

BUILDING COMPETENCIES FOR MANAGING VIRTUAL TEAMS IN LOCAL PUBLIC ADMINISTRATIONS: CHALLENGES IN THE AGE OF GLOBAL DIGITALIZATION

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Abstract. *Objectives.* The present article aims to examine the difficulties faced by local governments during their digital transitions, highlighting the urgent need to improve higher education programmes focused on public administration and related fields in order to adequately prepare future public servants for the demands of the digital age. This underscores the significance of practical competencies for effective virtual team management in collaborative projects. *Methods/Approaches.* A literature-based approach was employed to analyse and summarise scientific literature, thereby identifying theoretical concepts and practical aspects of the digital transformation of local and regional authorities. This approach is combined with a comparative analysis to illustrate the differences between traditional team practices and virtual ones, further commenting on the necessary knowledge and skills that future public servants must develop. In order to ascertain the extent to which the underutilisation of virtual or hybrid teams within local public administrations is attributable to the absence of contemporary training in teamwork in a digital environment, an on-desk study of the publicly available curricula of 14 Bulgarian universities offering Bachelor's and/or Master's degrees in "Public Administration" or a related discipline was conducted. Additionally, a specially designed 16-question, closed-ended online survey was conducted with representatives of 28 Bulgarian local and regional administrations. The survey focused on technological use and opinions on virtual teams and their associated challenges. *Results.* The paper proposes a conceptual model of core competencies for managing virtual teams within public authorities, which is derived from the study assessing the opportunities to establish and sustain effective virtual teams of 28 NUTS III-level public administrations in a single pilot municipality. The survey data reveal a complex set of interrelated challenges affecting the efficiency and security of virtual teams in local public administrations. These competencies are broadly categorised into three thematic areas: digital competence, procedural infrastructure, and information security. *Conclusion.* The study examined key obstacles to the implementation of virtual teams, such as technological limitations, connectivity issues and cross-cultural disparities. It also examined digital literacy among local authority personnel and recommended educational changes based on an analysis of existing "Public Administration" Bachelor's and Master's degree curricula.

Keywords: virtual and hybrid teams, digital transformation, public administration, education, management.

JEL Classification: M10, M21, O10

1. Introduction

The rise of global digitalisation has transformed the way public administration works, particularly with regard to managing virtual teams. As organisations strive to keep up with new technologies, local public

administrations are realising that they need digital tools to help their teams collaborate, even when they are far apart. This makes it even more important to develop specific skills for good governance in this digital age, including both technical know-how and

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the ability to work well with others. Although people are more aware of the challenges of managing remote teams, training programmes for public administrators still lack adequate coverage of this topic (Rudolph et al., 2025).

In an era of rapid technological advancement, local authorities are facing significant challenges in their efforts to implement successful digital transformations. Such changes are vital for improving public service delivery and enhancing the governance framework as a whole. However, many local administrations struggle with insufficient resources, a lack of technical expertise and well-prepared public servants, and outdated operational frameworks and procedures, all of which impede their ability to integrate digital solutions effectively. Furthermore, the educational programmes currently offered in "Public Administration" (Bachelor's or Master's level) rarely equip future leaders with the skills needed to navigate this complex landscape. There is an urgent need for these educational offerings to be advanced to include modern technological competencies, which could foster innovation and improve service outcomes. Contrasting scenarios in countries such as Bulgaria, Poland, Romania and Ukraine highlight these challenges, where the integration of digital infrastructure remains uneven. This reflects a broader necessity for strategic educational reform (Shevchuk et al., 2020).

The ongoing digital transformation necessitates an examination of the requirements of local public administrations in terms of education, and the obstacles they face in developing the competencies to effectively manage virtual teams. A salient issue pertains to the marked disparity in training and competencies exhibited by public administrators. In light of these findings, there is an evident necessity for comprehensive data collection methodologies, such as surveys, interviews, and case studies, to ascertain specific competency requirements and the learning opportunities that are currently available. It becomes evident that many local administrations do not have well-defined training programmes designed for the specific dynamics of managing virtual teams. This often results in lower team performance and reduced employee engagement. Moreover, technology is a major factor in enabling effective communication and collaboration remotely. Therefore, adaptive digitalised higher education in "Public Administration" is necessary, as is continuous professional development.

