AND METHODS

The methodological framework of the study was based on the principles of the competence-based, systems-based, activity-based and structural-functional approaches. The research drew on academic works by scholars addressing issues relating to the professional training of higher education lecturers, the development of career guidance competence, the use of interactive technologies in vocational education, and current trends in the modernisation of the educational process in higher education (Fernandes *et al.*, 2023; Rice & Hooley, 2024; Paska, 2025). During the research, scientific articles and materials from international scientific and practical conferences were analysed, which highlight the theoretical and practical aspects of applying interactive technologies in the training of teaching staff (Gubar *et al.*, 2023; Truskavetska, 2025; Prykhodkina *et al.*, 2025).

The first stage was aimed at clarifying the nature of interactive technologies and the specific features of their use in the context of teacher training. The comparative method was used to contrast different views on the classification and purpose of interactive technologies (Kozyr, 2021; Onishchenko *et al.*, 2022; Molodovska *et al.*, 2024). The application of this method made it possible to identify common and distinct approaches to interpreting the concept of "interactive technologies", to determine the characteristics of their functioning within the educational environment of a HEI, and to identify the specific features of using various interactive forms and teaching methods in teacher training. A comparative analysis of academic approaches made it possible to identify the most common criteria for classifying interactive technologies and to establish their pedagogical potential in the development of professionally significant qualities in future teachers.

The classification method was used to organise the range of interactive tools according to their functional purpose. Using this method, interactive technologies were systematised according to the areas in which they influence the development of the cognitive, motivational-value and operational-activity components of a HEI lecturer's career guidance competence. Within the framework of this classification, groups of technologies were identified that facilitate the development of analytical thinking, professional motivation, communication skills, professional interaction skills and the ability to make pedagogical decisions in career guidance contexts. On this basis, the functional significance of individual interactive technologies was

established, and the appropriateness of their use in the process of teacher training was determined.

In the second stage, an analysis was carried out of the issue of preparing HEI lecturers for career guidance activities and the role of interactive technologies in this process. To this end, methods of analysis, synthesis, generalisation and systematisation were employed. The method of analysis was used to examine the structure of a teacher's career guidance competence, to identify its main components and characteristics, and to identify the pedagogical conditions that influence the effectiveness of developing readiness for career guidance activities. During the analysis, the specific features of applying such interactive technologies as the case study method, problem-based learning, discussions, training sessions, business and role-playing games, project-based learning, the "round table" method, the analysis of pedagogical situations and the modelling of professional situations were examined.

The synthesis method enabled the integration of individual theoretical propositions into a coherent system of scientific concepts regarding the preparation of teachers for career guidance activities. This made it possible to establish interrelationships between interactive technologies and the structural components of career guidance competence. The generalisation method was used to draw conclusions regarding the potential of interactive technologies in the development of future lecturers' professional qualities and to determine their role in fostering readiness for career guidance activities. The systematisation method ensured the logical organisation of the research results, the grouping of scientific approaches and the structuring of the theoretical propositions obtained in accordance with the research objectives.

At the third stage, theoretical modelling of the process of preparing teachers for career guidance activities using interactive technologies was employed. To this end, a modelling method based on the structural-functional approach was applied. The use of the modelling method made it possible to outline a generalised structure for the development of a teacher's career guidance readiness, to identify its components, the interrelationships between them, and the corresponding interactive technologies that can be effectively used to develop each of them. During the modelling process, it was established that the case study method, problem-based learning and the analysis of pedagogical situations contribute to the development of the cognitive component of readiness; discussions, training sessions, debates and the "round-table" method facilitate the development of the motivational and value-based component; business and role-playing games, project-based techniques and the simulation of professional situations are geared towards developing the operational and activity-based component. The application of the structural-functional approach has made it possible to consider the process of developing a teacher's readiness for career guidance activities as a holistic system, within which all structural elements are hierarchically interrelated.

RESULTS

By stimulating cognitive activity and the development of professional competences, interactive technologies are an important part of the professional training of higher education lecturers. The essence of interactive learning can be understood as a set of methods, techniques and digital tools that ensure active interaction between participants in the educational process and are aimed at transforming knowledge into practical experience. At the same time, interactive learning is characterised by greater effectiveness compared with traditional methods in terms of information transfer, and by creating conditions for collaboration, reflection and the joint resolution of professionally oriented tasks (Onishchenko *et al.*, 2022). It has been theoretically established that the effectiveness of interactive technologies in teacher training depends to a large extent on the level of integration of practice-oriented tasks into the content of educational components.

