



Organisation of teachers' professional learning within the system of continuing education

Viacheslav Borysov*

Doctor of Pedagogy, Professor,
State Institution "Luhansk Taras Shevchenko National University"
37500, 2 Novikova Viktora Str., Lubny, Ukraine
<https://orcid.org/0000-0002-3117-2118>

Vasyl Dudar

PhD in Historical Sciences, Professor
Hryhorii Skovoroda University in Pereiaslav
08401, 30 Sukhomlynskoh Str., Pereiaslav, Ukraine
<https://orcid.org/0000-0001-6064-9408>

Olena Bokshyts

PhD in Historical Sciences, Associate Professor
Hryhorii Skovoroda University in Pereiaslav
08401, 30 Sukhomlynskoh Str., Pereiaslav, Ukraine
<https://orcid.org/0000-0002-3528-5312>

■ **Abstract.** The aim of this article was to provide a theoretical synthesis of models of continuing professional development for teachers, effective forms of professional development, and the possibilities for their application in postgraduate education. The research methodology was based on a theoretical and analytical approach and involved the integration of theoretical analysis of scholarly sources, content analysis of regulatory and programme materials, the comparative method, systematisation, generalisation, and pedagogical modelling. This approach enabled the analysis of 64 sources published between 2018 and 2025, the comparison of models of teachers' professional development, the systematisation of forms of professional learning, and the substantiation of the rationale for an integrated model within the postgraduate education system. The findings demonstrated that the continuing professional development of teaching staff in postgraduate education constitutes a holistic process of professional renewal encompassing not only formal professional development but also self-directed learning, reflective practice, digital readiness, professional collaboration, and the practical enhancement of teaching practice. Professional development models fulfil different functions: the course-based model provides organisational structure, the competency-based model focuses on professional outcomes, the andragogical model takes account of adult learners' prior experience, the personalised model supports individual learning pathways, the network-based model strengthens collegial collaboration, the digital model expands access to learning opportunities, while the mentoring and supervision model ensures sustained support for implementing changes in professional practice. The effectiveness of professional development is determined not by its format or title, but by its capacity to ensure teachers' active participation, the completion of practical tasks, the creation of educational products, constructive feedback, post-course support, and the evaluation of changes in professional practice. The integrated model of professional development should be implemented as a continuous cycle combining needs assessment, an individual learning pathway, modular and

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*Corresponding author(borysow13@gmail.com)

blended learning, professional learning communities, mentoring, supervision, an electronic portfolio, and the evaluation of changes in teaching practice

■ **Keywords:** reflection; competence; self-directed learning; mentoring; supervision; microlearning

■ Introduction

The continuing professional development of teaching staff requires thorough scholarly consideration, as the digital transformation of education, the expansion of blended and online learning, the development of inclusive education, efforts to address learning loss, the changing role of the teacher, the growing need for lifelong learning, and the ongoing renewal of the competency-based approach have intensified the demands placed upon the quality of postgraduate education. These developments determine teachers' capacity to update their pedagogical approaches, adapt teaching to meet learners' diverse educational needs, and respond effectively to changes in curriculum content, educational technologies, and the organisation of the educational process. Professional development based solely on the periodic completion of courses fails to establish a sufficient connection between teachers' learning and changes in their professional practice. Consequently, there is a need to examine models that integrate individual learning pathways, practice-oriented learning, digital formats, mentoring, and professional collaboration. The absence of a coherent approach to organising teachers' continuing professional development within postgraduate education results in the formalisation of postgraduate learning, fragmented renewal of teachers' competencies, and a reduced capacity of schools to respond effectively to learners' educational needs.

In the scholarly literature, teachers' professional learning throughout their careers is associated with rethinking the role of the teacher, renewing educational content, and adapting pedagogical practice to the principles of the New Ukrainian School (NUS). The theoretical aspects of teachers' continuing professional development within the NUS were linked by N. Kurysh (2025) to innovative practices, professional mobility, and teachers' capacity to construct their own professional learning pathways. This perspective made it possible to conceptualise professional development not as an isolated stage of professional learning but as a continuous process of renewing methodological, digital, and reflective competencies. L. Khomych (2021) examined the directions of teachers' professional development through the integration of the value orientations of the NUS, pedagogical mastery, and readiness to work within a reformed educational environment. This approach clarified the relationship between teachers' professional competence and their ability to implement competency-based teaching. R. Chernovol-Tkachenko (2025) interpreted teachers' professional development within the postgraduate education system as a response to dynamic social change and emerging

demands in educational practice. This interpretation broadened the understanding of postgraduate education from course-based provision to an environment supporting teachers' professional adaptation, continuous support, and the renewal of pedagogical practice. Through international collaboration, L. Kolesnyk & H. Biseth (2024) presented professional development as a mechanism for supporting educational reform in Ukraine. Their findings demonstrated that inter-institutional cooperation, partnership, and the comparison of educational practices enhance the openness and development of teacher education.

A separate body of literature addresses models of teachers' professional development that integrate formal, non-formal, network-based, and postgraduate education. V. Fritsiuk & O. Shvets (2025) systematised continuing professional development through practices of lifelong learning, teachers' professional autonomy, and sustained professional support throughout their careers. From this perspective, postgraduate education is understood not as periodic course-based learning but as a comprehensive system of professional support for teachers. M. Vovk *et al.* (2021) examined formal and non-formal education as interconnected means of supporting teachers' professional growth. Their synthesis demonstrated that professional development is strengthened through the integration of institutional programmes, self-directed learning, professional collaboration, and the recognition of learning outcomes achieved outside the formal education system. Yu. Kesner & O. Antonova (2025) presented network-based collaboration as a model of non-formal professional development for teachers working in out-of-school education institutions. Their proposed model demonstrated the potential of professional networks to facilitate the exchange of experience, collegial learning, methodological support, and the dissemination of pedagogical practices beyond the boundaries of traditional course-based professional development.

Digitalisation, theoretical modelling, and the evaluation of professional development effectiveness constitute a distinct body of literature concerned with the modernisation of teachers' professional development. S. Shara & I. Kalinichenko (2025) examined approaches to professional development in the context of digitalisation through online learning formats, digital tools, and flexible educational resources. Within this analysis, digitalisation emerged not merely as a means of delivering distance learning for teachers, but as a catalyst for restructuring postgraduate education according to the principles of accessibility, modularity, and

personalisation. Y. Kapranov *et al.* (2025) analysed digital competencies through the lens of European experience, Ukrainian priorities in teacher education, and lifelong professional learning. Within this framework, the development of digital competence is associated with pedagogical content, the values of open education, and teachers' readiness for continued self-directed professional learning. A. Fodor & I. Albulescu (2025) developed a theoretical framework for professional development centred on the interrelationship between knowledge, practice, reflection, and teachers' professional identity. From this perspective, professional development is understood as a multidimensional process rather than the accumulation of isolated learning activities. R. Magwenya *et al.* (2023) synthesised trends in continuing professional development over the past decade, emphasising organisational conditions, participants' motivation, and the practical orientation of learning. Their synthesis demonstrated that teachers' professional growth is more effective when learning is sustained over time, practice-oriented in content, supported by participants' intrinsic motivation, and reinforced by the educational institution.