2. Short Typology of Teams: Traditional vs. Virtual Teams

Digital transformation within local authorities represents a paradigm shift towards the integration of technology to improve the delivery of public services and civic engagement. This shift is dependent not

only on investment in IT solutions, but also on the acquisition of adequate knowledge, competencies and skills. Furthermore, successful digital transformation requires collaborative efforts at various levels of government, emphasising the importance of strategic planning and stakeholder participation in fostering innovation and improving overall governance (Alsudairi & Kamal, 2009). This multifaceted process involves adopting new technologies such as cloud computing and data analytics, as well as fundamentally rethinking organisational structures and workflows to enhance transparency and efficiency. Local governments are grappling with the rapid pace of technological advancements and face significant challenges, including resource constraints and resistance to change from existing bureaucratic cultures. The necessity for educational advancements in "Public Administration" programmes (at both the Bachelor's and Master's levels) becomes apparent, as officials must develop the skills necessary to navigate this complex landscape effectively and at least gain the ability to function in hybrid and virtual environments and teams.

A team is defined as "a small group of people with complementary skills, with common intentions, goals, and approach, for which they are jointly responsible" (Katzenbach & Smith, 1993). In contemporary organisational structures, the employment of a variety of team configurations is employed as a strategic approach to enhance efficiency, encourage innovation, and nurture adaptability within the operational frameworks of these structures (Jerab & Mabrouk, 2023). In this section, an examination and delineation of the characteristics that differentiate various team types is conducted.

Traditional teams are often organised as functional units or departments and consist of individuals with similar expertise, operating under centralised leadership. These teams benefit from clear hierarchies and defined roles, which facilitate streamlined decision-making processes. However, their homogeneity can hinder cross-functional collaboration and innovation (Rossignol, 2023).

Problem-solving teams are typically assembled to address specific issues within an organisation. These teams are often cross-functional, bringing together diverse expertise to analyse problems and develop solutions. To navigate complex challenges, effective problem-solving teams require strong communication skills and a collaborative mindset (Crowne, 2019).

Cross-functional teams are defined by collaboration towards a shared goal, with members drawn from various departments. The diverse perspectives and skills within these teams boost creativity and problem-solving. However, they may encounter coordination and communication challenges due to differing departmental cultures and priorities (MDRC, 2024).

Leadership teams comprise top executives and managers who handle strategic decision-making and guide organisational direction. The effectiveness of these teams is influenced by factors such as diversity, shared vision and leadership styles. According to Michels (2023), diverse leadership teams improve performance by taking multiple viewpoints into account when making decisions.

Self-managed teams operate with high autonomy, making collective decisions without direct supervision. They empower themselves to set goals, allocate tasks and manage their workflow. The success of self-managed teams depends on the competencies, mutual trust and effective communication of their members. While flexible working arrangements can improve satisfaction and flexibility, they can also give rise to accountability and coordination issues (Wheeler, 2013).

Virtual teams are formed through remote collaboration, which is often carried out across different geographical locations and time zones. Improvements in communication technology have enabled the growth of virtual teams, giving companies access to a global talent pool. The success of virtual teams hinges on trust, clear communication and technological expertise. However, challenges such as isolation, miscommunication and lack of team cohesion can arise (Ebrahim, Ahmed & Taha, 2009).

The following table provides a comparison between the conventional team's modus operandi and that of the virtual team. This comparison is intended to elaborate on the essential knowledge and skills that

prospective public servants must acquire to ensure their capacity to function efficaciously in a digital environment (hybrid or virtual).

In light of the necessity for personal contact, physical presence, and direct control over operations, as exemplified by those typical in administrative services, archives, and security work, the traditional model emerges as the more appropriate choice. The virtual model has been designed to be versatile, and as such, is suitable for analytical tasks, complex coordination, and comprehensive project work. In addition to this, the virtual model plays a crucial role in modernising public administration by streamlining processes and improving service delivery through digital platforms. In the context of the evolving paradigm of digitally transforming public administration, a hybrid approach that leverages the strengths of teams' multiple models is often the optimal strategy. This approach proposes unique and more comprehensive solutions that are adjusted to the specific functions assigned to the administrative unit/entity.

