FROM THEORY TO PRACTICE: ENHANCING PUBLIC ADMINISTRATION LEADERS' CAPACITIES THROUGH COLLABORATIVE TRAINING PROGRAMS*

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Abstract

Education and training of public leaders are critical for public administration performance and achieving the Sustainable Development Goals (SDGs). Public leaders act as a bridge between political power and public administration, serving as catalysts for change, directly influencing public organizations and policies. Investment in leadership development is essential to prepare leaders for Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) environments, fostering shared management language and collaborative problem-solving across organizations. This article analyzes reforms to the Portuguese leadership training model, adapting it to contemporary challenges through collaborative strategies. Using a mixed-method approach — literature review, document analysis, mega-trend analysis, expert interviews, and focus groups — the study identifies effective instructional strategies and highlights ongoing challenges in public administration training. The outcome is a legally grounded, competency-based training framework that prioritizes collaborative learning, integrating masterclasses, individual assignments, and group discussions using active pedagogies. A consortium, including the National Institute of Administration (INA) and universities, governs the program, ensuring alignment with formal education pathways, partially recognizing training within master's programs in public administration and awarding European Credit Transfer and Accumulation System (ECTS) credits. Preliminary results indicate increased satisfaction among managers and organizations, alongside enhanced professionalization and perceived public value creation. The collaborative, practice-oriented model represents a change in basic assumptions in public administration training in Portugal.

Keywords: digital governance, public administration training, leadership development, collaborative learning, innovation in the public sector.

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1. Introduction

The COVID-19 pandemic underscored the crucial role of public sector leadership in navigating crises, exposing the vulnerabilities of traditional bureaucratic approaches (Orazi, Turrini and Valotti, 2013). In the contemporary governance landscape, characterized by digital transformation, interinstitutional collaboration, and the growing complexity of policy challenges, public leaders must possess a diverse skill set that extends beyond traditional administrative competencies (Moccia, Zhao and Flanagan, 2019; Barrett, Gaskins and Haug, 2019). Historically, public administration training has focused on technical knowledge and regulatory compliance, often delivered through theoretical and siloed learning models. However, in response to evolving governance paradigms, a shift towards collaborative, interdisciplinary, and digitally integrated training models is necessary (Elliott, Robson and Dudau, 2020; Justice and Skelcher, 2009). This paper investigates the evolution of public administration leadership training, moving from traditional, compartmentalized approaches to competency-based models that emphasize adaptability, collaboration, and strategic problem-solving. It also investigates the evolution of public administration leadership training, moving from traditional, compartmentalized approaches to competency-based models that emphasize adaptability, collaboration, and strategic problem-solving. We developed this study based on the following research question: How can collaborative, competency-based, and digitally integrated training programs contribute to the professionalization and modernization of public administration leadership? The goal of this research is to analyze how collaborative, competency-based, and digitally integrated training models can enhance leadership capacities in public administration, using the Portuguese case as an empirical example.

Accordingly, the article is structured as follows: Section 2 examines governance models and their influence on leadership training systems; Section 3 discusses the necessity of collaborative approaches in public administration qualification; Section 4 outlines the methodological approach; Section 5 presents the Portuguese case study; Section 6 analyzes the evolution from traditional to collaborative, digital-driven training models; and Section 7 discusses the broader implications of this research, before the final conclusion.

2. Linking leadership training to governance models

Public administration training models have evolved in response to broader governance transformations. This study examines how the shift from traditional bureaucratic training towards competency-based, collaborative models aligns with two dominant governance paradigms: New Public Governance (NPG) and Neo-Weberian.

NPG emerged as a response to the limitations of both traditional Weberian bureaucracy and New Public Management, emphasizing network-based governance, stakeholder engagement, and co-production of public value. Leadership training must prepare public managers to operate in networked environments, emphasizing collaborative skills, adaptability, and digital competencies. Given the dynamic nature of public sector challenges,

leadership development should incorporate experiential learning approaches that simulate real-world governance scenarios, ensuring public leaders develop practical skills in e-governance, open data utilization, and digital service design.

