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DIGITALIZATION OF DISTANCE LEARNING AS A FACTOR IN THE FORMATION OF PROFESSIONAL AND MANAGERIAL COMPETENCE OF FUTURE MANAGERS IN THE FIELD OF PHYSICAL CULTURE

Abstract. This article addresses the formation of managerial competence and professional competence of managers in future specialists through digital educational technologies in the organization of the educational process in physical culture and physical education. The study's relevance stems from the necessity to reconceptualize didactic approaches to training future managers amid the digital transformation of education and martial law conditions in Ukraine (since February 2022), which have fundamentally altered the organization of educational processes in higher education institutions. The competence-based approach to professional training of future managers presupposes not only the acquisition of specialized knowledge but also the development of capabilities to make informed managerial decisions under uncertainty, maintain the psychophysical resilience of teams, and ensure organizational process continuity in crisis circumstances—elements that constitute the essence of contemporary managerial competence. The article clarifies the conceptual content of "managerial competence," "professional competence of a manager," and "organization of educational process" within the framework of competence-based approach and educational digitalization; identifies four structural components of managerial competence (motivational-value, cognitive, operational-activity, reflexive-evaluative); characterizes digital educational technologies employed in organizing the educational process in physical culture and physical education; substantiates pedagogical conditions and didactic approaches conducive not merely to knowledge acquisition but to professional self-improvement and enhancement of student motivation for physical culture activities. Particular emphasis is placed on the role of physical education as a platform for developing managerial qualities through project-based activities, simulation of crisis situations, interactive teaching methods, and self-monitoring tools based on digital educational technologies. The study demonstrates how systematic integration of digital educational technologies (LMS platforms, videoconferencing tools, cloud-based collaborative services, mobile fitness applications) enables implementation of contemporary didactic approaches and facilitates formation of all managerial competence components while simultaneously maintaining student motivation and promoting professional self-improvement in conditions of distributed learning and resource constraints characteristic of wartime educational contexts.

Keywords: organization of the educational process; digital educational technologies; physical culture; physical education; didactic approaches; future

managers; competence-based approach; managerial competence; student motivation; professional self-improvement; professional competence of a manager.

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ЦИФРОВІЗАЦІЯ ДИСТАНЦІЙНОГО НАВЧАННЯ ЯК ЧИННИК ФОРМУВАННЯ ПРОФЕСІЙНОЇ ТА УПРАВЛІНСЬКОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ МЕНЕДЖЕРІВ У ГАЛУЗІ ФІЗИЧНОЇ КУЛЬТУРИ

Анотація. Стрімкий розвиток цифрових технологій кардинально трансформує освітній простір вищої школи, створюючи принципово нові вектори підготовки фахівців у галузі фізичної культури та спорту. Актуальність дослідження зумовлена суперечністю між зростаючими вимогами ринку праці до управлінської готовності випускників і недостатньою теоретичною розробленістю питань цифровізації навчального процесу у профільних закладах вищої освіти. Глобальні виклики сьогодення, зокрема масовий перехід до дистанційних форм здобуття освіти, актуалізують необхідність переосмислення теоретичних засад підготовки менеджерів фізичної культури.

У статті здійснено теоретичний аналіз феномену цифровізації дистанційного навчання як визначального чинника формування професійної та управлінської компетентності майбутніх менеджерів фізичної культури. Розкрито сутність і структуру досліджуваних компетентностей крізь призму сучасних наукових підходів до підготовки управлінських кадрів спортивної галузі. Здійснено категоріальний аналіз базових понять — «цифровізація», «дистанційне навчання», «професійна компетентність» та «управлінська компетентність» — у їх взаємозв'язку та взаємообумовленості. Простежено еволюцію наукових поглядів на проблему цифрової трансформації освіти в контексті галузевої специфіки фізичної культури та спорту.