An analysis of academic sources revealed that interactive teaching methods stimulate learners' cognitive activity by involving them in solving professionally oriented problem situations, completing case studies, participating in discussions, business games, project work and joint decision-making. This facilitates a transition from passive assimilation of learning material to active mastery of it and further development (Onishchenko *et al.*, 2022; Gubar *et al.*, 2023; Truskavetska, 2025). The use of interactive technologies fosters professional reflection, the capacity for self-analysis and interpersonal communication skills. These functions are realised through the effective use of group interaction, peer assessment, discussion of activity outcomes, the reasoned defence of one's own position, and the receipt of constructive feedback from other participants in the educational process (Matiyash *et al.*, 2024; Reznichenko, 2024; Kushniruk & Khorkin, 2025).

A distinctive feature of the use of interactive technologies in the training of future teachers is their focus on simulating real-life professional situations. This enables students to put their accumulated theoretical knowledge into practice. As a result, cognitive and communicative processes that are rarely utilised in traditional teaching (critical thinking, intensive communication, decision-making under time pressure) are engaged more actively (Stoika, 2024). This advantage of interactive technologies can be harnessed to develop readiness for career guidance work. To achieve this

goal, it is important to create an educational environment in which every learner has the opportunity to exchange ideas, defend their own position and take an active part in the educational process (Onishchenko *et al.*, 2022). The use of interactive technologies is most effective when the educational process is organised on the basis of partnership between the teacher and the learner. In such an environment, the ability to communicate effectively in a professional context, organise career guidance activities and adapt to changing conditions in professional practice is developed.

With the aim of deepening understanding of the essence of interactive learning, a comparative analysis was carried out of the positions of various scholars regarding the classification and purpose of interactive technologies. In particular, I. Truskavetska (2025) identified such interactive technologies as the project method, the case study method, panel discussions and situational modelling. O. Gubar *et al.* (2023) proposed dividing interactive technologies into traditional and cutting-edge categories, which allows for the inclusion of both classic interactive methods (discussion, business games, etc.) and modern digital tools (social media, chatbots, etc.). This position is complemented quite naturally by the arguments of S. Kushniruk & D. Khorkin (2025), who viewed interactive methods primarily as a means of developing communicative competence and highlighted interactive technologies such as debates, gamification and chatbots. The comparative analysis carried out has shown that contemporary researchers are increasingly focusing on the integration of digital interactive tools into teacher training. This indicates a gradual expansion of the functional capabilities of interactive learning and its adaptation to the conditions of the digitalisation of education.

Thus, interactive technologies are multifunctional in nature and can be classified according to various criteria. In order to organise the wide range of interactive tools, they were classified according to their functional purpose (Table 1), which made it possible to specify the pedagogical potential of interactive technologies in the process of teacher training and to determine their impact on the development of specific components of career guidance competence. It should be emphasised that maximum effectiveness can be achieved through the integrated use of different groups of interactive technologies within a single educational component. This ensures a combination of the cognitive, motivational and practical aspects of professional training.

Table 1. Classification of interactive technologies by functional purpose

Functional purpose	Interactive technologies	Characteristics of impact
Developing analytical and critical thinking skills	Case study method, situational problem-solving tasks, brainstorming	Foster the development of the ability to analyse professional situations and make well-founded decisions.
Developing communication skills	Discussions, debates, the PRESS method, Take a Position, round-table discussions	Promote the development of argumentation skills and the ability to engage in professional dialogue.
Simulating professional practice	Business and role-playing games, situational modelling technology	Provide opportunities to recreate authentic professional practice.
Developing research skills	Project-based learning, problem-based learning	Develop the ability to independently search for information and apply it in practice.

Table 1. Continued

Functional purpose	Interactive technologies	Characteristics of impact
Increasing motivation and engagement	Gamification, training sessions, interactive exercises	Enhance learning engagement and increase motivation to learn.
Mastering information and communication technologies	Online platforms, interactive video lessons, multimedia tools, chatbots	Provide access to learning in a variety of formats and support distance interaction.

Source: compiled by the author based on research by V. Spitsyn & I. Kotyash (2023), O. Gubar *et al.* (2023), I. Truskavetska (2025)

At this stage of the research, it is important to clarify the nature of career guidance competence. It is a multi-level personality trait that combines the readiness and ability to engage in professional activity on the basis of acquired knowledge, skills, abilities and professionally relevant qualities. In this regard, the preparation of lecturers for career guidance activities emerges as a comprehensive system that involves addressing each level (component) of career guidance competence. In addition to deepening knowledge of the characteristics of students' career self-determination, career guidance competence involves providing support, counselling and the effective organisation of career guidance activities in various formats of pedagogical interaction.