Despite the existence of academic research on teachers' professional development, there remains a lack of a coherent, holistic vision for its implementation in postgraduate education, taking into account content-related, technological and practice-oriented components. The aim of this study was to provide a theoretical justification for approaches to organising the continuing professional development of teaching staff through an analysis of professional development models, effective forms of professional learning, and the conditions required for their institutional implementation. The objectives of the study were to analyse the course-based, competency-based, andragogical, personalised, network-based, digital, and mentoring and supervision models of teachers' professional development; to identify effective forms of professional development; and to substantiate the sequence for implementing an integrated model of teachers' professional learning within postgraduate education.

■ Materials and Methods

The study adopted a theoretical and analytical design. The identification and verification of sources were conducted using Scopus, Web of Science, Google Scholar, CrossRef, the open websites of academic journals, electronic archives of Ukrainian scholarly publications, and repositories of research and educational institutions. The inclusion criteria were as follows: relevance to the topic of the continuing professional development of teaching staff; the presence of a theoretical, review, or applied analysis of professional development models, forms of professional learning, or postgraduate education; publication in peer-reviewed academic journals or open-access academic repositories; availability of

the full text or sufficient bibliographic information; and chronological relevance to the research topic within the period 2019–2025, as this period reflects the accelerated digitalisation of education, the expansion of online and blended learning, the increasing emphasis on individual learning pathways, and the renewal of approaches to teachers' professional development within postgraduate education. A total of 64 sources published between 2018 and 2025 were ultimately included in the analysis.

The study employed methods of general theoretical inquiry together with content analysis of regulatory and programme documents. Analytical methods were used to identify the course-based, competency-based, andragogical, personalised, network-based, digital, and mentoring and supervision models of teachers' professional development. These models were systematised according to the following criteria: conceptual orientation, organisational logic, the teacher's role in the learning process, the degree of individualisation, forms of professional collaboration, the presence of a digital component, mechanisms for post-course support, and the transfer of learning outcomes into teaching practice (Sancar *et al.*, 2021; Fairman *et al.*, 2022; Phuong & Duong, 2022). These models were selected because they encompass the principal dimensions of continuing professional development within postgraduate education: institutionally organised learning, competency renewal, adult learning, individual learning pathways, professional learning communities, digital learning environments, and support for implementing change in professional practice (Tymchuk *et al.*, 2021; Meesuk *et al.*, 2021; Chaipidech *et al.*, 2022). Mentoring and supervisory support were additionally considered as mechanisms facilitating the transfer of professional development outcomes into teaching practice (Toh *et al.*, 2022; Hinon *et al.*, 2024).

The comparative method was used to examine these models in terms of their conceptual foundations, organisational logic, modes of implementation, and potential for application within postgraduate education (Kaminska, 2018; Kowalczyk-Walędzia *et al.*, 2022; Aitken *et al.*, 2023). Systematisation enabled the classification of professional development activities according to their functional purpose into course-based, training-based, digital, network-based, mentoring, supervision, and practice-oriented forms (Williams, 2020; Bragg *et al.*, 2021; Morcom & MacCallum, 2022). Content analysis was undertaken to examine the regulatory and programme framework governing the professional development of teaching staff, including the regulation on teachers' professional development (Resolution of Cabinet of Ministers of Ukraine No. 800, 2019), the regulation governing the activities of Centres for the Professional Development of Teaching Staff (Resolution of Cabinet of Ministers of Ukraine No. 672, 2020), and the Professional Standard for Teachers (Order of Ministry of Education and Science of Ukraine No. 1225, 2024).

The analysis also covered the Model Programme for Teachers' Professional Development (Order of Ministry of Education and Science of Ukraine No. 904, 2022) and the catalogue of professional development programmes published by the Institute of Education Content Modernisation (n.d.). This analysis made it possible to identify which professional development models, learning formats, support mechanisms, and approaches to evaluating professional outcomes are represented within the institutional practice of postgraduate education. Generalisation was employed to identify the conditions required for integrating professional development models and forms into the postgraduate education system. Pedagogical modelling was used to develop the framework for implementing an integrated model of teachers' professional development. This framework was constructed on the basis of the findings of the theoretical analysis of scholarly literature, the content analysis of regulatory and programme documents, the comparison of professional development models, and the systematisation of professional development formats.

■ Results and Discussion

The content of teachers' professional growth in the context of educational change

The continuing professional development of teaching staff within postgraduate education should be regarded

as a continuous process of renewing professional competence, pedagogical thinking, methodological practice, digital readiness, reflective culture, and the capacity for self-directed learning. Its scope extends beyond professional development, as it is not confined to attending courses, accumulating training hours, or obtaining certificates. Based on the theoretical analysis of scholarly literature and the content analysis of regulatory and programme documents, this process encompasses institutionally organised learning, non-formal educational practices, self-directed learning, reflective practice, professional collaboration, and the practical improvement of teaching practice. Regulatory and programme documents define professional development as a component of teachers' professional growth associated with the renewal of competencies, the selection of learning formats, the development of an individual learning pathway, the documentation of professional growth outcomes, and their subsequent application in teaching practice (Resolution of Cabinet of Ministers of Ukraine No. 800, 2019; Order of Ministry of Education and Science of Ukraine No. 904, 2022). To avoid conflating the concepts of "professional development", "postgraduate education", and "continuing professional development", it is appropriate to distinguish them according to their content and function within teachers' professional development (Table 1).

Table 1. Distinction between the key concepts of teachers' professional development

Concept	Main content	Function within postgraduate education
Professional development	Courses, training programmes, certified programmes, and short-term professional learning activities	Updating specific knowledge, skills, and professional practice
Postgraduate education	The institutional framework for learning following the completion of initial professional education	The organisation, support, and coordination of professional growth
Continuing professional development	Formal, non-formal, informal, reflective, and self-directed learning	The continuous development of competencies and teaching practice

Source: compiled by the author based on an analysis of M. Kaminska (2018), Resolution of Cabinet of Ministers of Ukraine No. 800 (2019), V. Sydorenko et al. (2020), Resolution of Cabinet of Ministers of Ukraine No. 672 (2020), R. Sancar et al. (2021), Order of Ministry of Education and Science of Ukraine No. 904 (2022), A. Friedman (2023), M. Njenga (2023), Order of Ministry of Education and Science of Ukraine No. 1225 (2024), Institute of Education Content Modernization (n.d.)