3. The Challenges and Constraints in Digitalisation of Public Administration Practice and Education

In order to identify the practice and problems in using virtual and hybrid teams in public administrations, a survey was conducted of the 28 administrative structures represented on the territory of Ruse district. These structures include regional and municipal administration, executive agencies, regional subdivisions

Table 1
Comparison between traditional and digitalised team's practice

Criterion	Traditional teams	Virtual teams
Accessibility for citizens	High in physical presence	High through e-services, but more limited personal contact
Flexibility for employees	Low	High
Crisis effectiveness	Limited	High resistance
Data security	Better in a controlled environment	Dependent on technology and protections
Building a team culture	Easier on site	More difficult remotely
Financial costs	Higher	Lower maintenance
Characteristics	Traditional teams	Virtual teams
Communication	Easy, direct	Technology dependent
Flexibility	Limited	High
Costs	Higher	Lower
Team cohesion	Stronger in personal contact	More difficult to build
Access to footage	Limited to local	Global access
Control	More direct and permanent	More delicate, distant
Model	Suitable for...	
Hybrid team	- Partial digitalisation; - activities with mandatory need for physical contact with citizens; - rotational work practice.	
Virtual team	- Project management and analytical work; - e-services provision; - IT activity and or technical support; - Work without physical documents or meetings.	

of state agencies, specialised territorial administration, and administrations related to the judicial system. The present study involved the development of a 16-item closed-ended questionnaire, the aim of which was to elicit respondents' views on technology use, their opinions on virtual teams, and the challenges they face. Completion of the form was dependent on the contribution of at least one manager from each of the relevant organisations. In this publication, a selection of results that justify the need to modernise higher education in the field of "Public Administration" under the processes of digitalisation are presented.

Out of a total of 28 administrations, a response was received from 26. The present study has demonstrated that administrative practice frequently uses information technologies for the exchange of documentation, most often via email (96.2%) or web-based applications for the sharing of digital content (30.8%). A relatively small proportion of the surveyed administrations participate in professional online forums maintained by other organisations (26.9%), and only 7.7% of the responding institutions participate in thematic groups and online discussions on professional topics. Concurrently, 42.3% of respondents reported utilisation or engagement in closed professional groups on applications such as Viber, WhatsApp, and Telegram. However, only 26.3% reported utilisation of video conferencing applications including Google Meet, Zoom, WebEx, and others. Traditional teams, which involve the physical presence of employees, are predominant. They follow the organisation's defined hierarchical structure without mixing representatives from different functions and areas of competence, accounting for 34.6% of teams. The smallest percentage of teams are hybrid teams, which follow the organisation's defined hierarchical structure but have a multidisciplinary orientation. These teams comprise employees from different structures with different functions and competencies, accounting for 7.7% of teams. When considering the various forms of teamwork within a digital environment, the data reveals that 46.2% of organisations do not use virtual teams. However, other respondents reported using temporary or permanent virtual teams, and a subset indicated using a hybrid approach integrating both.

Institutions reported that virtual teams are a valuable asset, demonstrating their effectiveness in staff training initiatives, project implementation – particularly in collaboration with partner organisations – and the efficient provision of electronic services to citizens. The percentages exceed 100 because respondents were able to give more than one answer. Among the advantages mentioned, 69.2% of respondents highlighted reduced office maintenance costs, 57.7% mentioned faster information exchange, 46.2% mentioned time savings on commuting and flexible