The main components of career guidance competence have been identified (Fig. 1). They are all functionally interdependent. The cognitive component encompasses a body of professional knowledge regarding the theoretical foundations of career guidance, contemporary concepts of career self-determination, patterns of career development, labour market trends, the characteristics of educational programmes and occupational requirements, as well as methods of career counselling, vocational assessment and the organisation of career guidance work with students (Boichuk *et al.*, 2023; Joho *et al.*, 2024; Rice & Hooley, 2024).

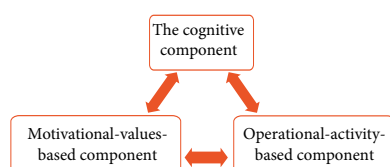


Figure 1. Structure of career guidance competence

Source: compiled by the author based on research by V. Boichuk *et al.* (2023), S. Fernandes *et al.* (2023), E. Gorni *et al.* (2024), C. Joho *et al.* (2024), S. Rice & T. Hooley (2024), O. Bersan *et al.* (2024), S. David & L. Mohebi (2026)

The cognitive component provides the foundation for the informed and competent delivery of career guidance activities. The motivational and value-based component characterises the teacher's positive attitude towards career guidance, an awareness of its social and professional significance, a willingness to take responsibility for supporting students' career self-determination, a commitment to continuous professional development, openness to pedagogical innovations, and a focus on student-centred interaction. Accordingly, this component determines the

teacher's intrinsic readiness and interest in such activities (Fernandes *et al.*, 2023; Bersan *et al.*, 2024; David & Mohebi, 2026). The operational-activity component forms the basis for the practical implementation of career guidance tasks, drawing on established skills, amongst which communicative, organisational and diagnostic skills can be highlighted. This component encompasses communication skills (establishing constructive interaction, counselling, conducting professional dialogue), organisational skills (planning and conducting career guidance activities, coordinating interaction with educational institutions, employers and other stakeholders), as well as diagnostic skills, which involve identifying students' career interests, aptitudes, educational needs and level of readiness for career choices, followed by the selection of appropriate forms of career guidance support (Boichuk *et al.*, 2023; Gorni *et al.*, 2024; Joho *et al.*, 2024).

The modelling process has established that a HEI lecturer's readiness for career guidance activities is shaped by the interaction of cognitive, motivational-value-based and operational-activity-based components. The interrelationship between these components is evident in the fact that professional knowledge determines the content of practical activities, established values and motives stimulate their implementation, and practical experience deepens professional knowledge and fosters the development of reflection, ensuring the continuous improvement of career guidance competence (Boichuk *et al.*, 2023; Fernandes *et al.*, 2023; Joho *et al.*, 2024). Based on the results of theoretical modelling, it can be argued that interactive technologies have a profound impact on all components of career guidance competence. Involving teachers in the analysis of professional case studies, the simulation of career guidance situations, role-playing, group discussions, project-based activities, peer assessment and reflective discussion of learning outcomes contributes to the development of professional thinking, the formation of skills for reasoned decision-making in conditions of professional uncertainty, the improvement of communication skills, and the capacity for professional reflection and self-analysis of one's own activities (Truskavetska, 2025; Kushniruk & Khorkin, 2025; Rozdymaha & Golovchenko, 2025).

Particular attention was paid during the modelling process to defining the role of interactive technologies in the development of each component of a teacher's career guidance competence. The case method and problem-based learning primarily contribute to the development of the cognitive component, as they ensure the acquisition of

knowledge regarding the principles of professional self-determination, modern approaches to career counselling, the characteristics of the labour market, and algorithms for resolving career guidance situations. Analysing alternative courses of action, justifying decisions made and forecasting their possible consequences contribute to the development of analytical and critical thinking, as well as the ability to evaluate professional situations in a reasoned manner and make pedagogically sound decisions (Onishchenko *et al.*, 2022; Truskavetska, 2025).

Group discussions, training sessions and reflective exercises primarily influence the motivational and value-based component. They promote an awareness of the social significance of career guidance, the development of positive professional motivation, a responsible attitude towards supporting learners' professional self-determination, the development of a readiness for continuous professional self-improvement, and the ability to carry out critical self-analysis of one's own professional practice through the discussion of teaching experience, peer assessment and

receiving constructive feedback (Fernandes *et al.*, 2023; Kushniruk & Khorkin, 2025; Prykhodkina *et al.*, 2025).