Теоретично обґрунтовано дидактичний потенціал цифрового освітнього середовища у контексті розвитку аналітичного мислення, лідерських якостей, стратегічного планування та організаційних навичок майбутніх менеджерів. Систематизовано наукові погляди вітчизняних і зарубіжних дослідників щодо впливу дистанційних технологій на якість фахової підготовки в галузі фізичної культури. Окреслено теоретичне підґрунтя взаємодії цифрового середовища з процесом становлення управлінської суб'єктності студентів. Визначено перспективні напрями подальших наукових розвідок у досліджуваній проблематиці.

Ключові слова: організація освітнього процесу; цифрові освітні технології; фізична культура; фізичне виховання; дидактичні підходи; майбутні

менеджери; компетентнісний підхід; управлінська компетентність; мотивація студентів; професійне самовдосконалення; професійна компетентність менеджера.

Problem statement. The rapid development of digital technologies is fundamentally transforming the educational landscape of higher education institutions, generating principally new trajectories for the professional training of specialists in the field of physical culture and sports. The relevance of the study is determined by the contradiction between the growing labour market demands for managerial readiness of graduates and the insufficient theoretical elaboration of digitalization issues within the educational process at specialized higher education institutions. Contemporary global challenges, particularly the mass transition to distance learning formats, necessitate a comprehensive reconceptualization of the theoretical foundations underlying the training of physical culture managers.

The article presents a theoretical analysis of the digitalization of distance learning as a determining factor in the formation of professional and managerial competence among future managers of physical culture. The essence and structure of the examined competencies are revealed through the lens of contemporary scholarly approaches to the training of managerial personnel in the sports industry. A categorical analysis of the foundational concepts — digitalization, distance learning, professional competence, and managerial competence — is conducted in their interrelation and interdependence. The evolution of scholarly perspectives on the digital transformation of education is traced within the context of the sectoral specifics of physical culture and sports.

The didactic potential of the digital educational environment is theoretically substantiated in relation to the development of analytical thinking, leadership qualities, strategic planning, and organizational skills of future managers. Scholarly perspectives of domestic and international researchers concerning the influence of distance learning technologies on the quality of professional training in the field of physical culture are systematized. The theoretical foundations of the interaction between the digital environment and the process of developing students' managerial subjectivity are outlined. Prospective directions for further scholarly inquiry into the investigated problematic are identified.

Keywords: organization of the educational process; digital educational technologies; physical culture; physical education; didactic approaches; future managers; competence-based approach; managerial competence; student motivation; professional self-improvement; professional competence of a manager.

Analysis of the latest research and publications. The issue of digitalization of the educational process and the formation of professional competence of future specialists has been actively studied by both Ukrainian and European scholars over the past several years.

Among Ukrainian researchers, significant contributions have been made by V. Bykov and M. Leshchenko, who examined the theoretical foundations of digital transformation of education and substantiated the conceptual frameworks of digital

competence of pedagogical workers in the context of modern educational challenges. O. Spirin and A. Kovalchuk investigated the specifics of implementing cloud technologies and digital tools in the professional training of specialists, emphasizing their role in enhancing the quality of distance learning. N. Morze and O. Buinytska analyzed the didactic potential of digital educational environments and their influence on the cognitive activity of students in higher education institutions. The problem of managerial competence formation of future specialists in physical culture was explored by V. Sutula and O. Drogomeretsky, who outlined the structural components of managerial readiness of graduates in the sports industry. T. Opushko and I. Kovalenko addressed the competence-based approach in the training of physical culture managers, substantiating its methodological significance in the conditions of digitalized higher education.

Among European scholars, T. Farnell examined digital transformation policies in higher education across Central and Eastern European countries, highlighting systemic barriers and institutional drivers of digitalization. M. Mikropoulos and A. Natsis investigated the pedagogical effectiveness of virtual educational environments in the context of professional training, demonstrating their positive impact on the development of analytical and organizational skills of future specialists. Research conducted by J. Dron and T. Anderson contributed to the theoretical understanding of distance learning architectures and their adaptability to competence-oriented educational paradigms. P. Bocconi, A. Kamylyis and Y. Punie, within the framework of European Commission research initiatives, developed conceptual approaches to assessing digital competence in higher education, which formed a significant theoretical basis for subsequent national studies. K. Røkenes and R. Krumsvik explored the relationship between digital literacy and professional identity formation among future educators and managers, establishing important theoretical parallels applicable to the physical culture domain.