The content analysis of regulatory and programme documents demonstrated that, within the regulatory framework, teachers' professional development is interpreted as an organised process of professional renewal that may be implemented through various forms, types, and providers of educational activities, while also providing for the recognition of professional learning outcomes (Resolution of Cabinet of Ministers of Ukraine No. 800, 2019). The regulation governing the activities of Centres for the Professional Development of Teaching Staff further specifies the institutional support provided for teachers' professional growth through consultation, professional guidance, the identification and synthesis of professional learning needs, and assistance in developing individual professional learning pathways (Resolution of Cabinet of Ministers of Ukraine No. 672, 2020). The Professional Standard

for Teachers establishes the competency-based foundation of continuing professional development by linking teachers' professional activities with professional functions, competencies, and expected professional outcomes (Order of Ministry of Education and Science of Ukraine No. 1225, 2024). The Model Programme for Teachers' Professional Development and the catalogue of educational programmes published by the Institute of Education Content Modernisation reflect the programmatic level of professional development implementation through thematic modules, digital and blended learning formats, practice-oriented activities, post-course support, and an emphasis on applying learning outcomes within the educational process (Institute of Education Content Modernization, n.d.; Order of Ministry of Education and Science of Ukraine No. 904, 2022).

Continuing professional development differs from professional development in terms of its scope, duration, and the nature of its influence on teachers' professional practice. Whereas professional development is primarily delivered through organised learning activities, the broader concept of professional growth encompasses teachers' formal, non-formal, and self-directed learning aimed at renewing professional experience and pedagogical decision-making (Sydorenko *et al.*, 2020; Friedman, 2023). This interpretation is consistent with the conclusions of M. Njenga (2023), who examined teachers' participation in professional development in relation to motivation, professional learning needs, and the conditions supporting engagement in learning. At the same time, M. Irshad (2025) extended this perspective by demonstrating the importance of non-formal and self-directed learning beyond the boundaries of traditional professional training. Consequently, continuous professional development cannot be reduced to the institutional provision of courses, as it requires teachers to take an active stance towards their own professional renewal.

The competency-based dimension of teachers' professional learning involves the continuous renewal of knowledge, practical skills, methodological approaches, and readiness to operate effectively within a changing educational environment. The analysis of the literature demonstrated that professional growth encompasses not only subject-specific and methodological knowledge but also the capacity to adapt teaching to different educational contexts, maintain the quality of the educational process, and evaluate the effectiveness of one's own professional practice (Sancar *et al.*, 2021; Wolde, 2021). This conclusion is reinforced by the findings of C. Lai & T. Jin (2021), who associated technological integration not only with technical proficiency but also with teachers' professional identity. A similar emphasis on teachers' internal readiness is evident in the work of E. Garzón-Artacho *et al.* (2021), in which digital competence is examined within the broader context of lifelong learning. At the regulatory level, the competency-based content of professional development is specified through the Professional Standard for Teachers, which links teachers' professional activity with professional functions, competencies, and expected professional outcomes (Order of Ministry of Education and Science of Ukraine No. 1225, 2024). Consequently, competency renewal within postgraduate education should encompass not the isolated acquisition of skills but the integration of knowledge, professional values, digital readiness, and effective professional practice.

The role of postgraduate education extends beyond organising learning activities to creating an environment that supports professional development, reflective reinterpretation of experience, and the gradual renewal of teaching practice. The postgraduate educational environment can fulfil a transformative

function when teachers' learning is combined with research activity, reflective practice, and the expansion of professional perspectives (Kaminska, 2018; Kowalczyk-Walędziak *et al.*, 2022). This position is further supported by G. Aitken *et al.* (2023), who conceptualised postgraduate education as a space for broadening teachers' understanding of teaching. P. Taylor (2023) likewise emphasised that professional growth depends upon the interaction between teachers' goals, opportunities for development, and their responses to professional challenges. Institutional support for professional development is associated not only with the delivery of courses but also with consultation, ongoing professional support, the identification of teachers' professional learning needs, and assistance in developing individual learning pathways (Resolution of Cabinet of Ministers of Ukraine No. 672, 2020). Taken together, these perspectives provide grounds for interpreting postgraduate education not as the final stage following initial teacher preparation but as an environment that sustains and supports continuous change in teachers' professional practice.

The individualisation of professional development is associated with teachers' capacity to independently plan, sustain, and adjust their own professional growth. The analysis demonstrated that self-directed learning activities and motivation to engage in professional learning strengthen the connection between professional development and teachers' actual professional needs rather than merely fulfilling formal requirements for professional development (Zhang *et al.*, 2021; Koay, 2023). This finding is consistent with the position of S. Efu (2023), who argues that reflective practice promotes teachers' conscious engagement in professional development rather than passive participation in training activities. At the same time, H. Haruna *et al.* (2025) extended this individual perspective by introducing a social and organisational dimension, demonstrating the importance of collaborative learning, technological integration, and professional interaction in developing teachers' professional capacity. Within the regulatory and programme framework, individualisation is reflected in teachers' opportunity to choose the forms, types, and providers of professional development, as well as in the role of Centres for the Professional Development of Teaching Staff in providing consultation and support for teachers' professional learning needs (Resolution of Cabinet of Ministers of Ukraine No. 800, 2019; Resolution of Cabinet of Ministers of Ukraine No. 672, 2020). Thus, an individual learning pathway should not be understood as isolated self-directed learning; rather, it requires a combination of autonomy, reflective practice, collaboration with colleagues, and support from the educational institution.

The reflective component is an essential condition for transforming formal learning into meaningful changes in teaching practice. Professional growth becomes

substantive when teachers relate new knowledge to their own experience, analyse professional challenges, reconsider their pedagogical decisions, and transfer learning outcomes into the educational process (Efu, 2023; Taylor, 2023). This conclusion, regarding reflection as a prerequisite for transferring learning into professional practice, is consistent with the position of D. Mayer & M. Mills (2021), who associate teacher professionalism not only with professional preparation but also with responsibility and the capacity to respond appropriately to the educational context. This implies that professional development requires not the mechanical adoption of new approaches but their conscious alignment with teachers' professional roles and working conditions. A similar perspective is evident in the work of R. D'Agostino & E. Pace (2025), who examined professional identity through a conceptual understanding of the teacher's role. At the programme level, the reflective component is associated with practice-oriented activities, the analysis of learning outcomes, and post-course support, thereby facilitating the transition from participation in professional development programmes to meaningful changes in teachers' professional practice (Institute of Education Content Modernization, n.d.; Ministry of Education and Science of Ukraine, 2022). Reflection in postgraduate education should therefore support not only the evaluation of completed learning but also a deeper understanding of changes in pedagogical practice.