Role-play and business games, situational modelling and project-based activities ensure the development of the operational-activity component, as they enable the practising of communication skills during career guidance consultations, organisational skills relating to the planning and implementation of career guidance activities, as well as diagnostic skills associated with the analysis of career interests, educational needs and the level of readiness of learners for career choices. On this basis, the ability to communicate professionally, make well-founded decisions quickly and respond flexibly to changing conditions of professional interaction is developed (Bersan *et al.*, 2024; Gorni *et al.*, 2024; Rozdymaha & Golovchenko, 2025). A synthesis of the results of theoretical modelling has made it possible to outline the structure of a teacher's readiness for career guidance activities, identify the interrelationships between its components, and establish interactive technologies that ensure their targeted development (Table 2).

Table 2. Interactive technologies that can be used to develop various components of career guidance activities

Component of career guidance activities	Functional purpose	Interrelationships	Interactive technologies
Cognitive	Developing a body of knowledge regarding the content, objectives and methods of career guidance activities	Forms the foundation for the development of the operational-activity component and influences the development of motivation.	Case study method, problem-based learning, analysis of pedagogical situations
Motivational-value-based	Identifying career aspirations and fostering an interest in career guidance activities	Strengthens activity within the operational-activity component and interacts with the cognitive component through the cognitive appraisal of the significance of professional activity.	Discussions, training sessions, round-table discussions, debates
Operational-activity-based	Skills and competences in career guidance work	Is grounded in the cognitive component and supported by the motivational-value component; it is closely associated with reflection on the outcomes of professional activity.	Business and role-playing games, project-based technologies, modelling of professional situations

Source: compiled by the author

The proposed model can be used in the professional training of prospective lecturers at HEIs when teaching subjects in the field of psychology and pedagogy, in particular the courses "Higher Education Pedagogy", "Teaching Methodology in Higher Education Institutions" and "Psychology of Professional Activity", as well as when organising teaching placements, conducting training sessions, seminars and workshops. Within the relevant educational components, the model can be implemented through the analysis of case studies from career guidance practice, the simulation of consultations with prospective students, role-play and business games, the development and presentation of career guidance projects, the conduct of group discussions, and the analysis of professional situations. The model can be adapted to the conditions of distance and blended learning through the use of digital interactive platforms, video conferencing services, online discussions, virtual modelling of professional situations, collaborative project work, electronic portfolios and tools for prompt

feedback. In this way, active interaction between participants in the educational process can be ensured, regardless of the learning format (Tkachuk *et al.*, 2024; Molodovska *et al.*, 2024; Pertseva *et al.*, 2025).

The practical value of the model lies in its applicability during the development of educational programmes, teaching and learning materials, and a system for assessing the level of career guidance competence among future teachers. Assessment can be carried out according to three interrelated criteria: cognitive (level of knowledge regarding the theoretical foundations of career guidance, career counselling and current labour market trends), motivational-value-based (level of professional motivation, awareness of the significance of career guidance activities, and readiness for professional self-development) and operational-activity-based (the development of communicative, organisational and diagnostic skills, the ability to plan, organise and implement career guidance activities, analyse the professional needs of learners and make informed

pedagogical decisions). The results of case studies, role-plays, project work, professional portfolios, self-assessment, expert evaluation and pedagogical observation of learners' activities can be used as indicators of the development of these criteria. Thus, specific interactive technologies have been identified that ensure the development of each component of career guidance activities. The presented system for utilising interactive technologies reflects the integrity and dynamism of the process of developing career guidance competence.

DISCUSSION

The results obtained during the study allow to examine the issue of preparing HEI lecturers for career guidance activities through the prism of the use of interactive technologies. The research findings correlate to some extent with the work of other researchers, providing a basis for a broader academic discussion. At the same time, this study not only confirms the existing claims in the academic literature regarding the effectiveness of interactive learning, but also specifies the mechanisms through which it influences the development of career guidance competence among higher education lecturers. The findings indicate that interactive technologies should be regarded not as isolated methodological techniques, but as a systematic tool for professional training, capable of ensuring the integration of the cognitive, motivational-value and operational-activity components of a lecturer's professional readiness.

In particular, C. Joho *et al.* (2024) emphasised the multi-component structure of the competences realised in the process of career guidance, which corresponds to the cognitive, motivational-value-based and activity-based components identified in present research. The authors emphasise the importance of combining knowledge and skills. At the same time, this study devotes considerably less attention to the means of developing these components. In the present study, this issue was addressed in detail by identifying specific interactive technologies that facilitate the development of each component of career guidance competence. Thus, the findings of this study complement the conclusions of the aforementioned researchers with a practice-oriented aspect, enabling the specification of methods for implementing the competence-based approach within the teacher training system.