working hours, and 38.5% mentioned improved access to knowledge and best practices. The survey results reveal a number of ongoing challenges related to the functioning of virtual teams in local government. The most prevalent issue identified by 38.5% of the organisations is the inadequate training programme designed to enhance digital competence. Furthermore, 30.8% of respondents reported a complete absence of developed digital skills among personnel, while an equal proportion (38.5%) emphasised the lack of established internal protocols for operating in a digital environment. Additional impediments include difficulties in synchronising work processes (26.9%), the risk of unauthorised access or compromise of official information (34.6%), and a shortage of qualified information security specialists (30.8%). Furthermore, 23.1% of respondents noted communication inefficiencies, and 26.9% cited significant disparities in digital competence among virtual team members. At a systemic level, the represented administrative structures emphasised the pressing need for sustained investment in the technological development of digital infrastructure, the unequal connectivity across different geographic areas, and the limited interoperability of digital systems employed by separate administrative units. These factors collectively hinder the effective implementation and management of virtual teams within local governance. The survey data reveals a complex set of interrelated challenges that affect the efficiency and security of virtual teams within local public administrations. These challenges can be broadly categorised into three thematic areas: digital competence, procedural infrastructure and information security. A substantial number of respondents indicated deficiencies in digital proficiency, citing inadequate training and uneven skill levels within teams. These factors are strongly related, suggesting that inconsistent skill levels across teams are directly caused by a lack of structured training programmes. This skills gap undermines collaborative effectiveness, fostering over-reliance on a few skilled individuals and consequently diminishing team performance. It also restricts adaptability to global digitalisation trends and creates a considerable discrepancy between opportunities for process optimisation and preparedness to adopt emerging technologies.

In order to ascertain the extent to which the underutilisation of virtual or hybrid teams within local public administrations can be attributed to the absence of contemporary training in teamwork in a digital environment, an additional desk study was conducted. This study involved an examination of the publicly available curricula of Bulgarian universities offering Bachelor's and/or Master's degrees in "Public Administration" or a related field. A total of 14 universities' curricula were examined in the study,

as illustrated in Table 2. The focus of the analysis centred on the existence, within the curricula, of a specific discipline that is directly associated with the management of teams, with a particular emphasis on virtual teams.

Of the fourteen Bulgarian universities that offer undergraduate and/or graduate programmes in Public Administration, only four incorporate Team Management into their curricula, with two offering it as an elective. All curricula cover traditional "Human Resources Management", but do not include topics on managing virtual or hybrid teams. All curricula include information technology subjects at a basic theoretical level. However, only four universities offer more advanced subjects such as "Electronic Management of Public Services", "Digital Resource Management" and "Information Society". One university offers a degree in digital administration, but it is engineering-oriented. An analysis of curricula reveals that the conventional approach presupposes the cultivation of fundamental digital competencies for prospective public servants. However, it fails to offer a platform for the integration of novel methodologies in administrative operations pertaining to digital or hybrid environments. In contrast, the conventional curricula of the specialisation in Public Administration are deficient in key knowledge and skills that are imperative for the digital governance of the public sphere. These include the digital transformation of administration, virtual leadership and teamwork in the public sector, and cybersecurity.

4. Curricular Modernisation for Public Administration in the Digital Age

The effective management of virtual and hybrid teams in the public sector demands a radical rethink of the mindset and skillset required, both of which are woefully absent from traditional "Public Administration" curricula. In the context of digital transformation becoming an integral component of public governance, there is a necessity for curricular reform to incorporate specialised content on the management of distributed teams. This should include remote motivation techniques, virtual performance monitoring, digital organisational culture, and ethical decision-making in online environments. The integration of cybersecurity and information security training is of fundamental importance to this transformation, particularly with regard to secure remote data access, data protection standards, and critical digital hygiene practices.

Moreover, the integration of immersive technologies, such as virtual and augmented reality, has been demonstrated to have a substantial impact on the efficacy of experiential learning. By simulating real-world scenarios, students can practise essential competencies such as virtual leadership, digital communication, remote project coordination, and conducting online meetings, presentations, negotiations, and conflict resolution. Equally important is the development of soft skills attuned to digital contexts. Training modules should cover digital emotional intelligence, asynchronous communication strategies, management

Table 2

Discipline/s directly related to team management in the curricula of Bulgarian universities offering Bachelor's and/or Master's degrees in "Public Administration" or similar