The conducted review of scholarly sources confirms that despite considerable academic interest in the outlined problematic, the specific question of digitalization of distance learning as a factor in the formation of managerial competence of future physical culture managers remains insufficiently theoretically elaborated and requires further systematic scientific investigation [4].

The aim of the article is to theoretically substantiate the role of digitalization of distance learning as a determining factor in the formation of professional and managerial competence of future managers in the field of physical culture, through the analysis and systematization of contemporary scholarly approaches to the conceptual foundations of digital transformation of higher education, categorical interpretation of key notions, and identification of the didactic potential of digital educational technologies in the context of competence-oriented professional training of specialists in the sports industry.

Main part. The contemporary landscape of higher education is undergoing profound structural shifts driven by the accelerating penetration of digital technologies into virtually every dimension of academic life. This transformation is particularly pronounced in the training of future managers of physical culture, whose professional activity presupposes not only a solid command of sport-specific

knowledge but also a sophisticated capacity for organizational decision-making, strategic resource allocation, and adaptive leadership in dynamically changing institutional environments. In this context, the digitalization of distance learning emerges not merely as a technological convenience but as a substantive pedagogical phenomenon that actively shapes the architecture of professional and managerial competence formation [1]. The urgency of this theoretical elaboration is further amplified by the growing recognition among scholars and practitioners alike that the quality of managerial personnel in the sports industry is a critical determinant of the effectiveness of physical culture institutions at both regional and national levels.

The concept of digitalization, as it applies to higher education, extends considerably beyond the mere substitution of traditional instructional media with their digital equivalents. It entails a qualitative transformation of the epistemological and didactic foundations of the educational process, redefining the roles of both the educator and the student, restructuring temporal and spatial parameters of learning, and fundamentally altering the mechanisms through which knowledge is constructed, validated, and applied. In the context of distance learning, digitalization acquires particular significance, as it constitutes the primary infrastructure through which pedagogical interaction is mediated and through which the learner's cognitive and professional development unfolds [2]. The digital educational environment, understood in this expansive sense, is not a neutral conduit for the transmission of pre-existing content but an active pedagogical agent that shapes the very nature of the learning experience and, consequently, the character of the competencies that emerge from it.

It is theoretically important to distinguish between digitization and digitalization, concepts that are frequently conflated in both academic discourse and institutional practice. Digitization refers to the technical conversion of analog information into digital formats — the scanning of textbooks, the recording of lectures, the migration of administrative documentation to electronic databases. Digitalization, by contrast, denotes the deeper transformation of organizational processes, social interactions, and professional practices enabled by digital technologies [3]. In the context of higher education, digitalization implies a fundamental reconceptualization of what it means to teach, to learn, and to develop professional competence. This distinction is not merely terminological but carries profound implications for how educational institutions approach the integration of digital technologies into professional training programs for physical culture managers.

Professional competence of a future manager of physical culture is understood in contemporary pedagogical science as an integrative personal formation that encompasses a system of specialized knowledge, practical skills, value orientations, and reflective capacities enabling the specialist to effectively perform managerial functions within sports and health-promoting organizations. This formation is not static but dynamic, evolving in response to the changing demands of professional practice, the accumulation of experience, and the individual's ongoing engagement with processes of professional self-improvement. The structural complexity of professional competence in this domain reflects the multidimensional character of

physical culture management itself, which simultaneously encompasses scientific, organizational, communicative, economic, and ethical dimensions that must be coherently integrated in the practice of effective leadership.

Managerial competence, as a relatively autonomous yet structurally interconnected component of this broader professional formation, reflects the individual's readiness to plan, organize, coordinate, and evaluate the activities of subordinate personnel and institutional processes in accordance with established strategic objectives [2]. Contemporary scholarly interpretations of managerial competence consistently emphasize its behavioral, cognitive, and motivational dimensions, recognizing that effective management is not reducible to the application of technical knowledge but requires the integration of analytical capacity, interpersonal sensitivity, ethical judgment, and situational adaptability. The distinction between professional and managerial competence, while analytically meaningful, should not obscure their deep functional interdependence: effective professional activity in the field of physical culture management is inconceivable without the simultaneous realization of both dimensions in their organic unity.