In the context of the present study, the findings of C. Xie *et al.* (2026) were of particular interest. Through bibliometric analysis, these researchers identified growing scholarly attention to career guidance in higher education and the increasing use of digital and visualisation tools within the educational process. This points to the potential for the effective application of interactive technologies and highlights their important role within the contemporary educational environment. It should be noted that the findings of the present study extend these conclusions by not only confirming the growing prevalence of such technologies but also providing a systematic classification of interactive technologies according to their functional purpose

within the professional preparation of lecturers. Furthermore, the results suggest a gradual shift in emphasis from the isolated use of individual digital tools towards the creation of an integrated interactive learning environment in which digital technologies are combined with traditional interactive teaching methods.

It can be argued that the data obtained during the study complement the findings of S. David & L. Mohebi (2026). These researchers concluded that career guidance has a significant impact on the career choices and professional development of students. At the same time, according to the researchers, preparing teachers for such activities takes on not only pedagogical but also social significance. One can generally agree with the thesis regarding the need for the targeted development of teachers' readiness to perform career guidance functions, in particular through the use of interactive technologies. Within the framework of the present research, this issue is further specified by identifying the relationships between interactive technologies and the development of professionally significant qualities of lecturers, including communicative competence, the capacity for professional reflection, and the ability to organise effective professional interaction with learners.

The views expressed by E. Gorni *et al.* (2024) regarding the need to integrate career guidance components into university curricula are consistent with the ideas presented in this study. In particular, these researchers emphasised the importance of embedding career guidance elements within the educational process of HEIs in order to help learners better navigate their future professional pathways. The findings of the present study extend this proposition by demonstrating that the effectiveness of such integration depends to a considerable extent on the selection of appropriate interactive technologies and on lecturers' readiness to use them effectively. For this reason, the career guidance component should be integrated not only into the content of individual academic disciplines but also into the broader system of teaching practice, training activities, and extra-curricular educational work.

Of particular relevance to the subject under consideration is the conclusion reached by T. Paska (2025) regarding the need for a systematic and integrated approach to combining career guidance activities with the educational process, as well as its close links with employers and professional communities. Such integration should be implemented not only at the level of organising events, but also at the methodological level, ensuring the continuous improvement of the content and methods of teacher training. The experience of the Vasyl Stefanyk Precarpathian National University, described in the study, deserves special attention, as it demonstrates the effectiveness of a comprehensive approach to career guidance work. The implementation of initiatives such as career guidance days, participation in nationwide projects and the organisation of specialised centres demonstrates the effectiveness of combining informative and interactive forms of work. This confirms the findings that interactive technologies create conditions for

students to immerse themselves in a professional environment and contribute to the development of their career orientations. The findings of the present study further refine these conclusions by placing the lecturer at the centre of career guidance activities. Whilst T. Paska's (2025) work places the main emphasis on the organisational and institutional level of implementing innovative technologies, the present study highlights the importance of developing the teacher's individual readiness for their purposeful application. The present study also provides grounds for asserting that the effectiveness of career guidance activities is largely determined not only by the availability of modern technological resources, but also by the teacher's ability to adapt interactive methods to specific educational situations and the professional needs of learners.

At the same time, the study's findings correlate with the conclusions of V. Boichuk *et al.* (2023), who emphasised the need for specialised training of teachers in career guidance within the postgraduate education system. In the context of this study, this issue is considered more broadly, as interactive technologies are viewed as a universal tool for the continuous professional development of lecturers, which can be utilised both during initial teacher training and in professional development programmes. This approach ensures that lecturers' professional competences are constantly updated in line with changes in the modern educational environment. To some extent, the study's findings are also consistent with the conclusions of S. Fernandes *et al.* (2023), who demonstrated the positive impact of pedagogical training on the professional development of higher education lecturers. This confirms the value of using interactive technologies as a tool for professional self-development and the refinement of lecturers' pedagogical skills. In particular, interactive forms of teaching contribute to the development of the ability for professional reflection, self-assessment of performance, and the formation of interpersonal interaction skills.

