The digitalization process, digital educational technologies, as well as digital resources and tools allow developing alternative approaches to the formation of pedagogical systems and processes, implementing innovative ideas in theoretical and methodological research and practical applications. In the corresponding transformations, the professional training of primary school teachers is changing architecturally, since the influence of global crisis phenomena (the COVID-19 pandemic, war) accelerated the structural, functional, organizational, and pedagogical reorganization of distance (electronic) learning. Professional training of a teacher in the conditions of distance learning is another transformation that improves the pedagogical system in terms of openness, flexibility, variability, electivity, alternatives, mobility, individuality, autonomy, interactivity. Arguably, this innovation is a structural conceptual idea that requires multifaceted analysis of the conceptual and categorical apparatus in particular. The basic concepts interpret the initial possibilities of development and potential implementation of the structure, therefore competent semantic mapping is a factor of productive performance.

The problems of professional training of primary school teachers are presented in the studies of Ukrainian scientists on a large scale, but they typically require the continuous renewal of scientific research, which is caused by a number of factors (educational policy and reforms, transformations in the system of pedagogical education, etc.). The scientific research in this topic should be considered in the context of two directions: general approaches to the professional training of teachers and specifics of the professional training of primary school teachers. It is important to analyze the problem from the point of view of the application of information and communication technologies as well as distance learning in the professional training of teachers.

In modern scientific studies, changes in the system of professional training of primary school teachers are examined in depth in accordance with the Laws of Ukraine «On Education», «On Higher Education», the Strategy for the Development of Higher Education in Ukraine for 2022-2032, the Concept of New Ukrainian School, the Concept of Development of Pedagogical Education, the Professional Standard for Primary School Teachers, the Digital Agenda of Ukraine – 2020 project,
the project of the Concept of Digital Transformation of Education and Science for the Period until 2026, the Order of the Ministry of Education and Science «On the Approval of the Model Program of Professional Development of Pedagogical Workers in the Improvement of Digital Competence», etc.

The concept «professional training of primary school teachers» is multi-functional, multi-structural, and multi-level. Thus, the definition requires a terminological analysis of supporting concepts, namely «professional development», «professional formation», «professional training», «professional readiness», «pedagogical education». Their interpretation is based on the dialectical unity of the professionalism of the performance and the professionalism of the individual.

In the conceptual field, «professional development» («professional genesis of an individual») is the process of development of a subject of professional activity, that is, a system of certain traits in the conditions of continuous professional training, self-education, and professional performance. Professional development is not an autonomous process, but it is interdependent with personal, social, individual, and subject development. Identifying the stages of continuous professional development within the scope of professional activity depends on quantitative to qualitative personal variables (communicative, motivational, characterological, reflective, educational, intellectual, psychophysiological) and the appearance of new formations.

The stage of entering the system of professional activity as an individual is called professional formation. «Professional formation» consists of procedural actions aimed at qualitative changes in the personality regarding its self-determination, professional identification, and self-realization in the profession. In the process of professional formation, the priorities of meaningfulness of life change in the direction of forming an image of professional activity, professional system of values, and professional lifestyle. Accordingly, professionally created organizational and pedagogical conditions of formal, non-formal, and informal pedagogical education ensure optimal comprehensive professional development in the structure of professional training of primary school teachers.

The professional preparation of primary school teachers for professional activity according to the standards of the concept of New Ukrainian School (NUS)
involves the transformation of the content of pedagogical education with the priority of personal development of the future teacher. Accordingly, «professional development of teachers» is a dominant component in their «professional training». Therefore, «professional development» and «professional formation» of elementary school teachers are psychological and pedagogical categories that provide for the formation of personal qualities of future teachers aimed at professional self-realization in the conditions of NUS.

A comprehensive conceptual analysis of the «professional training of elementary school teachers» needs to be supplemented through the categories of «professional training», «professional readiness», «pedagogical education». The differentiation of the related concepts «professional training», «professional pedagogical training», and «preparation for pedagogical activity» interprets the definition of «professional pedagogical training» as preparation for pedagogical activity as a professional, stating that such training includes a system of measures (content-based; organizational), which are not limited to the focus on the formation of knowledge, skills, and abilities, but are also aimed at the development of the student’s personal potential; the goal and result of this training is «readiness of students for future professional activities». «Professional readiness» / «readiness for pedagogical activity» is the result of «professional training» / «professional pedagogical training» and is determined by the mental state and qualitative personal traits that determine this state; the structural components of «professional readiness» are presented as motivational, cognitive, operational, emotional, and volitional one. Professional training correlates directly with pedagogical education, these are complementary factors of one whole. The basis of «professional training» is the performance of certain work corresponding to the goals of education, which does not affect the improvement of the educational result, because it is determined by «readiness», and «professional education» is determined by qualitative changes in the level of education (knowledge, abilities, skills, professional competences, professional values, professional culture) as a process and result.

The innovative vision of the professional training of primary school teachers in the conditions of distance learning technologies (network, multimedia, mobile, cloud,
virtual, etc.) and the development of digital resources allowed to build an appropriate pedagogical system that provides for the distance professional development and distance pedagogical education.