Neo-Weberianism represents a recalibration of traditional bureaucracy, integrating modern governance tools while preserving core administrative values such as legality, professionalism, and accountability. Training programs aligned with this paradigm must address professionalization, ethical leadership, and evidence-based decision-making. Public leaders must be trained in data analytics and policy evaluation methodologies to support informed decision-making. Unlike NPG's emphasis on horizontal governance, Neo-Weberianism still recognizes hierarchical structures, requiring leadership training to balance collaborative approaches with structured decision-making processes.

3. The need for collaborative programs in public administration qualification

The literature highlights the importance of collaborative approaches in public administration, as contemporary issues often transcend organizational and sectoral boundaries (Jing and Besharov, 2014). Public leaders must be equipped to navigate complex networks, foster cross-agency collaboration, and engage with diverse stakeholders to address wicked problems (Elliott, Robson and Dudau, 2020).

As collaborative Public Management research has shown, the adoption of collaborative structures and processes can lead to improved information sharing, productivity, a better use of public resources, and greater legitimacy (Jing and Besharov, 2014). However, achieving effective collaboration requires specific skills and competencies that go beyond traditional public administration training.

Collaboration has emerged as a key strategy for addressing contemporary challenges in public administration, where solving complex problems requires the exchange of information, improved operational efficiency, better resource allocation, and enhanced credibility through the active involvement of diverse stakeholders from different sectors (McGuire, 2006 *apud* Jing and Besharov, 2014). As Jing and Besharov (2014) stated, countries, despite their varying contexts and conditions, 'have embraced the idea of a thinner, more adaptive, more entrepreneurial, and more collaborative government'. As a result, academic programs aimed at training public service professionals should design curricula that foster cultural competency and collaborative abilities, enabling future leaders to effectively address the needs of diverse communities (Lopez-Littleton and Blessett, 2015).

Today, collaboration across government, the private sector, and civil society plays a vital role in developing responses that blend competition with active participation in public administration, fostering a culture of innovation and generating effective solutions to meet social needs within the public sector. The literature on collaborative public management and team-based learning in public administration highlights the importance of developing collaborative skills and cultural competency among public leaders. Challenges nowadays require the need to adopt curricula that promote cultural competency, as public leaders

must be equipped to serve diverse populations effectively (Lopez-Littleton and Blessett, 2015). Furthermore, research by Morse and Stephens underscores the effectiveness of team-based learning in developing cultural competency and addressing local community challenges (Morse and Stephens *apud* Saldivar, 2015). Research on collaborative public management, as highlighted by O'Leary and Vij (2012), demonstrates that implementing collaborative frameworks and processes enhances information exchange, promotes transparency, improves the efficient use of public resources, and strengthens legitimacy among a wide range of stakeholders. However, achieving effective collaboration requires specific skills and competencies that go beyond traditional public administration training.

Alongside the need for collaborative and cultural competencies, the literature also emphasizes the critical importance of developing robust digital skills and competencies among public administration leaders to navigate the ongoing digital transformation of the public sector (Febiri and Hub, 2021). Scholars have proposed comprehensive frameworks outlining the key digital competencies required, including data analytics, artificial intelligence applications, digital service design, and digital governance (Mergel, Edelmann and Haug, 2019). These digital competencies are increasingly essential for public leaders to effectively leverage emerging technologies like big data and AI to drive innovation in public policy and service delivery. Big data analytics, for instance, can provide valuable insights to inform evidence-based policymaking, optimize resource allocation, and enhance the responsiveness and effectiveness of public programs (Hamirul *et al.*, 2023; Rogge, Agasti and Witte, 2017; Shi, Ai and Cao, 2017).

However, the successful integration of these digital technologies into the public sector requires public leaders to possess not only technical expertise but also the ability to navigate the complex ethical, legal, and social implications of their use (Dawes, 2009). Public administration programs must, therefore, equip future leaders with a holistic understanding of digital transformation and the competencies needed to harness its potential while mitigating risks.

Overall, the literature highlights the need for public administration programs to adopt a collaborative training model that integrates theory and practice, fosters the development of essential competencies — including both collaborative/ cultural skills and digital capacities — and promotes cross-sectoral engagement to prepare leaders for the evolving challenges of modern governance (Rubaii, 2016; OECD, 2021).