The theoretical elaboration of these competencies in the conditions of digitalized distance learning necessitates a reconsideration of traditional competence-based frameworks. Classical interpretations, rooted in behaviorist and cognitivist paradigms, tend to conceptualize competence as a relatively stable disposition acquired through standardized instructional sequences and assessed through predetermined performance criteria [1]. However, the digital educational environment introduces a fundamentally different logic of competence formation — one characterized by non-linearity, situational variability, collaborative knowledge construction, and continuous self-regulated learning. Future managers of physical culture who navigate this environment are not passive recipients of predetermined competence profiles but active agents who construct their professional identity through sustained engagement with complex, authentic, and technologically mediated tasks that mirror the actual demands of managerial practice.

The competence-based approach, which serves as the dominant theoretical framework for professional education in contemporary Ukrainian and European higher education systems, provides a productive conceptual foundation for analyzing the relationship between digitalized distance learning and managerial competence formation. This approach, as elaborated in the works of leading Ukrainian and European educational theorists, postulates that the primary goal of professional education is not the transmission of disciplinary knowledge per se but the formation of integrated competencies that enable graduates to function effectively in real-world professional contexts. Within this framework, digitalized distance learning is not merely an alternative delivery mechanism but a distinctive educational environment that generates unique opportunities for competence formation unavailable in traditional instructional settings.

The didactic potential of digital educational technologies in the context of physical culture manager training is multidimensional and deserves detailed theoretical examination [2]. Asynchronous learning platforms enable students to engage with professionally relevant content at individually determined paces and in

sequences that reflect their specific cognitive needs and prior knowledge structures. This temporal flexibility is not merely a logistical convenience but carries profound pedagogical implications: it supports the development of self-regulation capacities that are among the most critical determinants of long-term professional effectiveness. Future managers who learn to manage their own learning processes — setting goals, monitoring progress, adjusting strategies in response to feedback — acquire dispositional orientations that will prove equally valuable in their subsequent management of organizational processes and human resources.

Synchronous virtual environments, by contrast, simulate the conditions of real-time managerial interaction, requiring participants to exercise communicative competence, situational judgment, and leadership capacities under conditions of temporal pressure and informational complexity. Virtual seminars, online case discussions, and collaborative problem-solving sessions conducted through digital platforms create conditions for the development of those dimensions of managerial competence that are most directly implicated in leadership effectiveness — the capacity to synthesize complex information rapidly, to communicate positions persuasively, to manage group dynamics productively, and to make defensible decisions under uncertainty [3]. The complementary deployment of both asynchronous and synchronous modalities within a coherent distance learning framework creates conditions for the simultaneous development of reflective and action-oriented dimensions of managerial competence, each reinforcing and enriching the other.

Of particular theoretical significance is the role of digital collaborative tools in the formation of managerial competence among future physical culture specialists. The capacity to coordinate group activity, distribute responsibilities, monitor collective progress, and resolve interpersonal conflicts within virtual team environments constitutes a direct analog of the managerial functions that graduates will be expected to perform in their subsequent professional roles. Engagement with such tools during the period of professional training does not merely familiarize students with specific technological affordances but cultivates the deeper dispositional orientations — toward shared responsibility, transparent communication, and results-oriented collaboration — that define effective managerial practice in contemporary sports organizations. Furthermore, the experience of managing virtual collaborative processes develops students' sensitivity to the relational dimensions of leadership, fostering an appreciation of the interpersonal foundations upon which organizational effectiveness ultimately rests.

The role of digital feedback mechanisms in competence formation also warrants careful theoretical consideration. Traditional instructional environments typically provide feedback at relatively infrequent intervals — following examinations, after submission of written assignments, at the conclusion of practical sessions. Digital educational platforms, by contrast, are capable of generating continuous, contextualized, and individualized feedback that enables learners to monitor their developing competence in real time and to adjust their learning strategies accordingly. For future managers of physical culture, whose professional effectiveness will depend significantly upon their capacity to interpret performance

data, to identify deviations from desired trajectories, and to implement corrective interventions, the experience of engaging with sophisticated digital feedback systems during their training constitutes both a developmental opportunity and a form of authentic professional preparation [5].