University	Educ.degree	Disciplines directly related to team management
Sofia University St.Kliment Ohridski	Bachelor/Master	HR management Teams' management
"Angel Kanchev" University of Ruse	Bachelor	HR management
New Bulgarian University	Bachelor/Master	HR management Teams' and conflicts management
University of National and World Economy	Bachelor/Master PhD	HR management HR management in the state administration
University of Veliko Turnovo St Cyril and St. Methodius, Bulgaria	Bachelor/Master	HR management Teams' management
Paisii Hilendarski University of Plovdiv	Bachelor	HR management
D. A. Tsenov Academy of Economics	Bachelor/Master	Teams' management and communications; HR management in public administration;
University of Economics - Varna	Bachelor/Master	HR management in public sector
Burgas Free University	Bachelor	HR management
Varna Free University	Bachelor	HR management
Technical University Gabrovo	Bachelor	HR management
University of Shumen E.Preslavski	Bachelor	No publicly accessible information
Agriculture University Plovdiv	Bachelor	No publicly accessible information
Technical University- Varna	Bachelor	No publicly accessible information

of distributed organisational environments and digital leadership, emphasising public reputation and accountability. These competencies are currently lacking in existing programmes.

In order to meet the evolving needs of digitally competent public servants, educational programmes must move beyond general ICT literacy. Future professionals must be proficient in using administrative software, cloud platforms and AI-driven tools to analyse and make decisions based on secure and efficient data. This requires a significant shift in focus from conventional IT instruction towards strategic digital fluency and systems thinking. Finally, modernising public administration education must be both interdisciplinary and informed by international best practice. This should involve integrating global best practices in the digitalisation of the public sector, as demonstrated by Estonia's e-governance model, Canada's service design approaches and the digital innovation ecosystems of the Netherlands.

The four-dimensional framework of the competence map can be used to redesign public administration curricula to meet the requirements of the digital era. This approach builds on traditional models by emphasising technological fluency, adaptive soft skills and awareness of global governance. The initial domain, *Core Administrative Competencies*, remains vital, demonstrating the strengths typically found in current programmes in areas such as administrative law, public finance and strategic management

(Rosenbloom et al., 2014). However, the other domains clearly lack up-to-date curricula, particularly in Bulgarian educational settings, where expertise in digital and hybrid teamwork is rarely explicitly taught.

Digital Public Sector Competencies, such as cybersecurity awareness, AI-based decision-making, and platform interoperability, are foundational for managing public services in hybrid ecosystems (Kettunen & Kallio, 2020). The integration of these technologies into training is imperative, as digital governance necessitates not only technical infrastructure but also skilled administrators who can utilise and effectively shape these technologies. Moreover, the integration of *Virtual and Hybrid Team Management Models* responds to the mounting necessity for adaptable administrative practices, especially in the post-pandemic context. Nevertheless, current degree programmes have been found to lack this type of training, reflecting an ongoing reliance on conventional notions of team collaboration and hierarchical organisation (Carayannis & Morawska, 2022). Equally crucial are digital soft skills, which are rarely presented in a structured curriculum. These competencies are vital for the ethical and effective delivery of online services and internal coordination (Roy, 2022). Finally, *Global and Comparative Digital Governance Competencies*, such as familiarity with generative AI, can help students to internalise globally recognised practices and introduce innovations with ease (Ooi et al., 2023).