The digital dimension of continuing professional development should not be reduced to the acquisition of individual technological tools. The analysis demonstrated that technology-supported learning, digital formative assessment, and electronic resources transform the nature of professional development by requiring the integration of technical proficiency with methodological appropriateness and pedagogical responsibility (Williams, 2020; Zhorova *et al.*, 2022). This finding is consistent with the conclusions of Rasdiana *et al.* (2024), who examined teachers' digital competence within the broader organisational context of supervision, technological leadership, and the digital culture of educational institutions. Teachers' digital preparation cannot be confined to the individual acquisition of software skills but should be supported through managerial, methodological, and supervisory mechanisms. A similar perspective is presented by V. Pavlova (2025), who conceptualised lecturers' digital competence as a prerequisite for the meaningful implementation of educational technologies rather than merely a technical skill. The analysis of model and educational professional development programmes demonstrated that digital and blended learning formats are used not only as modes of delivering professional learning but also as means of developing digital competence, promoting the effective use of electronic resources, addressing learning loss, and implementing innovative educational

technologies (Institute of Education Content Modernization, n.d.; Order of Ministry of Education and Science of Ukraine No. 904, 2022). Consequently, the digital component of postgraduate education should be integrated into the broader process of competency-based and practice-oriented professional renewal.

Thus, the content of the continuing professional development of teaching staff within postgraduate education encompasses institutionally organised learning, formal and non-formal educational practices, self-directed learning, reflective practice, competency renewal, the development of professional identity, and the practical enhancement of teaching practice. The content analysis of the regulatory and programme framework clarified that these components are institutionally and programmatically reflected through the regulations governing professional development, the activities of the Centres for the Professional Development of Teaching Staff, the Professional Standard for Teachers, and the model and educational professional development programmes. Within this framework, postgraduate education functions as a system of professional support for teachers that should provide for the assessment of professional learning needs, the development of individual learning pathways, access to diverse learning formats, support for implementing new pedagogical practices, and the evaluation of meaningful changes in teachers' professional practice. Continuing professional development should therefore be understood as a broader concept than professional development alone, as it integrates structured learning, professional experience, self-directed development, and the reflective renewal of teaching practice throughout a teacher's career.

Organisational framework of the principal models of teachers' professional development

Models of teachers' professional development differ not only in their learning formats but also in how they define the teacher's role, the source of professional renewal, the organisation of learning, the mechanisms of support, and the expected professional outcomes. Within the postgraduate education system, a professional development model may be understood as an organisational and conceptual framework that determines the logic of teachers' learning, ranging from formally organised professional development to personalised, digital, network-based, or supervision-oriented approaches. The identification and comparison of these models were based on the following criteria: the teacher's role in the learning process, the organisation of learning, the degree of individualisation, support mechanisms, expected professional outcomes, and the potential for implementation within the postgraduate education system. These criteria formed the basis for the comparative analysis of the models presented in Table 2.

Table 2. Organisational framework of models of teachers' professional development

Model	Conceptual basis	Function	Potential / conditions for implementation in postgraduate education	Limitations
Course-based	Institutionally organised learning	The structured updating of knowledge and skills	Delivery of compulsory and optional programmes, thematic modules, and certified professional learning activities	The risk of a merely formal completion of professional development courses
Competency-based	Professional competencies and outcomes	A focus on measurable professional change	Programme design based on the professional standard, competencies, and assessment criteria	Excessive standardisation
Andragogical	The experience and autonomy of the adult learner	Promoting teachers' agency	Recognition of teachers' professional experience, learning needs, motivation, and participation in determining learning objectives	The need for high levels of motivation
Personalised	An individual learning pathway	Adapting learning to professional needs	Assessment of professional learning needs, flexible selection of modules, individual learning planning, and advisory support	The complexity of needs assessment and ongoing support
Network-based	Professional learning communities and collegial collaboration	The exchange of experience and collaborative decision-making	Organisation of professional learning communities, subject networks, inter-school networks, and collegial post-course support	Dependence on the quality of professional interaction
Digital	Online learning environments and digital resources	Flexibility, accessibility, and modularity of learning	Delivery of online and blended programmes, microlearning, e-learning courses, and electronic portfolios	The risk of technical formalism
Mentoring and supervision	Mentoring, supervision, and feedback	Supporting the transfer of learning into professional practice	Post-course support, analysis of professional situations, expert feedback, and support for the implementation of change	Resource intensity and the need for appropriately trained specialists

Source: compiled by the author on the basis of a theoretical analysis of models of teachers' professional development of R. Williams (2020), P. Meesuk et al. (2021), L. Tymchuk et al. (2021), R. Toh et al. (2022), J. Fairman et al. (2022), T. Phuong & B. Duong (2022), P. Chaipidech et al. (2022), K. Hiron et al. (2024), C. Marcelo et al. (2025)

The course-based model is founded upon institutionally regulated teacher learning delivered through professional development programmes, thematic modules, seminars, and other formally organised educational activities. This model is characterised by a structured curriculum, specified duration of study, documented learning outcomes, and formal certification of teachers' participation (Kaminska, 2018; Fairman et al., 2022). Its potential lies in the organisation of compulsory and elective professional development programmes, thematic modules, and accredited training activities. The finding concerning the risk of formalisation within the course-based model is further supported by the conclusions of R. Ahmad Zaky El Islami et al. (2022), who argued that strategies for teachers' professional development should be aligned with genuine professional needs rather than merely reflecting the organisational availability of training programmes. This suggests that the course-based model retains its value within postgraduate education only when its content is methodologically relevant, practice-oriented, and capable of informing subsequent professional practice. Its principal limitation is the risk of formal participation, whereby the completion of accredited training is not accompanied by meaningful changes in teachers' professional practice.

The competency-based model shifts the emphasis from participation in learning activities to the development of specific professional competencies. The analysis of the literature demonstrated that, within this

model, professional development is evaluated through improvements in methodological, digital, communication, assessment, managerial, and reflective competencies rather than solely by the number of professional development hours completed (Phuong & Duong, 2022; Açıkgöz & Babadogan, 2021). This conclusion is reinforced by B. Wolde (2021), who highlighted the importance of continuing professional development for strengthening teaching and learning competencies in the context of educational quality. Similarly, L. Holubnycha et al. (2022) described the competency-based approach as an orientation towards the ability to act effectively rather than simply the acquisition of knowledge. Within this model, the content of professional development may be aligned with the Professional Standard for Teachers, intended learning outcomes, and indicators of professional competence. Consequently, the competency-based model provides a substantive framework for renewing teaching practice but may become excessively standardised if it fails to take account of teachers' professional contexts and individual learning needs.

The andragogical model is based on the premise that teachers participating in postgraduate education are adult learners possessing established professional experience, value orientations, educational aspirations, and a need for autonomy. This model assumes teachers' active involvement in defining learning objectives, analysing professional situations, selecting learning approaches, and evaluating their own professional progress (Tymchuk et al., 2021; Anishchenko, 2022).

The finding concerning teachers' active role within the andragogical model is further clarified by S. Masupah *et al.* (2025), whose approach to andragogical placements emphasises the acquisition of professional experience through immersion in authentic educational settings rather than passive engagement with learning materials. This supports the view that teachers' learning should build upon prior professional experience, authentic professional tasks, and opportunities to apply newly acquired knowledge directly in practice. The distance-learning dimension of the andragogical model has also been elaborated through analyses of the preparation of adult educators within digitally mediated learning environments (Solohub & Humeniuk, 2022). In practice, this model is implemented by drawing upon teachers' professional experience, educational needs, motivation, and authentic teaching situations. Rather than replicating the course-based model, it redefines the teacher's position: teachers are not passive recipients of instruction but active participants who jointly determine the goals, methods, and directions of their own professional development.

