



Technologies For Developing Innovative Management Competences Of School Educational Leadership Staff In The Professional Training System

PhD A.Z. Ganiyeva

Preschool educational institutions
Leaders and experts reprocessing and their
Institute of Advanced Training
independent researcher

ABSTRACT

This article theoretically analyzes the technologies for developing innovative management competencies of managers of preschool educational organizations in the system of advanced training. Within the framework of the study, the content, components and role of the concept of innovative management competencies in the preschool education system were determined. The theoretical foundations of andragogic, competency-based and transformational approaches in the process of advanced training were studied and the possibilities of their application to preschool education leaders were substantiated. As a result of the theoretical analysis, the cognitive, functional, social and metacognitive components of innovative management competencies were distinguished, their interrelationships and significance in the activities of preschool education leaders were revealed. Also, the theoretical and methodological foundations of the development of innovative management competencies in the system of advanced training were formed and relevant scientific proposals were developed.

Keywords:

Innovation management, competence, preschool education, leadership, advanced training, andragogy, transformational leadership, professional development.

Аннотация. В данной статье теоретически проанализированы технологии развития компетенций инновационного управления у руководящих кадров организаций дошкольного образования в системе повышения квалификации. В рамках исследования определено содержание и структурные компоненты компетенции инновационного управления, а также её значение в системе дошкольного образования. Изучены теоретические основы андрагогического, компетентностного и трансформационного подходов к повышению квалификации, обоснованы возможности их применения к руководителям дошкольных образовательных учреждений. В результате теоретического анализа выделены когнитивный, функциональный, социальный и метакогнитивный компоненты компетенции инновационного управления, раскрыта их взаимосвязь и значимость в деятельности руководителей дошкольного образования. Кроме того, в системе повышения квалификации сформированы теоретико-методологические основы развития компетенций инновационного управления и разработаны соответствующие научные рекомендации.

Ключевые слова: инновационное управление, компетенция, дошкольное образование, руководящие кадры, повышение квалификации, андрагогика, трансформационное лидерство, профессиональное развитие.

Annotatsiya. Mazkur maqolada malaka oshirish tizimida maktabgacha ta'lim tashkilotlari rahbar kadrlarining innovatsion boshqaruv kompetensiyalarini rivojlantirish texnologiyalari nazariy jihatdan tahlil qilingan. Tadqiqot doirasida innovatsion boshqaruv kompetensiyasi tushunchasining mazmuni, tarkibiy qismlari va maktabgacha ta'lim tizimidagi o'rni aniqlangan. Malaka oshirish jarayonida andragogik, kompetensiyaviy va transformatsion yondashuvlarning nazariy asoslari o'rganilgan hamda ularning maktabgacha ta'lim rahbarlariga nisbatan qo'llanilish imkoniyatlari asoslangan. Nazariy tahlil natijasida innovatsion boshqaruv kompetensiyasining kognitiv, funksional, ijtimoiy va metakognitiv komponentlari ajratilgan, ularning o'zaro aloqadorligi va maktabgacha ta'lim rahbarlari faoliyatidagi ahamiyati ochib berilgan. Shuningdek, malaka oshirish tizimida innovatsion boshqaruv kompetensiyalarini rivojlantirishning nazariy-metodologik asoslari shakllantirilgan va tegishli ilmiy takliflar ishlab chiqilgan.

Kalit so'zlar: innovatsion boshqaruv, kompetensiya, maktabgacha ta'lim, rahbar kadrlar, malaka oshirish, andragogika, transformatsion yetakchilik, kasbiy rivojlanish.