4. Methodology

The research design for this study utilized a mixed-methods approach, combining qualitative and quantitative data collection and analysis. The qualitative component involved the exploration of mega-trend analysis, identifying governance and leadership development trends, expert interviews with policymakers and senior public sector managers, and focus groups engaging trainees and trainers in discussions on training effectiveness.

The study comprised 12 semi-structured interviews with a diverse range of participants, including university professors, senior public administrators, and political advisors, as well

as 2 focus groups involving a total of 67 participants. Data collection took place between March and June 2024. Both the interviews and focus groups explored four main thematic axes: digital competencies, collaborative leadership, policy innovation, and the impact of emerging technologies on public administration.

We obtained insights from in-depth interviews with program university professors, senior public administrators, and political staff, including representatives of the cabinet of government. These interviews explored the consequences and expectations of AI and big data in public policies, and how the training program addressed these emerging trends through content analysis.

To identify strategies for future training program methodologies, participants engaged in focus groups where they shared their experiences and thoughts, and the researchers analyzed the qualitative data to create dimensions representing the perceptions of the development of critical competencies, such as digital skills, leadership, collaboration, problem-solving, and cultural awareness. The focus group discussions delved into how the training program incorporated content on the implications of AI and big data for public administration, and the participants' perspectives on the necessary competencies to navigate these technological advancements.

The mixed-methods approach, combining in-depth interviews and focus group analysis, allowed the researchers to gain a comprehensive understanding of the collaborative training program and its ability to prepare public administration leaders for the evolving challenges of modern governance, including the integration of emerging technologies into public policies and service delivery.

5. Collaborative training model for public managers: the case of Portugal

In Portugal, the National Institute of Administration (INA) and PA Universities (ISCTE-IPPS, UMINHO) have formed a strategic partnership to redesign public administration training in Portugal. This consortium has defined instructional strategies that emphasize:
- Competency-based education: focusing on leadership, collaboration, and digital competencies;
- Integration of digital governance: training programs include modules on e-governance, cybersecurity policies, and digital ethics;
- Active pedagogies: the implementation of masterclasses, problem-based learning, and collaborative case studies tailored to public administration challenges; and
- Standardization and accreditation: ensuring harmonization of training standards across institutions while allowing for contextual adaptability in national and local governance structures.

To enhance the capacities of public administration leaders, a collaborative training model was put into practice, integrating theory and practice, fostering the development of essential competencies. The model emphasizes active pedagogies, such as case studies,

simulations, and group discussions, to ensure the practical application of knowledge instigated by Lopez-Littleton and Blessett (2015).

The training modules designed by each institution were mapped to be credited as ECTS based on contact hours, learning outcomes, and assessment criteria, ensuring their transferability to master's programs in Public Administration. Participants who do not want to enroll in PA Master's Programs can accumulate credits towards higher qualifications, allowing flexibility in career progression and eventual future accreditation at the university level.

The consortium has been established on the basis of agreements between the National Institute of Administration and universities to formally recognize this training as part of the executive education and lifelong learning initiatives for PA managers. The key components of the collaborative training model of public managers in Portugal include the following at ISCTE:

– Competency-based curriculum: The curriculum is designed to develop a comprehensive set of competencies, including leadership, collaborative skills, problem-solving, and cultural competency;
– Stakeholder engagement: The training program must involve the participation of multiple stakeholders, such as public organizations, governmental organizations and students, to provide a multifaceted perspective in the context of a consortium made by the three accredited entities from Portugal (National Institute of Public Administration, ISCTE – University Institute of Lisbon and Minho University);
– Collaborative instructional strategies: The training utilizes active learning methodologies, such as case studies, problem-based learning, and group debates and projects, to foster interactive and experiential learning.
– Continuous evaluation and improvement: The training program incorporates regular assessments and feedback mechanisms to ensure ongoing development and refinement of the curriculum and instructional strategies.

The collaborative training model of ISCTE is designed to equip public administration leaders with the necessary skills and competencies to effectively navigate the complex challenges of modern governance, while also promoting cross-sectoral collaboration and the development of innovative solutions.

These collaborative training programs have shown promising results in enhancing the capacities of public administration leaders. By bridging the gap between theory and practice, these programs have contributed to increased satisfaction among public managers and public organizations, along with a heightened perception of professionalization and return on the investment for the creation of public value.