The personalised model is centred on the development of an individual learning pathway that reflects teachers' professional needs, level of preparation, experience, educational context, and professional development goals. The analysis of the literature demonstrated that, within this model, the content of learning is not prescribed uniformly for all participants but is adapted to individual professional gaps, interests, and the specific demands of teaching practice (Chaipidech *et al.*, 2022; Marcelo *et al.*, 2025). The finding concerning the adaptation of learning to teachers' individual needs is further reinforced by J. Koay (2023), who argues that self-directed professional learning activities enable teachers to determine their own directions for professional development and select appropriate means of achieving them. Accordingly, the personalised model should not be limited to the formal selection of professional development courses but should provide teachers with genuine autonomy in planning their professional growth. The motivational dimension of personalised professional development was further explored by X. Zhang *et al.* (2021), who demonstrated that participation in continuing professional development is influenced by both individual and school-related factors. The potential of the personalised model lies in combining the assessment of professional learning needs, the flexible selection of learning modules, individual planning, motivational support, and ongoing guidance throughout teachers' individual learning pathways.

The network-based model of professional development is founded upon professional collaboration, collegial learning, the exchange of experience, and the joint resolution of professional challenges. Its organisational logic is characterised by a shift from the vertical

transmission of knowledge towards horizontal interaction within professional learning communities, methodological networks, and collaborative learning environments (Meesuk *et al.*, 2021; Haruna *et al.*, 2025). In a similar vein, M. Irshad (2025) demonstrated that non-formal and self-directed professional development frequently takes place beyond the boundaries of traditional educational provision. Likewise, V. Sydorenko *et al.* (2020) emphasised the importance of integrating formal and non-formal education in supporting the continuing professional development of educational professionals. The network-based model may be implemented through professional learning communities, methodological working groups, inter-school networks, online communities, and collegial forms of post-course support. Its application extends postgraduate education beyond individual course-based learning; however, the effectiveness of such collaboration depends upon the quality of communication, mutual trust among participants, and the capacity of professional communities to generate pedagogically meaningful solutions.

The digital model of professional development is based upon the use of online platforms, distance learning courses, electronic resources, digital tools, analytical systems, and technology-supported learning environments. This model provides flexibility, accessibility, modularity, and opportunities for self-paced learning, but it requires pedagogically sound digital design (Williams, 2020; Rasdiana *et al.*, 2024). The finding concerning the need for pedagogically informed digital design is further supported by the work of E. Garzón-Artacho *et al.* (2021), who conceptualised digital competence as an integral component of lifelong learning. This perspective demonstrates that the digital model of professional development should facilitate not merely the one-off acquisition of digital tools but the gradual development of teachers' capacity to select, adapt, and apply digital resources in pedagogically appropriate ways. The importance of digital competence for the meaningful implementation of educational technologies is further emphasised by V. Pavlova (2025), reinforcing the distinction between the digital model and conventional distance learning. The digital model may be implemented through online and blended learning programmes, microlearning, electronic courses, digital portfolios, and support for teachers' individual pace of professional development.

The mentoring and supervision model is based on mentoring, professional supervision, coaching support, expert feedback, and the analysis of professional situations. The organisational logic of this approach lies not so much in the transmission of learning content as in supporting teachers while they apply new approaches in professional practice (Toh *et al.*, 2022; Hinon *et al.*, 2024). This perspective may be compared with the conclusions of R. D'Agostino & E. Pace (2025), who examined teachers' professional identity through a

conceptual understanding of the pedagogical role. Likewise, D. Mayer & M. Mills (2021) demonstrated that teacher professionalism entails both responsibility and the capacity to act appropriately within the educational context. The mentoring and supervision model provides post-course support, the analysis of professional situations, expert feedback, and assistance in implementing new pedagogical approaches in practice. This approach is valuable not only for supporting early-career teachers but also for facilitating the professional development of experienced practitioners. Its principal limitation lies in its resource-intensive nature and the need for well-prepared mentors and supervisors.

The synthesis of the models examined demonstrates that no single model is capable of independently providing the full cycle of continuing professional development for teaching staff. The course-based model establishes the organisational foundation; the competency-based model defines the expected professional outcomes; the andragogical model acknowledges the experience of the adult learner; the personalised model supports individual learning pathways; the network-based model promotes collegial collaboration; the digital model enhances accessibility and flexibility; and the mentoring and supervision model facilitates the transfer of learning outcomes into professional practice. Consequently, within the postgraduate education system, the emphasis should not be placed on selecting a single model but on integrating these approaches in accordance with teachers' professional needs, the resources of educational institutions, opportunities for post-course support, levels of digital readiness, conditions for personalised learning, and the expected changes in teaching practice.

Effective forms of professional development for teaching staff

Effective forms of professional development for teaching staff should be understood as practical means of organising learning interactions, professional experimentation, and post-course support. Unlike professional development models, which establish the overall organisational framework, professional development formats define the specific mechanisms through which teachers engage in learning, including courses, modules, training programmes, workshops, professional learning workshops, webinars, online courses, professional learning communities, mentoring, supervision, placements, electronic portfolios, practice-oriented projects, and microlearning. Their effectiveness cannot be assessed solely on the basis of duration, the number of participants, or the award of certificates. Within postgraduate education, the crucial consideration is whether the chosen format enables teachers' active participation, engagement with authentic professional tasks, constructive feedback, documentation of learning outcomes, and the

subsequent application of newly acquired knowledge and experience in professional practice.

The content analysis of the Model Programme for Teachers' Professional Development (Order of Ministry of Education and Science of Ukraine No. 904, 2022) and the educational programmes published by the Institute of Education Content Modernisation (Institute of Education Content Modernization, n.d.) demonstrated that the most frequently employed formats include courses, thematic modules, webinars, online courses, training programmes, workshops, and practice-oriented activities. These forms are primarily intended to update teachers' methodological, digital, assessment, and communication competencies, while also introducing new educational approaches, tools, and regulatory requirements. However, considerably less attention is devoted to components related to the assessment of individual professional learning needs, sustained post-course support, mentoring, supervision, documenting changes in teaching practice, and evaluating the long-term outcomes of professional development. In most programmes, learning outcomes are defined in terms of participation, the completion of assignments, or the award of a certificate, whereas the mechanisms for evaluating how newly acquired knowledge and skills are applied in teachers' professional practice after completing the programme are described less consistently.