In the current context of globalization, the preschool education system is undergoing a process of rapid reforms and modernization. Modern requirements of social development pose new tasks to preschool educational organizations, such as ensuring quality, introducing innovative approaches, and adapting to a changing environment. In this regard, the managerial competence of the heads of preschool educational organizations is of crucial importance, since they are the main entities ensuring the strategic development of the educational process, the professional growth of pedagogical personnel, and maintaining a high level of educational quality. The instructions of the President of the Republic of Uzbekistan on further improving the preschool education system dated February 4, 2026, noted that the coverage of preschool education in our country has reached 78%, but 61% of teachers in state kindergartens and 76% in private kindergartens have secondary specialized education, which indicates that further increasing the potential of personnel is an urgent issue. In this regard, the development of innovative management competencies of preschool education leaders is a necessary condition not only for improving the quality of education, but also for adapting the entire system to modern requirements.

This of the problem social importance is that before school education child's intellectual, social and spiritual in development solution doer stage to be, to learn organization leader's

management culture directly education - upbringing process effectiveness defines. Methodological in terms of and, qualification increase in the system leader of personnel innovative competencies develop technologies scientific justification modern pedagogical science for current from tasks one to be remains.

Preschool education leaders management competencies develop issue foreign and local scientific in literature wide studied. P. J. Bloom preschool education leaders management competence strategic planning, personnel management and organizational culture formation through education quality increase main factor as research [1] T. J. Sergiovanni transformational leadership theory education to the system implementation the leader to values based leadership culture formation and the collective inspire through organizational changes done increase opportunities based on [2]. L. M. Spencer and S. M. Spencer competence model working out, its cognitive, functional and personal components determined and competence effective to activity the secret of the effect systematic accordingly analysis [3] C. Kivunjana preschool education in the context of leadership Appearance, functions and functions analysis to lead competence education in the environment instead [4] M. Knowles andragogy theory within adults education main principles working to go out and do it yourself management, experience rely on and to the problem directed to teach principles based on

[5] . M. Gunarto and Y. Widiastuty preschool education institution leader's management competence education to the quality directly effect show empirical research through proved by [6]. N. Tsai Uzbekistan Republic preschool and school education system leaders professional competencies analysis modern leader's professional profile model offer [7] . A. Panchenko and others preschool education of educators digital competence development management aspects learn from the leader digital transformation coordinator as role open given by [8].

But there is research analysis this It turns out that before school education leaders innovative management competencies develop issue often general leadership theories within seeing issued be , qualification increase system to oneself typical opportunities and restrictions enough at the level into account not obtained . In particular , the qualification increase in the process innovative management competencies development theoretical - methodological basics , andragogic approaches preschool education to the leaders relatively application features and transformational leadership and competency-based approaches integration issues enough at the level working not released . This method , scientific space there is of research general theoretical to the character ownership and preschool education to the leaders specialized qualification increase technologies theoretical unfounded manifestation It is happening .

The study identified within the scope of the study innovative management competence concept modern pedagogical in science wide discussion being done from categories one The concept of " competence " is initially in linguistics N. Chomsky by " language" internal system understanding in the sense of " ability " used if so , later D. McClelland him/her professional activity in the context of " worker " effective performance determinant personal features as a set of " described by [3] .

L. M. Spencer and S. M. Spencer competence " specific " situation or at work effective and high effective of activity causal connection was person's main " feature " [3].

Preschool education in the field and P. J. Bloom management " preschool " competence education leader's strategic planning , personnel management , financial resources distribution and organizational culture formation according to knowledge , skill and personal features as a set of " described by [1]. Authorship to the definition according to , before school education leaders innovative management competence is leader's education organization strategic development, innovation changes management , pedagogical the team inspire and modern education technologies implementation to grow for necessary was integrative knowledge , skills , abilities and personal adjectives whole This is a system . concept one from the side management sciences , second from the side pedagogy and andragogy sciences at the intersection located to be , to be come output also management theories (management), and education with theories (pedagogy , andragogy) is related to . Innovative management competence The concept of " innovation " and " management " "competence " concepts from synthesis formed The concept of " innovation " J. Schumpeter by " economic" development driving force power as in the sense of " news " first there is science included . Education in the context of innovation " education process , content or to the management new ideas , methods and technologies current as " to It is understood . This innovative management competence management competence to update directed , strategic and transformational to the features has shape as manifestation It will be .