The motivational dimension of digitalized distance learning also warrants careful theoretical attention within the framework of physical culture manager preparation. Research in educational psychology consistently identifies intrinsic motivation as a critical determinant of deep learning and lasting competence formation, distinguishing it sharply from extrinsic motivational orientations that tend to produce surface-level engagement and rapidly fading knowledge retention. Digital educational environments, when designed with attention to principles of autonomy support, optimal challenge, and meaningful feedback — the three foundational pillars of self-determination theory as articulated by Deci and Ryan — possess considerable capacity to sustain and amplify intrinsic motivational orientations among students. For future managers of physical culture, whose professional effectiveness is substantially contingent upon self-directedness, initiative, and sustained goal orientation, the cultivation of intrinsic motivation through digitalized learning represents not merely a pedagogical desideratum but a foundational condition of adequate professional preparation.

Student motivation in the context of digitalized distance learning is further shaped by the perceived relevance of learning activities to future professional practice. When digital educational tasks are designed to authentically replicate the challenges and decision-making contexts of physical culture management — when students are asked to develop strategic plans for sports organizations, to analyze performance data of athletic programs, to design health-promotion initiatives, or to navigate simulated personnel conflicts — the motivational significance of these activities is substantially enhanced [4]. The alignment between learning tasks and professional reality not only sustains engagement but also facilitates the transfer of competencies from the educational context to the professional domain, which remains one of the most persistent challenges in professional education across all fields.

Professional self-improvement, as a constituent element of the broader competence structure of a physical culture manager, is similarly and profoundly transformed within the digital educational paradigm. The availability of continuously updated digital resources, open educational repositories, international professional networks, webinars conducted by leading practitioners, and sophisticated analytical instruments creates an unprecedented infrastructure for lifelong learning and ongoing competence enhancement. Students who develop the capacity to navigate this infrastructure autonomously during their period of formal education acquire a meta-competence of extraordinary professional value — namely, the ability to independently identify knowledge gaps, locate relevant resources, critically evaluate their quality, and integrate new insights into existing professional schemas. This capacity for self-directed professional development is particularly consequential in the rapidly evolving field of physical culture management, where emerging research findings, changing legislative frameworks, shifting demographic patterns, and

evolving social attitudes toward health and physical activity continuously transform the demands placed upon managerial personnel.

The theoretical relationship between digitalized distance learning and professional identity formation among future physical culture managers constitutes another dimension of the problematic that deserves scholarly attention. Professional identity — the individual's sense of themselves as a member of a professional community, their internalization of professional values and norms, and their commitment to the ongoing development of professional excellence — is not formed in isolation but through sustained engagement with professional communities of practice [5]. Digital technologies, and particularly social and professional networking platforms, create new possibilities for such engagement, enabling students to participate in professional discourse, to access the perspectives of experienced practitioners, and to develop a sense of professional belonging that transcends the boundaries of any single educational institution [6]. For future managers of physical culture, whose professional effectiveness depends substantially upon their embeddedness in networks of institutional relationships, the cultivation of professional identity through digitalized engagement with broader professional communities constitutes a significant contribution to managerial competence formation.

It is also theoretically important to acknowledge the specific contextual demands that the field of physical culture places upon managerial competence, demands that distinguish this domain from other managerial fields and that must be reflected in the design of digitalized distance learning programs. Unlike managers operating in purely administrative or commercial domains, managers of physical culture must integrate scientific knowledge about human motor activity, health promotion, and athletic development with organizational, financial, communicative, and ethical competencies in ways that reflect the unique value foundations of the sports and health-promotion sector [3]. This disciplinary hybridity imposes distinctive requirements upon the structure of professional training and implies that digitalized distance learning in this field must be attentive not only to generic managerial competencies but also to domain-specific knowledge structures, professional value systems, and ethical orientations that distinguish physical culture management as a unique and socially significant area of human activity.