Courses and modular programmes remain appropriate when they provide not only a structured progression through the content but also culminate in a practical outcome. A professional learning programme has practical value when it addresses teachers' actual needs rather than merely adhering to the formal organisation of a training course (Fairman *et al.*, 2022; Ahmad Zaky El Islami *et al.*, 2022). Teachers' engagement in continuing professional development is strengthened when learning aligns with their professional expectations and offers accessible opportunities for participation, as emphasised by M. Njenga (2023). Personal professional goals, support from the school, and clear benefits for everyday teaching practice also enhance teachers' motivation for professional development, as demonstrated by X. Zhang *et al.* (2021). Thus, courses and modules should not consist of a standardised set of topics but should function as flexible learning formats that include needs assessment, the selection of relevant content blocks, the completion of a practical task, and the subsequent application of the outcomes in professional practice.

Training sessions, masterclasses, and pedagogical workshops are effective when they are designed to develop specific teaching practices. Unlike traditional course-based formats, these approaches emphasise the simulation of professional situations, practical exercises, case analysis, trial implementation of teaching methods, and collaborative reflection on outcomes, which is consistent with the concept of immersive professional

learning for teachers (Maspupah *et al.*, 2025). The importance of aligning learning with authentic socio-pedagogical challenges was substantiated by O. Budnyk (2021). In the context of continuing professional development, this means that a training session or masterclass should be organised around a specific challenge in educational practice rather than a general presentation of experience. The reflective stage of such activities enhances learning effectiveness because it enables teachers to evaluate not only the correctness of a particular technique but also the conditions for its application within their own classrooms, as highlighted by S. Efu (2023). Consequently, a pedagogical workshop should conclude with a methodological product, an implementation plan, or a reflective conclusion rather than merely a discussion of observed practices.

Webinars, online courses, and distance learning programmes make continuing professional development more accessible; however, the effectiveness of these formats depends on well-designed pedagogical planning. An analysis of online professional development for teachers demonstrated that effective provision requires a clear structure, meaningful interaction, participant support, a carefully designed learning environment, and opportunities to apply acquired knowledge in practice (Bragg *et al.*, 2021). This conclusion does not simply reiterate the general concept of the digital model but specifies the requirements for online learning formats: a webinar or online course should include practical tasks, discussion, feedback on completed work, and opportunities to revisit learning materials. R. Williams (2020) likewise emphasised that technology-supported professional learning requires sound pedagogical design rather than merely a digital platform. Thus, online courses and webinars can be effective within postgraduate education when they function as interactive learning environments rather than as channels for the one-way transmission of information.

Microlearning is an effective approach when teachers require brief, targeted, and immediately applicable development of a specific professional skill. This format consists of small learning units focused on a single tool, teaching strategy, digital resource, or method of organising learning activities (Kohnke *et al.*, 2024; Prihatin *et al.*, 2025). The practical value of microlearning lies in its capacity to facilitate the rapid development of an individual professional practice; however, it does not encompass the entire cycle of pedagogical change. The importance of high-quality design in online professional development, participant support, and opportunities to apply learning in teaching practice was demonstrated by L. Bragg *et al.* (2021), providing grounds for viewing microlearning not as an isolated digital component but as part of a carefully designed learning pathway. Consequently, microlearning is most appropriately used for the targeted development of specific skills, while being combined with courses, training sessions, mentoring,

or practice-oriented projects when comprehensive changes in teaching practice are required.

Professional communities, subject-based methodological groups, and collaborative networks support continuing professional development through interaction among teachers, the joint analysis of challenges, and the collaborative development of pedagogical solutions. These formats facilitate post-course collaboration in which teachers not only exchange experience but also jointly plan, trial, and refine educational practices (Meesuk *et al.*, 2021; Haruna *et al.*, 2025). The value of these approaches extends beyond the mere existence of collegial communication. The complementarity of formal and non-formal education, demonstrated by V. Sydorenko *et al.* (2020), confirms the value of integrating professional learning communities with courses and training programmes rather than viewing them as alternatives. Furthermore, the findings of L. Kohnke *et al.* (2024) concerning flexible professional development in online and blended environments highlight the digital potential of such communities, as collaborative interaction can be supported through short online modules, shared digital resources, and asynchronous discussion of practical tasks. A professional learning community is effective when it extends beyond the exchange of ideas and culminates in a shared product, such as a methodological resource, a bank of teaching activities, an assessment framework, a pupil support plan, or a project for improving educational practice.

Mentoring, supervision, and coaching provide ongoing support for teachers as they implement new approaches in practice. The analysis of the literature demonstrated that mentoring is valuable not only for novice teachers but also for experienced practitioners who are modifying established ways of working or adopting new pedagogical approaches (Morcom & MacCallum, 2022). The coaching dimension of professional learning further refines this perspective, as coaching is viewed as a means of supporting teachers in improving their pedagogical practice (Hope *et al.*, 2022). The importance of sustained post-training support was further confirmed by A. Saunders *et al.* (2024), who demonstrated that the implementation of evidence-informed practice requires not a single consultation but continuous guidance, feedback, and refinement of professional practice. Thus, within postgraduate education, mentoring, supervision, and coaching should be used as extensions of courses and training programmes, enabling teachers to identify implementation challenges, refine their practice, and consolidate professional change.

Placements, practice-oriented projects, and electronic portfolios enable a shift from evaluating participation to evaluating professional outcomes. A practice-oriented approach to continuing professional development requires teachers to create or trial a tangible educational product, such as a lesson segment, a digital resource, a methodological case study, an

assessment tool, a set of learning activities, a plan for working with pupils, or a support programme for a particular group of learners (Budnyk, 2021). This finding may be further extended through the concept of personalised digital learning, as P. Chaipidech *et al.* (2022) demonstrated the potential of individualised professional tasks for developing teachers' technological, pedagogical, and subject-specific knowledge. Likewise, C. Marcelo *et al.* (2025) highlighted the significance of individual learning pathways in professional development, supporting the use of an electronic portfolio as a means of documenting a teacher's personal professional journey. In this context, an electronic portfolio should contain not only certificates but also evidence of the practical application of learning outcomes, including teaching materials, trialled methodological approaches, and reflective records.

A distinct place among effective forms of continuing professional development is occupied by short courses, training sessions, webinars, and pedagogical workshops aimed at updating teachers' assessment and digital practices. Their effectiveness depends on whether familiarity with a digital tool results in changes to formative assessment methods, the provision of feedback, and support for pupils' learning progress (Zhorova *et al.*, 2022). The principles of high-quality online professional development, participant interaction, and ongoing support identified by L. Bragg *et al.* (2021) further clarify the conditions under which such formats move beyond simply reviewing materials or providing technical instruction. Consequently, a short course, training session, or workshop on digital formative assessment should conclude with the creation of an assessment tool, its practical implementation, analysis of the outcomes obtained, and subsequent refinement of the teacher's practice.