Preschool education leaders innovative management competencies development theoretical basics one how many large scientific approaches within formed . First approach — competency-based approach be , he knowledge , skill and personal of the characteristics integrative set as competence to develop directed by L. M. Spencer and S. M. Spencer competence model working out , its pyramidal structure — knowledge and skills on the surface visible layer , motivation and personal features and deeper layer that [3] J. Boyatzis and competence person's competencies , work

requirements and organizational environment between balance as descriptive , effective management condition this three factor each other in accordance with that [9]. Preschool education in the field this approach M. Gunarto and Y. Widiastuty by developed they are garden leader's management competence the organization management , education process organization to grow and education quality control to do abilities own inside to take empirical research through proved [6].

Second approach — andragogic approach be , he adults education to oneself typical laws into account received without qualification increase process organization to reach directed by . M. Knowles andragogy in theory six main the principle marked by : big old the student to know was need , self management concept , experience instead of reading readiness , learning orientation and motivation [5]. Qualification increase in the system this of principles importance is that before school education leaders are big old , professional to experience has experts to be , their winter process children's education to take from the process fundamentally difference does . J. Khadka andragogic the model process and to the context based (PCB) model as develop and learn process opportunity create , empower and attraction to grow to the stages was [10] . Preschool education to the leaders relatively andragogic approach this demand enough , qualification increase process leader's realistic professional to the problems based on experience leaning and practical application opportunity high to be necessary .

Third approach — transformational leadership theory be , he leader's the organization fundamentally change and new quality to the

level take exit ability to develop focused on . Transformational leadership concept initially J. M. Burns by in 1978 scientific into circulation included later B. Bass him/her four to the component was : idealized influential , inspiring motivation , intellectual encouragement and individual Note [2] . T. J. Sergiovanni this theory education to the system implementation school leader's five leadership strength — technical , human , educational , symbolic and cultural forces [2] . Preschool education in the context of C. Kivunjuna leadership two main function — management and leadership functions differentiating , effective leadership for every both function wake up accordingly done increase the necessity [4] I. Siraj and others " Read for Leadership for Learning) program working out , to school education leaders professional development programs through education quality increase opportunities proved [11].

Fourth approach — innovative management theory be , he in the organization innovative processes management and innovative the environment formation issues learns . Preschool education in the system innovative management M. Ostrovska by traditional and innovative education technologies in the context of learned to be a researcher innovative of technologies education quality increase and pedagogue of personnel professional in development role theoretical in terms of [12] N. Tychieva supreme education institutions in the example of innovative in management digitization instead analysis so that the leader innovative competence and organization digital transformation management ability between each other relevance shown [13] .

Table 1. Preschool education leaders innovative management competencies to develop circle theoretical approaches comparative analysis

Theoretical approach	Main focus	General aspects	Different aspects
Competency approach (Spencer, Boyatzis)	The structural structure of competence, an integrative set of knowledge, skills and	Considers competence as a key factor in the effective functioning of an individual	Analyzes competence primarily at the individual level, not sufficiently considering the organizational context

	personal characteristics		
Andragogic approach (Knowles, Khadka)	Specific laws of adult education, self-management, reliance on experience	Aimed at ensuring the student's active position in the professional development process	Focuses on organizational forms and methods of the educational process, does not deeply analyze the structure of competence
Transformational Leadership (Burns, Bass, Sergiovanni)	The leader's ability to fundamentally change an organization, inspire and intellectually stimulate	Aimed at forming the leader's readiness for innovative activities	Focuses more on leadership qualities, does not take into account the andragogic characteristics of the professional development process
Innovation Management Theory (Ostrovskaya, Tychieva)	Management of innovation processes in the organization, digital transformation, technological innovation	Considers innovation as an integral part of the management process	Focuses more on technological aspects, does not fully cover the development of an individual's competencies

The comparative analysis presented in the table shows that all four theoretical approaches play an important and complementary role in the development of innovative management competence of a preschool education leader. While the competency-based approach serves to determine the structural structure of the competence, the andragogical approach allows you to adapt the professional development process to the professional experience and needs of leaders. While the theory of transformational leadership is aimed at developing the leader's ability to change the organization, the theory of innovative management focuses on the issues of forming an innovative environment and managing digital transformation. At the same time, the differences between these approaches are manifested in the fact that each of them reveals different aspects of innovative management competence and can be used at different stages of the professional development process.