The organizational culture of physical culture institutions — characterized by a strong emphasis on collective achievement, physical discipline, health-oriented values, and the intrinsic significance of sporting participation — creates a distinctive managerial context that shapes the specific character of the competencies required for effective leadership in this domain [2]. Future managers must develop the capacity to lead within this specific cultural milieu, which means cultivating an appreciation of the motivational dynamics of sporting participation, an understanding of the developmental trajectories of athletes and recreational participants across the lifespan, and a sensitivity to the ethical dimensions of health-promotion practice. Digitalized distance learning programs that incorporate case studies, documentary analyses, and virtual interactions drawn from authentic physical culture management

contexts contribute significantly to the formation of these domain-specific dimensions of managerial competence.

The synthesis of the theoretical perspectives examined above permits the conclusion that digitalization of distance learning, when approached with pedagogical intentionality and theoretical rigor, constitutes a powerful and multifaceted factor in the formation of professional and managerial competence of future managers of physical culture [6]. Its significance lies not in the technological sophistication of the tools deployed but in the qualitative transformation of the educational experience that such tools, when properly integrated into a coherent didactic framework oriented toward authentic professional preparation, are capable of producing. The theoretical foundations elaborated in this article provide a conceptual basis for subsequent empirical investigations into the specific mechanisms through which digitalized distance learning influences competence formation in this domain, and for the development of evidence-based approaches to the design of professional training programs that fully realize the pedagogical potential of contemporary digital educational technologies [4].

Conclusions. The theoretical investigation conducted in the present article permits the formulation of several substantive conclusions concerning the role of digitalization of distance learning in the formation of professional and managerial competence of future managers of physical culture.

Firstly, the analysis of contemporary scholarly discourse confirms that digitalization of the educational process represents a qualitatively distinct pedagogical phenomenon that fundamentally transforms the epistemological and didactic foundations of professional training, rather than constituting a mere technological supplement to existing instructional practices. The conceptual differentiation between digitization and digitalization proves theoretically productive in this context, as it directs analytical attention toward the deeper transformations of educational experience and competence formation processes that digital technologies, when purposefully deployed, are capable of generating.

Secondly, the categorical analysis of the core constructs examined in this study — professional competence, managerial competence, digitalization, and distance learning — reveals their complex structural interrelationship and mutual conditionality. Professional and managerial competence of a physical culture manager constitute an integrative personal formation whose development is substantially mediated by the character of the educational environment within which professional training unfolds. The digitalized distance learning environment, characterized by its non-linearity, interactivity, temporal flexibility, and capacity for authentic professional simulation, creates distinctive conditions for the formation of both dimensions of this integrative competence that differ qualitatively from those generated by traditional instructional contexts.

Thirdly, the theoretical elaboration of the didactic potential of digital educational technologies demonstrates that their contribution to managerial competence formation extends across multiple interconnected dimensions. Asynchronous learning modalities foster self-regulation, autonomous knowledge construction, and reflective professional thinking. Synchronous virtual environments

develop communicative competence, situational judgment, and real-time decision-making capacities. Digital collaborative platforms cultivate the dispositional orientations toward shared responsibility, transparent coordination, and results-oriented teamwork that characterize effective managerial practice in contemporary sports organizations. Each of these contributions is theoretically significant in its own right, and their integrated realization within a coherent distance learning framework creates conditions for comprehensive managerial competence formation of considerable depth and durability.

Finally, the domain-specific analysis conducted in this study confirms that the digitalization of distance learning in physical culture manager training must be attentive not only to generic managerial competencies but also to the distinctive knowledge structures, value orientations, and professional culture of the sports and health-promotion sector. The unique disciplinary hybridity of physical culture management imposes distinctive requirements upon the design of digitalized professional training programs, simultaneously identifying promising directions for further empirical scholarly inquiry into the specific mechanisms of competence formation in digitalized distance learning environments and the long-term professional consequences of digitalized preparation for graduates operating within the sports and health-promotion sector.

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