The findings of studies by V. Matiyash *et al.* (2024), N. Prykhodkina *et al.* (2025) and E. Rozdymaha & D. Golovchenko (2025), who emphasised the importance of interactive technologies for the development of general cultural, academic and professional competences among future teachers. A comparison of these findings with the results of the present study suggests that interactive technologies possess universal pedagogical potential and can be effectively utilised in various areas of teacher training, including career guidance. Another important aspect of the current academic debate is the issue of the digitalisation of career guidance. In this context, the findings of the study by V. Tkachuk *et al.* (2024), who examined social media as a tool for career guidance in higher education, are worthy of attention. This confirms the relevance of integrating digital interactive technologies into the system of lecturers' professional training. At the same time, based on the findings, it can be concluded that the use of digital tools will be effective provided they are combined with traditional interactive teaching methods in a pedagogically

sound manner. Thus, a comparison of the findings with the conclusions of other researchers demonstrates their complementary nature. Interactive technologies are indeed a key factor in enhancing the effectiveness of career guidance activities; however, their effectiveness depends significantly on the level of the teacher's preparedness to use these tools appropriately. The present study suggests that interactive technologies have considerable potential for developing lecturers' professional readiness for career guidance activities; however, their effective application requires systematic methodological support, integration into educational programmes, and the creation of a holistic interactive educational environment within HEIs.

CONCLUSIONS

The findings of the study include a comparative analysis of scholarly approaches to defining the nature and classification of interactive technologies, which made it possible to establish their multifunctional character and the diversity of their application within the educational process. On this basis, a classification of interactive technologies has been developed according to their functional purpose, which systematises them in accordance with the areas in which they influence the development of the professional qualities of future lecturers. The results obtained suggest that interactive technologies possess significant pedagogical potential in the context of the professional training of higher education lecturers, as they combine theoretical training with practice-oriented activities, stimulate cognitive processes and contribute to the development of professional reflection. It was also established that the greatest effectiveness in professional training was achieved through the comprehensive use of various interactive technologies, integrated into a coherent system of educational interaction.

The study clarified the nature of career guidance competence among higher education lecturers and substantiated its structure, which encompasses cognitive, motivational-value and operational-activity components. It has been demonstrated that readiness for career guidance activities is formed as a result of the interaction between these components. The content of each structural component of career guidance competence has been specified, and their functional interdependence has been identified. The cognitive component ensures the development of a system of professional knowledge regarding the content, forms and methods of career guidance activities; the motivational-value component determines the level of professional orientation and readiness to carry out career guidance work; the operational-activity component encompasses the practical skills and abilities required to organise professional interaction, communication and pedagogical support for learners.

Based on theoretical modelling, the possibilities for developing a teacher's readiness for career guidance activities using interactive technologies have been demonstrated. In doing so, the interrelationships between the structural components of career guidance competence and the

corresponding groups of interactive technologies have been identified. In particular, it has been established that the case study method, problem-based learning and the analysis of pedagogical situations facilitate the development of the cognitive component; discussions, training sessions, the “round table” method and debates – the motivational-value component; and business and role-playing games, project-based technologies and the modelling of professional situations – the operational-activity component. Modelling has made it possible to justify the feasibility of systematically combining interactive technologies within the framework of teacher training. Their use ensures the creation of an educational environment that is as close as possible to the real conditions of professional practice.

The study also expanded current understanding of the systematic application of interactive technologies in the preparation of future lecturers. The effectiveness of these technologies largely depends on the quality of methodological support within the educational process, the consistency with which interactive methods are implemented, and their alignment with the professional objectives of lecturer preparation. The practical significance of the

findings lies in the possibility of applying the proposed system of interactive technologies in teaching psychological and pedagogical disciplines, organising teaching practice, conducting training sessions, and implementing professional development programmes for HEI lecturers. The study also substantiated the feasibility of adapting the proposed model to distance and blended learning environments through the use of digital interactive tools, on-line platforms, and virtual communication technologies. Future research should focus on developing criteria and indicators for assessing the level of readiness for career guidance activities, as well as further clarifying the role of digital interactive tools within this process.

ACKNOWLEDGEMENTS

None.

FUNDING

None.

CONFLICT OF INTEREST

None.