Based on a thorough analysis of the above theoretical approaches, a new, integrative definition of the innovative management

competence of preschool education leaders has been formulated. According to this definition, the innovative management competence of a preschool education leader is a holistic system of cognitive, functional, social and metacognitive knowledge, skills, abilities and personal qualities necessary for the leader to strategically develop the preschool education organization, manage and implement innovative changes in the educational process, direct the pedagogical team to professional growth, effectively use information and communication technologies, and renew organizational culture.

This definition, unlike previously proposed definitions, firstly, takes into account the specialized features of innovative management in preschool education; secondly, it clearly defines the four-component structure of competence; thirdly, it theoretically justifies the possibility of its development in the system of advanced training.

The general conclusion from the theoretical analysis is that the innovative management competence of preschool education leaders is

not a static, but a dynamic, constantly evolving, multifaceted and integrative phenomenon, for the development of which one approach is not enough, but a synthesis of various theoretical approaches is required. The theoretical significance of this competence is that it serves to develop the theory of preschool education management in an integrated manner with the theories of innovative management, andragogy and transformational leadership. This integrative approach creates a theoretical basis for a more purposeful and effective organization of the professional development of leadership personnel in the system of advanced training. As a result of theoretical analysis, four main components of innovative management competence of preschool education leaders were identified, and their definition and distinguishing features were formulated as follows:

The first component is the cognitive component. It includes the leader's system of knowledge about modern management theories, educational innovations, strategic planning methods, and information technologies. The distinguishing feature of the cognitive component is that it implies not only theoretical knowledge, but also the ability to critically analyze and apply this knowledge in the context of preschool education.

The second component is the functional component. It includes a set of practical skills of the manager in strategic planning, management of innovative projects, effective allocation of resources, implementation of monitoring and evaluation systems. The distinguishing feature of the functional component is that it is directly focused on the practical results of management activities and has measurement criteria.

The third component is the social component. It includes the leader's ability to inspire the pedagogical team, organize teamwork, resolve conflicts, and effectively communicate with parents and the public. The distinguishing feature of the social component is its direct connection with interpersonal relationships, emotional intelligence, and communicative culture.

The fourth component is the metacognitive component. It includes the leader's ability to reflexively analyze his own activities, plan his own professional growth, self-assessment, and continuous self-improvement. The distinguishing feature of the metacognitive component is that it is based on the leader's ability to self-manage and continuous professional improvement.

The separation and description of these four components creates a theoretical framework for the systematic study, assessment, and targeted development of the innovative management competence of preschool education leaders in the process of professional development.

Comparison of the results of this theoretical analysis with existing scientific research shows that the proposed four-component structure of innovative management competence is consistent with the theoretical foundations of a number of previous studies and at the same time has new aspects. In particular, the competency pyramid model developed by LM Spencer and SM Spencer distinguished between visible (knowledge, skills) and hidden (motivation, personal characteristics) layers of competence [3]. The four-component structure proposed in our theoretical analysis further specifies this model and adapts it to the context of preschool education. That is, while the cognitive and functional components correspond to Spencer and Spencer's "visible" layer, the social and metacognitive components concretize the "hidden" layer for preschool education leaders.

The five leadership power theories proposed by TJ Sergiovanni (technical, human, educational, symbolic and cultural powers) have certain points of correspondence with our structure [2]. For example, Sergiovanni's category of "human power" is close in content to our social component, and "technical power" is close to the functional component. However, the difference is that we have separately identified the metacognitive component, which is not sufficiently covered in Sergiovanni's theory. The separate presentation of the metacognitive component allows us to theoretically

substantiate the important role of self-management and reflexive development of preschool education leaders in innovative management.