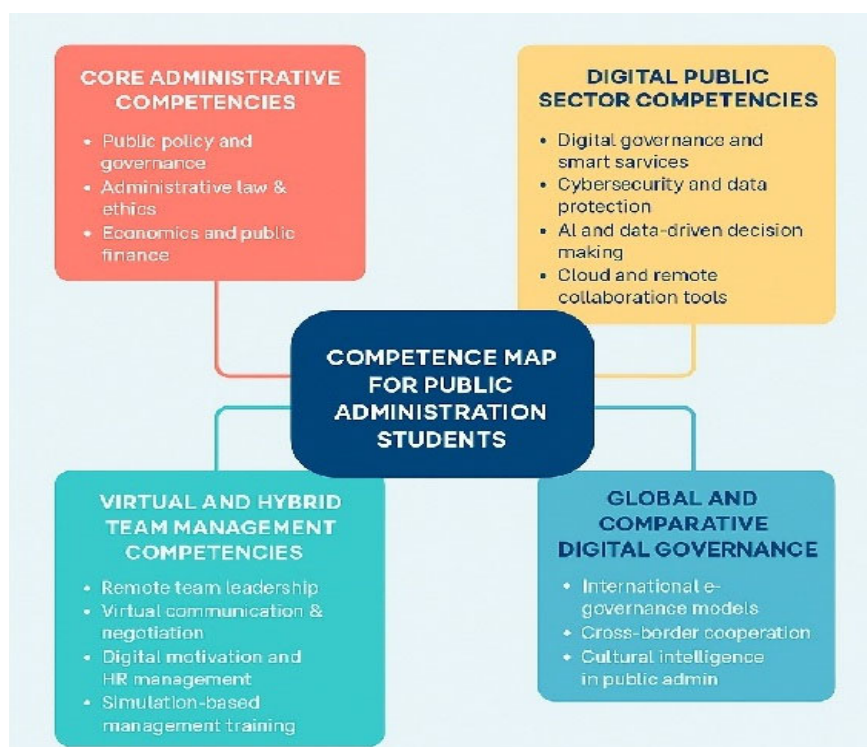


Figure 1. Four-faceted new competence map for "Public administration" specialty

5. Conclusions

A deficiency in "Public Administration" education, specifically its failure to keep pace with global digitalisation, has a negative impact on the attractiveness of the field and produces graduates who lack the skills required for digital employment. This also explains why local and regional administrations currently do not recognise virtual and/or hybrid teams as an appropriate form of work, instead associating them with many of the above-mentioned challenges and barriers, rather than seeing them as an opportunity to optimise processes, working hours, costs, and improve the quality and accessibility of administrative services offered. A lack of education in "Public Administration" that is adequate for current global digitalisation trends makes the specialty unattractive, and its graduates are poorly suited to working in digital environments. Limited funds for constant technological renewal, underdeveloped ICT infrastructure and problematic connectivity, particularly in small and remote settlements, combined with other complex factors, greatly increase the disparity between public expectations of easily accessible, quick and universal administrative services and e-government, and the reality of their provision. The paucity of knowledge, skills and competencies for functioning in digital

teams (fully virtual or hybrid) has consequences for the services provided to citizens and the efficiency of the overall functioning of public administrations. The limitations imposed by this lack of ability affect the constitution and coordination of inter-institutional teams, the implementation of active inter-regional and transnational co-operation and the implementation of projects related to them.

The accelerating pace of technological advancement necessitates a prompt and strategically planned overhaul of the "Public Administration" curriculum. This is to ensure that students are adequately equipped to meet the challenges of the modern administrative landscape. In order to surpass the expectations of traditional scholars in this interdisciplinary area, this curriculum must integrate specialised training designed to cultivate a demonstrably higher level of expertise in knowledge, skills, and competencies.

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References:

- Alsudairi, M., & Kamal, M. (2009). ICT Policy` for ICT service management – role of business organizations in national reforms agenda for services sector. European and Mediterranean Conference on Information Systems (EMCIS 09), Izmir, Turkey, 13-14 July 2009. Available at: <http://bura.brunel.ac.uk/handle/2438/8331>
- Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. *J Knowl Econ*, 13, 3445–3471. DOI: <https://doi.org/10.1007/s13132-021-00854-2>
- Crowne, K. A. (2019). Puzzling in Teams: A Multipurpose Group Activity for Teamwork, Communication, Problem Solving, and Creativity. *Management Teaching Review*, 4(4), 237–246.
- Deneva, A., Pavlov, D., Kume, A., Alieva, D., & Petrova, M. (2025). Sustainable Work-Life Balance through Family Entrepreneurship: A Cross-Country Perspective. *European Journal of Sustainable Development*, Publisher: European Center of Sustainable Development, ISSN 2239-5938 (print), ISSN 2239-6101 (online), <http://www.ecsdev.org/>, Rome, Italy, Vol 14, No. 2, 2025, pp. 937–960. DOI: <https://doi.org/10.14207/ejsd.2025.v14n2p937>
- Ebrahim, N. A., Ahmed, S., & Taha, Z. (2009). Virtual Teams: A Literature Review. *Australian Journal of Basic and Applied Sciences*, 3(3), 2653–2669.
- Jarmusevica, V., Ilisko, D., Badjanova, J., Jukss, V., & Petrova, M. (2019). *Educating citizens for integrating the strategy of corporate social responsibility for sustainable regional development: the case study*. Proceedings of EDULEARN19 Conference 1st-3rd July 2019, Palma, Mallorca, Spain, ISBN 978-84-09-12031-4, pp. 10449–10454. DOI: <https://doi.org/10.21125/edulearn.2019.2633>
- Jerab, D. & Mabrouk, T. (2023). The Evolving Landscape of Organizational Structures: A Contemporary Analysis. DOI: <http://dx.doi.org/10.2139/ssrn.4584643>
- Katzenbach, J. R. & Smith, D. K. (1993). *The Discipline of Teams*. Harvard Business Review, March–April.
- Kettunen, P. (2020). *Digital Governance and Public Administration in the 21st Century*. Springer Nature.
- Kettunen, P., & Kallio, J. (2020a). Digital governance and its role in modernizing public administration. *Public Administration Review*, 45(6), 701–712.
- Kettunen, P., & Kallio, J. (2020b). AI in public administration: Exploring the impact and opportunities. *International Journal of Public Sector Management*, 33(5), 533–546.
- Linde, I., & Petrova, M. (2018). *The challenges of formalization and modelling of Higher Education Institutions in the 21st century*. CBU International conference proceedings 2018: Innovations in Science and Education, 21.-23.03.2018, pp. 303–308. DOI: <https://doi.org/10.12955/cbup.v6.1173>
- MDRC (2024). *Exploring Cross-Functional Teams in Higher Education*. Available at: https://www.mdrc.org/sites/default/files/Exploring_Cross-Functional_Teams.pdf