REFERENCES

- [1] Bersan, O.S., Lustrea, A., Sava, S., & Bobic, O. (2024). Training teachers for career guidance of high school students. *Education Sciences*, 14(3), article number 289. doi: [10.3390/educsci14030289](https://doi.org/10.3390/educsci14030289).
- [2] Boichuk, V.B., Boichuk, O.B., & Hura, A. (2023). Preparation of teachers in postgraduate education institutions for career guidance work. *Pedagogical Sciences: Theory, History, Innovative Technologies*, 4(128), 437-451. doi: [10.24139/2312-5993/2023.04/437-451](https://doi.org/10.24139/2312-5993/2023.04/437-451).
- [3] David, S.A., & Mohebi, L. (2026). Implications of career guidance on career choices and professional development: Stakeholders' perspectives from selected higher educational institutions in the UAE. *Social Sciences & Humanities Open*, 13, article number 102594. doi: [10.1016/j.ssaho.2026.102594](https://doi.org/10.1016/j.ssaho.2026.102594).
- [4] Fernandes, S., Araújo, A.M., Miguel, I., & Abelha, M. (2023). Teacher professional development in higher education: The impact of pedagogical training perceived by teachers. *Education Sciences*, 13(3), article number 309. doi: [10.3390/educsci13030309](https://doi.org/10.3390/educsci13030309).
- [5] Gorni, E., Vignoli, M., & Di Stasi, M. (2024). Including career guidance in university courses: The instructor perspective. *CERN IdeaSquare Journal of Experimental Innovation*, 8(3), 84-92. doi: [10.23726/cij.2024.1575](https://doi.org/10.23726/cij.2024.1575).
- [6] Gubar, O.G., Spitsyn, V.V., & Kotyash, I.S. (2023). The impact of the use of interactive technologies on the quality of teaching of future teachers in higher education institutions. *Academic Visions*, 26. doi: [10.5281/zenodo.10461085](https://doi.org/10.5281/zenodo.10461085).
- [7] Joho, C., Mok, S.Y., Höfelner, C., & Düggele, A. (2024). Analyzing teachers' competencies in career guidance: A systematic review. *Frontiers in Education*, 9, article number 1488662. doi: [10.3389/feduc.2024.1488662](https://doi.org/10.3389/feduc.2024.1488662).
- [8] Kozyr, M.V. (2021). Application of interactive learning technologies in the educational process of higher education institutions. *Pedagogy of the Formation of a Creative Personality in Higher and General Education Schools*, 78, 186-191. doi: [10.32840/1992-5786.2021.78.33](https://doi.org/10.32840/1992-5786.2021.78.33).
- [9] Kushniruk, S., & Khorkin, D. (2025). Innovative technologies as a means of forming communicative competence of future teachers of higher education institutions. *Youth and Market*, 3(235), 12-17. doi: [10.24919/2308-4634.2025.325686](https://doi.org/10.24919/2308-4634.2025.325686).
- [10] Matiyash, V., Gladyuk, T., Gladyuk, M., Bankovsky, A., & Vodyana, V. (2024). Interactive technologies in the formation of general cultural competence of future teachers. *Youth and Market*, 6(226), 147-152. doi: [10.24919/2308-4634.2024.307880](https://doi.org/10.24919/2308-4634.2024.307880).
- [11] Molodovska, Y., Vainola, R., Lisnevsk, N., Biriuk, L., Kostenko, L., & Bosyi, O. (2024). Use of interactive technologies in an innovative educational environment. *Revista Eduweb*, 18(3), 134-156. doi: [10.46502/issn.1856-7576/2024.18.03.11](https://doi.org/10.46502/issn.1856-7576/2024.18.03.11).
- [12] Onishchenko, T.Ye., Ryabokon, O.V., Helemendyk, A.B., Savelyev, V.G., & Glaktionov, A.G. (2022). The use of interactive teaching methods in the formation of professional competencies in students of higher education institutions. *Higher Education of Ukraine in the Context of Integration into the European Educational Space*, 89(2), 90-96. doi: [10.38014/osvita.2022.89.08](https://doi.org/10.38014/osvita.2022.89.08).
- [13] Paska, T. (2025). Innovative educational technologies in career guidance activities of higher education institutions. *New Pedagogical Idea*, 123(3), 46-53. doi: [10.37026/2520-6427-2025-123-3-46-53](https://doi.org/10.37026/2520-6427-2025-123-3-46-53).