C. Kivunjuna distinguished between the management and leadership functions of leadership in the context of preschool education [4]. Our theoretical analysis confirms this distinction and further substantiates it: the functional component corresponds mainly to the management function, and the social component to the leadership function. However, we propose to integrate these two functions into a single system through cognitive and metacognitive components, which is a novelty different from Kivunjuna's research.

The principles of self-management, experience-based and problem-oriented learning identified by M. Knowles in his theory of andragogy [5] are taken into account in our theoretical analysis as the methodological basis of the professional development process. Our results confirm Knowles' principles and concretize them in relation to preschool education leaders: in particular, the metacognitive component can be seen as an expression of the principle of "self-management" in Knowles' theory at the competency level. At the same time, our approach, unlike Knowles' theory, theoretically justifies the possibility of increasing the effectiveness of the professional development process by integrating andragogy principles with competency-based and transformational approaches.

M. Gunarto and Y. Widiastuty's study proved that the managerial competence of the head of a preschool educational institution has a direct impact on the quality of education [6]. Our theoretical results confirm and further expand the conclusions of this study: that is, it is theoretically justified that not only the managerial competence of the head, but also all four components of the innovative management competence affect the quality of education. A. Panchenko et al., studying the managerial aspects of developing digital competence in preschool education, emphasized the role of the head as a coordinator of digital transformation [8]. The cognitive component in our theoretical

framework, including knowledge of digital literacy and information technologies, is consistent with the results of this study. N. Tsai proposed a model of professional competencies of heads of preschool and school education systems in the context of Uzbekistan [7]. Our results, unlike this study, highlight the features of competence focused on innovative management and concretize them in the context of the professional development system.

I. Siraj et al. have demonstrated through a randomized controlled trial that professional development programs for preschool leaders through the "Leadership for Learning" program have a positive impact on improving the quality of education [11]. The results of this study confirm the conclusions of our theoretical analysis that development and professional development programs need to include all components of innovative management competence in order to be effective.

The scientific significance of the results of the theoretical analysis is manifested in the following. First, the four-component structure of the innovative management competence of preschool education leaders serves to enrich the theory of preschool education management. Second, the integration of andragogic, competency-based and transformational approaches offers a new methodological basis for the theory of professional development. Third, the formulation of a definition of innovative management competence specialized for preschool education leaders expands the categorical apparatus of the science of preschool education pedagogy.

As for the practical significance, the theoretical results obtained can be applied in the following areas: it is recommended to use the four components of innovative management competence as a basis when developing training programs for advanced training courses; these competence components can be used as assessment criteria in the process of certifying heads of preschool educational organizations; it is advisable to use these theoretical results in the formation of a reserve of managerial personnel by educational management bodies and planning their professional growth; they

can serve as a theoretical basis for the formation of an innovative management culture in preschool educational organizations and strategic planning of organizational development.

It is also necessary to acknowledge some limitations of this theoretical analysis. First, the four-component structure of innovative management competence proposed in the article was formulated on the basis of theoretical analysis, which has not yet been empirically verified. Second, the theoretical conclusions are based mainly on foreign research, and the specific features of the Uzbek preschool education system may not have been sufficiently taken into account. Third, although the article covers the theoretical foundations of advanced training technologies, specific technological solutions and methodological recommendations have not been developed.

The following directions for future research have been identified. The first direction is to confirm or supplement the proposed four-component structure of innovative management competencies through empirical research. In this regard, it is appropriate to use expert surveys, factor analysis, and structural equation modeling methods. The second direction is to develop advanced training programs taking into account the specific characteristics of the preschool education system of Uzbekistan and evaluate their effectiveness. The third direction is to conduct an experimental study of the role of digital technologies, artificial intelligence, and distance learning tools in the development of innovative management competencies in the advanced training system. The fourth direction is to develop and approve diagnostic tools for assessing the level of innovative management competencies of preschool education leaders.