- Michels, D. (2023). *A Study of Thousands of Executive Teams Reveals 5 Central Behaviors*. Forbes. Available at: <https://www.forbes.com/sites/davidmichels/2023/09/27/a-study-of-thousands-of-executive-teams-reveals-5-central-behaviors/>
- Ooi, K. B., Tan, G. W. H., Al-Emran, M., Al-Sharafi, M. A., Capatina, A., Chakraborty, A., ... Wong, L. W. (2023). The Potential of Generative Artificial Intelligence Across Disciplines: Perspectives and Future Directions. *Journal of Computer Information Systems*, 65(1), 76–107. DOI: <https://doi.org/10.1080/08874417.2023.2261010>
- Petrova, M., Ramazanov, S., & Stemplewska, L. (2025). Employee involvement in a volatile Society 5.0 landscape. Chapter 13, pp. 164–170. In *Organizational development, innovation, and Economy 5.0: challenges in the digital era* / edited by Elżbieta Jędrych and Agnieszka Rzepka. New York, NY: Routledge. Series: Routledge studies in management, organizations and society. Taylor & Francis. DOI: <https://doi.org/10.4324/9781003502272>
- Rosenbloom, D. H., Kravchuk, R. S., & Clerkin, R. M. (2014). *Public Administration: Understanding Management, Politics, and Law in the Public Sector*. 8th ed. McGraw-Hill Education, pp. 32–39.
- Rossignol, N. 5/2023. *Different Types of Teams & Their Role in the Organization*. Available at: <https://www.runn.io/blog/types-of-teams>
- Roy, J. (2022). COVID-19, digitization and hybrid workspaces: A critical inflection point for public sector governance and workforce development. *Canadian Public Administration*, 65(4), 569–575. DOI: <https://doi.org/10.1111/capa.12475>
- Rudolph, J., Tan, S., & Tan, Sh. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education?. *Journal of Applied Learning & Teaching*. DOI: <https://doi.org/10.37074/jalt.2023.6.1.9>
- Singh, S., Singh, S. K., Singh, V. L., & Petrova, M. (2025). Unravelling Economic Complexity: A Systematic Exploration of Themes and Trends through Literature and Keyword Network Analysis. *Access to science, business, innovation in digital economy*, ACCESS Press, 6(2), 357–380. DOI: [https://doi.org/10.46656/access.2025.6.2\(7\)](https://doi.org/10.46656/access.2025.6.2(7))
- Shevchuk, S. M., Dobrianska, V. V., Myskovets, N. P., Kokhan, M. O., & Shepel, T. V. (2020). Marketing aspects of image formation and investment attractiveness of territories and enterprises. *International Journal of Economics and Business Administration*, Volume VIII, Issue 2, 229–239. DOI: <https://doi.org/10.35808/ijeba/455>
- Utebayev, T., Petrova, M. M., & Lyubenova, I. (2018). *Training of qualified specialists in the process of their education at the university: the role of the public-private partnership*. CBU International conference proceedings 2018: Innovations in Science and Education, 21.-23.03.2018, pp. 491–495. DOI: <https://doi.org/10.12955/cbup.v6.i203>
- Wheeler, J. V. (2013). Self-Managing Work Teams: Enhancing Organizational Innovativeness. *Journal of Organizational Behavior*, 24(4).
- Public Administration bachelor's programme, Sofia University St.Kliment Ohridski. Available at: <https://phls.uni-sofia.bg/obuchenie/bakalavarski-programi/publiczna-administraciya>
- Public administration Bachelor's programme, University of Ruse "Angel Kanchev". Available at: <https://www.uni-ruse.bg/education/students/e-plan-bachelors>
- Public Management and Regional Development bachelor's programme, New Bulgarian University. Available at: https://ecatalog.nbu.bg/default.asp?V_Year=2024&YSem=2&Mod_ID=&Spec_ID=&Page_Show=programpresent&P_Menu=courses_part1&Fac_ID=3&M_PHD=0&P_ID=3270&TabIndex=3&l=0
- Public administration Bachelor/Master, PhD programme, University of National and World Economy. Available at: <https://departments.unwe.bg/padmin/bg/pages/1023/%D0%BE%D0%B1%D1%83%D1%87%D0%B5%D0%BD%D0%B8%D0%B5.html>
- Public administration Bachelor's and master programme, Veliko Tarnovo University St.St. Cyril and Metodii. Available at: <https://www.uni-vt.bg/bul/spec/infopack.aspx?sptype=1&mc=3070006&fmc=30700062&nspec=000069&specname=%D0%9F%D1%83%D0%B1%D0%BB%D0%B8%D1%87%D0%BD%D0%B0%20%D0%B0%D0%B4%D0%BC%D0%B8%D0%BD%D0%B8%D1%81%D1%82%D1%80%D0%B0%D1%86%D0%B8%D1%8F&tab=azb>
- Public Administration bachelor's programme, Paisii Hilendarski University of Plovdiv. Available at: <https://fisn.uni-plovdiv.bg/wp-content/uploads/2021/09/Публична-администрация-р.о.-21-22.pdf>
- Public administration Bachelor/Master programme, D. A. Tsenov Academy of Economics. Available at: <https://www.uni-svishtov.bg/bg/admission/bachelor/majors/1013/overview>
- Public administration Bachelor/Master programme, University of Economics – Varna. Available at: <https://ue-varna.bg/bg/subject/390#curriculum>
- Public Administration bachelor's programme, Burgas Free University. Available at: <https://www.bfu.bg/bg/bakalavarski-programi/tsentar-po-yuridicheski-nauki/publiczna-administratsiya>
- Public Administration bachelor's programme, Varna Free University. Available at: <https://www.vfu.bg/ects-bac/%D0%BF%D1%83%D0%B1%D0%BB%D0%B8%D1%87%D0%BD%D0%B0-%D0%B0%D0%B4%D0%BC%D0%B8%D0%BD%D0%B8%D1%81%D1%82%D1%80%D0%B0%D1%86%D0%B8%D1%8F-%D0%B8-%D0%BC%D0%B5%D0%BD%D0%B8%D0%B4%D0%B6%D0%BC%D1%8A%D0%BD%D1%82.html>
- Public Administration bachelor's programme, Technical University Gabrovo. Available at: <https://www.tugab.bg/za-nas/fakultet-stopanski/katedra-ezikovo-i-spezializirano-obuchenie?view=article&id=150:spetzialnost-publiczna-administratziya-pa&catid=103>

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