- [14] Pertseva, T.O., Sanina, N.A., & Turlyun, T.S. (2025). Interactive technologies in education: Digital tools for active learning of higher education students. *Medical Education*, 1, 78-82. doi: [10.11603/m.2414-5998.2025.1.15376](https://doi.org/10.11603/m.2414-5998.2025.1.15376).
- [15] Prykhodkina, N., Tsynova, M., Kravets, H., Hrechanovska, O., & Nichyshyna, V. (2025). The role of interactive technologies in improving the quality of learning and development of scientific competencies in modern education. *Periodicals of Engineering and Natural Sciences*, 13(1), 69-82. doi: [10.21533/pen.v13.i1.253](https://doi.org/10.21533/pen.v13.i1.253).
- [16] Reznichenko, I.G. (2024). The use of interactive teaching methods in the process of forming project competence of future teachers. *Pedagogical Academy: Scientific Notes*. doi: [10.5281/zenodo.14262899](https://doi.org/10.5281/zenodo.14262899).
- [17] Rice, S., & Hooley, T. (2024). How can and should secondary school teachers be involved in building students' career knowledge and skills? A Delphi study of the expert community. *Journal of Education and Work*, 37(5-6), 483-501. doi: [10.1080/13639080.2025.2456849](https://doi.org/10.1080/13639080.2025.2456849).
- [18] Rozdymaha, E., & Golovchenko, D. (2025). Peculiarities of using interactive technologies in the process of training future teachers. *Teacher Professionalism: Theoretical and Methodological Aspects*, 1(23), 143-156. doi: [10.31865/2414-9292.23.2025.334060](https://doi.org/10.31865/2414-9292.23.2025.334060).
- [19] Stoika, O. (2024). Interactive learning technologies as a tool for optimizing vocationally oriented English teaching in higher education institutions. *Knowledge, Education, Law, Management*, 7(67), 32-37. doi: [10.51647/kelm.2024.7.5](https://doi.org/10.51647/kelm.2024.7.5).
- [20] Tkachuk, V.V., Yechkalo, Y.V., Bielikova, O.A., Kolomoiets, T.H., Zinchenko, V.M., & Semerikov, S.O. (2024). *Social media as a tool for career guidance in higher education*. In *AREdu 2024: 7th international workshop on augmented reality in education* (pp. 282-292). Kryvyi Rih: CEUR Workshop Proceedings.
- [21] Truskavetska, I. (2025). Interactive learning technologies as a means of forming professional competencies in future teachers of natural sciences. *Acta Paedagogica Volyniensis*, 2, 124-129. doi: [10.32782/apv/2025.2.17](https://doi.org/10.32782/apv/2025.2.17).
- [22] Xie, C., Jamaludin, K.A., & Ismail, H.H. (2026). A visualization analysis of career guidance in higher education: Using Citespace. *Discover Education*, 5, article number 72. doi: [10.1007/s44217-025-01090-5](https://doi.org/10.1007/s44217-025-01090-5).

Наталія Недвецька

Асистент

Національний університет біоресурсів і природокористування України

03041, вул. Героїв Оборони, 15, м. Київ, Україна

<https://orcid.org/0000-0002-4233-168X>

Інтерактивні технології як сучасні засоби підготовки викладача закладу вищої освіти до профорієнтаційної діяльності

Анотація. У статті розглядається проблема формування готовності майбутнього викладача закладу вищої освіти до здійснення профорієнтаційної діяльності в умовах сучасного освітнього середовища. Метою роботи було обґрунтування впливу інтерактивних технологій на розвиток готовності майбутнього викладача закладу вищої освіти до профорієнтаційної діяльності та визначення можливості їх застосування для цілеспрямованого формування відповідної компетенції. Дослідження виконано поетапно із застосуванням методів аналізу, синтезу, узагальнення, систематизації, порівняння, класифікації та теоретичного моделювання на засадах структурно-функціонального підходу. Обґрунтовано доцільність використання інтерактивних технологій як засобу розвитку відповідної компетентності. У результаті аналізу наукових праць уточнено сутність інтерактивних технологій та впорядковано їх за функціональним призначенням. Виокремлено групи технологій, що сприяють розвитку аналітичного й критичного мислення, комунікативних умінь, дослідницьких компетентностей, професійного моделювання діяльності, мотивації та цифрової грамотності. На основі узагальнення наукових підходів запропоновано структуру профорієнтаційної компетентності закладів вищої освіти, що охоплює когнітивний, мотиваційно-ціннісний та операційно-діяльнісний компоненти. Здійснено теоретичне моделювання процесу підготовки майбутнього викладача до профорієнтаційної діяльності із застосуванням інтерактивних технологій. Визначено, що розвиток когнітивного компонента забезпечується через кейс-метод, проблемне навчання та аналіз педагогічних ситуацій; мотиваційно-ціннісного – через дискусії, тренінги, метод «круглого столу» та дебати; операційно-діяльнісного – через ділові й рольові ігри, проєктні технології та моделювання професійних ситуацій. Узагальнено систему взаємозв'язків між компонентами профорієнтаційної компетентності та інтерактивними технологіями й представлено цілісну модель формування готовності викладача до профорієнтаційної діяльності. У результаті проведеного теоретичного дослідження уточнено зміст і структуру готовності майбутнього викладача закладу вищої освіти до профорієнтаційної діяльності.

Ключові слова: інноваційна технологія; інтерактивні методи; профорієнтаційна компетентність; професійна підготовка; дискусія; кейс-метод; мозковий штурм