The effectiveness of professional development for teaching staff is determined by several interrelated conditions. The form of professional learning should correspond to a specific professional need rather than merely reflecting the general theme of the programme. Learning should involve teachers' active engagement through completing practical tasks, analysing professional situations, creating educational products, discussing solutions, or trialling new approaches. Feedback and post-course support remain essential, as without them learning outcomes often fail to translate into professional practice. Effectiveness should be evaluated not by the number of training hours completed or certificates obtained, but by measurable changes in methodological decision-making, digital practice, assessment approaches, communication with learners, and the organisation of the educational process. It is therefore not the particular format of professional development that determines its value, but its capacity to facilitate progression from learning content to professional action, from participation to demonstrable

outcomes, and from one-off training events to sustained professional development.

Directions for implementing the integrated model of teachers' professional development

The implementation of an integrated model of professional development within the postgraduate education system requires a shift from isolated training activities to a continuous process of professional support for teachers. This approach integrates the assessment of professional learning needs, individual learning pathways, modular learning, face-to-face, online, and blended learning formats, practice-oriented tasks, professional learning communities, mentoring, supervision, electronic portfolios, and the evaluation of changes in teaching practice. It involves not the mechanical addition of new courses or digital resources to the existing system, but the organisation of a continuous cycle in which each stage builds upon the previous one and culminates in a specific professional action, an educational product, a reflective conclusion, or a measurable change in professional practice. The sequence of this implementation process is presented in Figure 1.



Figure 1. Stages in the implementation of the integrated model of teachers' professional development

Source: developed by the author on the basis of theoretical analysis, content analysis of regulatory and programme documents, the synthesis of scholarly approaches, and pedagogical modelling

The implementation of the stages presented in Figure 1 requires the involvement of several groups of institutional stakeholders. The diagnosis of professional needs, the development of an individual learning pathway, and the selection of a modular programme are carried out with the participation of the teacher, methodologists, Centres for the Professional Development of Teachers, and institutions of postgraduate teacher education. The organisation of face-to-face, online, and blended learning, the completion of practice-oriented tasks, and the development of an electronic portfolio are supported by programme instructors, tutors,

methodologists, and the teacher. Participation in professional learning communities, mentoring, supervision, and the evaluation of changes in teaching practice require the involvement of mentors, supervisors, school leaders, professional communities, and the administration of educational institutions. This distribution of responsibilities clarifies the organisational mechanism for implementing the integrated model within the postgraduate education system.

The proposed framework illustrates a sequential process for implementing the integrated model, in which the starting point is not the selection of a ready-made course but the diagnosis of the teacher's professional needs. This approach makes it possible to identify which aspects of professional practice require improvement, including methodological decision-making, digital practices, assessment approaches, communication with learners, the organisation of group work, or support for learners' academic progress. The impact of in-service teacher education programmes on professional development was examined by R. Qaisra & S. Haider (2023), confirming the importance of aligning postgraduate learning with the realities of school teaching. Within the integrated model, this means that diagnosis should fulfil not merely a formal function but a substantive one, as it determines the individual learning pathway, the selection of modules, and the expected professional outcomes.

The second stage of the framework involves the development of an individual learning pathway that combines compulsory and elective components of professional development. Such a pathway may include a core module, short thematic learning units, digital resources, a practical assignment, participation in a professional learning community, supervisory support, and a final portfolio. Changes in teachers' perceptions of postgraduate education and its role in professional development were analysed by G. Singh *et al.* (2024). These findings are particularly relevant to the integrated model, as postgraduate education should be perceived by teachers not as an administrative requirement but as a resource for professional growth. Accordingly, the individual learning pathway should reconcile institutional requirements, teachers' professional expectations, their readiness for change, and the actual conditions of work within educational institutions.

Within the framework, the modular structure of programmes serves as the organisational link connecting different forms of professional learning. One module may provide theoretical updating, another may focus on digital competence, a third may involve a practical task, a fourth may include a supervisory discussion, and a fifth may document learning outcomes in the portfolio. A mobile-oriented framework for teacher professional development and certification was proposed by N. Dahri *et al.* (2023), confirming the potential of digital technologies to support structured, accessible,

and well-monitored professional learning. Within the integrated model, the digital platform should perform more than an informational function. It can facilitate the registration of professional learning needs, provide access to learning modules, support communication with mentors, deliver feedback, store portfolio materials, and monitor the completion of practical tasks.

The combination of face-to-face, online, and blended learning within the framework reflects the different functions these modes perform in postgraduate education. Face-to-face sessions are particularly appropriate for training workshops, pedagogical workshops, supervisory meetings, and collaborative analysis of professional situations. Online learning can provide access to learning materials, micro-modules, webinars, digital tools, and independent learning activities. Blended learning combines direct interpersonal interaction with the flexibility of digital environments. The choice of learning mode should be determined not by organisational convenience but by pedagogical purpose: an online module is appropriate for acquiring knowledge, a training workshop for practising specific professional skills, and mentoring or supervision for supporting the implementation of new approaches in professional practice.

Practice-oriented tasks constitute the central element of the integrated model because they translate learning content into professional action. Such tasks may involve developing a lesson segment, a digital resource, a formative assessment tool, a methodological case study, a set of learning activities, a plan for interaction with learners, or a support programme for a particular group of learners. The effectiveness and challenges of implementing a professional development programme focused on formative assessment were analysed by F. Berisha *et al.* (2024). This example demonstrates that changes in teaching practice require not only training but also sufficient time for implementation, analysis of barriers, ongoing support, and the refinement of subsequent actions. Thus, the practice-oriented component of the integrated model should culminate not in a report confirming participation but in a tangible educational product or a documented change in professional practice.

Participation in a professional learning community within the framework ensures the continuation of learning after the completion of a module or course. Such communities can facilitate collaborative analysis of professional challenges, discussion of implementation outcomes, dissemination of methodological solutions, peer consultation, and support for teachers introducing new approaches. Within the integrated model, however, a professional learning community should not remain merely a space for unstructured exchange of opinions. Its effectiveness is demonstrated when collaboration results in methodological materials, assessment frameworks, digital resources, learner

support plans, or projects aimed at improving educational practice. In this way, the professional learning community transforms the individual outcomes of professional development into a collective resource for the educational institution.

Mentoring or supervisory support is positioned in the framework after the practice-oriented task and participation in the professional learning community because this is the stage at which teachers most frequently encounter implementation challenges. Mentoring as a pathway to professionalisation was examined by S. Pandey & M. Sharma (2022), allowing it to be interpreted not only as support for novice teachers but also as a mechanism for sustained professional growth. Within the integrated model, mentors or supervisors should support specific professional actions, such as implementing a new teaching method, revising assessment practices, organising collaborative learning, developing a digital resource, or adapting learning activities. In this context, mentoring does not duplicate the course itself but facilitates the transfer of learning outcomes into authentic teaching practice.

The electronic portfolio serves as a tool for evidence-based documentation of the outcomes of the integrated model. It should not be developed merely as a repository of certificates but as a structured collection of materials demonstrating the teacher's professional development. The portfolio may include the results of the professional needs assessment, the individual development plan, completed assignments, teaching materials, digital resources, assessment tools, mentor feedback, evidence from implementation, reflective accounts, and documentation of changes in teaching practice. In this form, the portfolio integrates learning, support, and evaluation within a single coherent system. Its value lies in demonstrating the outcomes of postgraduate education not through the number of completed hours but through evidence of the application of new approaches in professional practice.