The research analyzed the theoretical and methodological foundations of the technologies for developing innovative management competencies of preschool education leaders in the system of advanced training. As a result of the theoretical analysis, an integrative definition of the concept of innovative management competencies of preschool

education leaders was formed and its four main components were identified - cognitive, functional, social and metacognitive components. A comparative analysis of the approaches to competency-based, andragogical, transformational leadership and innovative management showed that they are complementary and justified the need for their integrated use in the process of advanced training. The theoretical results obtained serve to enrich the theory of preschool education management, scientifically substantiate advanced training programs and systematically organize the professional development of leaders.

References

1. Bloom, PJ Leadership in Action: How Effective Directors Get Things Done. — Lake Forest, IL: New Horizons, 2014. — 256 p. URL: <https://ecrp.illinois.edu/v16n1/talan.html>
2. Sergiovanni, TJ Leadership and Excellence in Schooling // Educational Leadership. — 1984. — Vol. 41, No. 5. — P. 4–13. URL: https://us.sagepub.com/sites/default/files/upm-binaries/11217_Serg__Article_1.pdf
3. Spencer, LM, Spencer, SM Competence at Work: Models for Superior Performance. — New York: John Wiley & Sons, 1993. — 372 p. DOI: 10.1002/hrdq.3920050411
4. Kivunja, C. Leadership in Early Childhood Education Contexts: Looks, Roles, and Functions // Creative Education. — 2015. — Vol. 6, No. 16. — P. 1710–1717. DOI: 10.4236/CE.2015.616172
5. Knowles, MS, Holton, EF, Swanson, RA The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development. — 8th ed. — London: Routledge, 2015. — 402 p. DOI: 10.4324/9781315816951
6. Gunarto, M., Widiastuty, Y. The Impact of Kindergarten Head's Managerial Competency on Improving Preschool

- Educational Quality // Dinasti International Journal of Digital Business Management. — 2020. — Vol. 1, No. 2. — P. 178–189. DOI: 10.31933/DIJDBM.V1I2.155
7. Tsay, N. Professional Competencies of Leaders in the Preschool and School Education System of the Republic of Uzbekistan // Excellencia: International Multi-disciplinary Journal of Education. — 2025. — Vol. 3, No. 1. — P. 45–58. URL: <https://multijournals.org/index.php/excellencia-imje/article/view/3050>
 8. Panchenko, A., Yuriychuk, I., Stehni, O. Management of the Development of Digital Competence of Preschool Education Teachers in the Conditions of the Modern Educational E-Environment // Open Educational E-Environment of Modern University. — 2025. — No. 19. — P. 90–102. DOI: 10.28925/2414-0325.2025.199
 9. Boyatzis, RE The Competent Manager: A Model for Effective Performance. — New York: John Wiley & Sons, 1982. — 308 p. URL: <https://www.wiley.com/en-us/The+Competent+Manager-p-9780471090311>
 10. Khadka, J. Andragogy: Process and Context Based (PCB) Model for Adult Learners // Journal of Adult and Continuing Education. — 2020. — Vol. 63, No. 4. — P. 31–41. DOI: 10.7176/jaas/63-04
 11. Siraj, I., Howard, S., Neilsen-Hewett, C. et al. Improving Quality of Teaching and Child Development: A Randomized Controlled Trial of the Leadership for Learning Intervention in Preschools // Frontiers in Psychology. — 2023. — Vol. 13. — Art. 1092284. DOI: 10.3389/fpsyg.2022.1092284
 12. Ostrovska, M. Traditional and Innovative Educational Technologies in Preschool Educational Institutions // IMZO Journal. — 2025. — Vol. 1, No. 102. — P. 112–119. DOI: 10.52256/2710-3986.1-102.2025.16
 13. Tuychieva, N. The Role of Digitalization in the Innovative Management of Higher Education Institutions // MMIT Journal. — 2024. — No. 1. — P. 15–24. DOI: 10.61587/mmit.uz.vi.29