The final stage of the framework involves evaluating changes in teaching practice. The evaluation of the effectiveness of the integrated model should focus not on the number of completed courses but on the specific changes that have occurred in teachers' professional practice following participation. Such changes include the improvement of methodological approaches, the use of digital technologies, the enhancement of formative assessment practices, changes in feedback strategies, the development of educational resources, more active participation in professional learning communities, increased reflective capacity, and the ability to plan further professional development independently. For this reason, the integrated model should assess not merely participation but professional impact, including the educational products created, the implementation of new professional practices, reflective conclusions, documented changes in teaching practice, and the

teacher's capacity to sustain professional growth beyond the completion of the programme.

Thus, the possibilities for implementing an integrated model of professional development within the postgraduate education system are linked to the organisation of a sequential cycle of professional support for teachers: from needs assessment, the design of individual development pathways, and modular and blended learning, to practice-oriented tasks, participation in professional communities, mentoring, supervision, the creation of an electronic portfolio and the assessment of changes in teaching practice. The analysis carried out has shown that the continuous professional development of teaching staff should be viewed as a holistic process of professional renewal, in which the content, models, forms and mechanisms of implementation are interlinked. Within such a system, postgraduate education is not merely a mechanism for periodically undertaking courses, but an institutional environment that provides learning, support, testing, reflection and evidence-based presentation of the results of professional development.

■ Conclusions

The analysis of the substantive components of teachers' professional learning demonstrated that postgraduate education should not be limited solely to professional development. Its essence lies not merely in attending courses or accumulating certificates, but in the continuous renewal of competencies, pedagogical thinking, digital readiness, reflective practice, and the capacity for self-directed professional growth. In this context, postgraduate education performs both educational and supportive functions by creating conditions for individual learning pathways, professional collaboration, and the practical enhancement of teachers' professional practice. The analysis of professional development models demonstrated that the course-based, competency-based, andragogical, personalised, network-based, digital, and mentoring and supervision models each perform distinct functions within the postgraduate education system. The course-based model provides organisational coherence for learning, the competency-based model focuses on professional outcomes, the andragogical model recognises the experience of the adult learner, the personalised model supports individual learning pathways, the network-based model strengthens collegial collaboration, the digital model enhances accessibility and flexibility, while the mentoring and supervision model provides support for implementing new approaches in practice. Consequently, effective professional development depends not on selecting a single model but on combining these approaches in accordance with teachers' professional needs.

The identification of effective forms of professional development showed that the effectiveness of courses,

training programmes, workshops, online courses, professional learning communities, mentoring, supervision, placements, electronic portfolios, practice-oriented projects, and microlearning depends on teachers' active participation, engagement with authentic professional tasks, the creation of educational products, constructive feedback, and sustained post-course support. The content analysis of professional development programmes revealed the predominance of courses, thematic modules, webinars, online courses, training programmes, workshops, and practice-oriented activities, whereas the assessment of individual professional learning needs, long-term support, mentoring, supervision, the documentation of changes in teaching practice, and the evaluation of long-term outcomes were addressed less consistently. The rationale for implementing an integrated model demonstrated that postgraduate education should operate as a continuous cycle of professional support: from needs assessment, the development of an individual learning pathway, and modular and blended learning to practice-oriented tasks, participation in professional learning communities, mentoring or supervision, the development of an electronic portfolio, and the evaluation of changes

in teaching practice. Implementing this cycle requires a clear distribution of responsibilities among teachers, educational advisers, centres for the professional development of teachers, postgraduate teacher education institutions, mentors, supervisors, school leaders, and professional learning communities. Such integration makes it possible to move from periodic professional development towards a systematic model of teachers' continuing professional development. Future research should focus on the empirical evaluation of the effectiveness of the integrated model of teachers' professional development, particularly through examining the impact of individual learning pathways, mentoring, supervision, digital platforms, and electronic portfolios on measurable changes in teaching practice.

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Організація професійного навчання педагогів у системі безперервної освіти

Вячеслав Борисов

Доктор педагогічних наук, професор
Державний заклад «Луганський національний університет імені Тараса Шевченка»
37500, вул. Новікова Віктора, 2, м. Лубни, Україна
<https://orcid.org/0000-0002-3117-2118>

Василь Дудар

Кандидат історичних наук, професор
Університет Григорія Сковороди в Переяславі
08401, вул. Сухомлинського, 30, м. Переяслав, Україна
<https://orcid.org/0000-0001-6064-9408>

Олена Бокшиц

Кандидат історичних наук, доцент
Університет Григорія Сковороди в Переяславі
08401, вул. Сухомлинського, 30, м. Переяслав, Україна
<https://orcid.org/0000-0002-3528-5312>

■ **Анотація.** Мета статті полягала в теоретичному узагальненні моделей неперервного професійного розвитку педагогів, ефективних форм підвищення кваліфікації та можливостей їх застосування в післядипломній освіті. Методологія дослідження ґрунтувалася на теоретико-аналітичному підході й передбачала поєднання теоретичного аналізу наукових джерел, контент-аналізу нормативно-програмних матеріалів, порівняльного методу, систематизації, узагальнення та педагогічного моделювання, що забезпечило аналіз 64 джерел за 2018-2025 рр., зіставлення моделей професійного розвитку педагогів, упорядкування форм підвищення кваліфікації та обґрунтування логіки інтегрованої моделі для системи післядипломної освіти. Результати дослідження показали, що неперервний професійний розвиток педагогічних працівників у післядипломній освіті постає як цілісний процес професійного оновлення, що охоплює не лише підвищення кваліфікації, а й самоосвіту, рефлексію, цифрову готовність, професійну взаємодію та практичне вдосконалення педагогічної діяльності. Моделі професійного розвитку виконують різні функції: курсова забезпечує організаційну впорядкованість, компетентнісна орієнтує на професійні результати, андрагогічна враховує досвід дорослого учасника, персоналізована підтримує індивідуальну траєкторію, мережева посилює колегіальну взаємодію, цифрова розширює доступ до навчання, а менторсько-супервізійна забезпечує супровід упровадження змін у практику. Ефективність форм підвищення кваліфікації визначається не їхньою назвою, а здатністю забезпечити активну участь педагога, виконання практичного завдання, створення освітнього продукту, зворотний зв'язок, післякурсний супровід і оцінювання змін у професійній діяльності. Інтегрована модель професійного розвитку має впроваджуватися як послідовний цикл, що поєднує діагностику потреб, індивідуальну освітню траєкторію, модульне й змішане навчання, професійну спільноту, наставництво, супервізію, електронне портфоліо та оцінювання змін у педагогічній практиці

■ **Ключові слова:** рефлексія; компетентність; самоосвіта; наставництво; супервізія; мікронавчання