Through the integration of collaborative approaches, competency-based curricula, and active learning methodologies, public administration training can better prepare leaders to address the multifaceted challenges of the 21st century (McGuire, 2006; Jing and Besharov, 2014; Lopez-Littleton and Blessett, 2015).

6. The evolution from traditional public administration training to a collaborative digital-driven, competency-based approach

The findings from the study highlight the key benefits and challenges of implementing collaborative training programs for public administration leaders. These programs have the potential to significantly enhance the capacities of public sector leaders in navigating the digital transformation of the public sector. One of the main advantages of the collaborative training model is its ability to foster the development of essential competencies that are critical for effective public leadership in the 21st century. The case studies revealed that the training program successfully cultivated collaborative skills, cultural competency, problem-solving abilities, and digital literacy among participants (Hu, 2018; Sousa *et al*., 2019; Pencheva, Estève and Mikhaylov, 2018).

Specifically, the training program emphasized the importance of collaborative and team-based learning, which enabled participants to develop a deeper understanding of the complexities of public sector challenges and the value of cross-sectoral engagement. However, the study also identified several challenges in implementing collaborative training programs. Securing long-term funding and institutional support, as well as overcoming organizational silos and resistance to change, were identified as significant barriers to the widespread adoption of such programs. We could categorize the results of key core competencies as in the following dimensions:

– **Digital competencies**: The collaborative training model was found to effectively develop essential digital competencies among public administration leaders, such as data analytics, artificial intelligence applications, and digital service design. By fostering the growth of these critical digital skills, the programs equip public leaders with the necessary tools to harness the power of emerging technologies and drive innovation in public policy and service delivery.

– **Technology integration**: The training program incorporated in-depth content on the implications of digitalization, artificial intelligence and big data, for public policy and service delivery. This allowed participants to gain a deeper understanding of the potential opportunities and challenges presented by these technological advancements and develop strategies for their seamless integration into public administration practices. Preparing public leaders to leverage the full potential of digital transformation is essential for enhancing the responsiveness, efficiency, and effectiveness of the public sector.

– **Improved collaboration**: Participants reported increased engagement and collaboration across sectoral boundaries, fostering a greater understanding of diverse stakeholder perspectives and the ability to navigate complex, multi-stakeholder environments. This cross-sectoral collaboration is crucial for public leaders to effectively co-create digital solutions and strategies to address pressing public challenges.

– **Organizational challenges**: However, the study also identified organizational barriers to the implementation of collaborative training programs, including resistance to change, siloed mentalities, and limited resources for digital upskilling. Overcoming

these challenges will require a concerted effort to foster a culture of innovation and continuous learning within public organizations.

– **Sustainability**: Ensuring the long-term sustainability of collaborative training programs was also highlighted as a key challenge, requiring ongoing support from political leadership, dedicated funding, and the integration of the program into broader public administration education and development initiatives. Securing the necessary resources and institutional support will be crucial for the sustained impact and scalability of these programs in driving digital transformation across the public sector.

7. Discussion

The evolution from traditional public administration training to a digital-driven, competency-based approach represents a fundamental change in thinking. The transition can be analyzed through the following movements:

– From theory to practice: moving away from theoretical training models to experiential, case-based learning that integrates digital tools;
– From silos to collaboration: encouraging inter-institutional collaboration and cross-sectoral partnerships to prepare leaders for interconnected governance challenges; and
– From static to adaptive learning: incorporating continuous feedback mechanisms and evolving curriculum content to keep pace with emerging digital trends.

The findings of this study suggest that collaborative training programs can play a crucial role in enhancing the capacities of public administration leaders to address the complex challenges of modern governance. By fostering the development of essential competencies, such as strategic thinking, problem-solving, cultural awareness, and digital literacy, these programs equip public leaders with the necessary skills to navigate the evolving landscape of public administration (Jatmikowati, Dinata and Noorsetya, 2020; McGuire, 2006; Jing and Besharov, 2014).

Moreover, the collaborative nature of the training model promotes cross-sectoral engagement, enabling public leaders to better understand the diverse perspectives and priorities of stakeholders, and collaborate effectively in addressing complex, multi-faceted issues. The integration of content on digital transformation enhances the relevance and responsiveness of public administration training, preparing leaders to harness the potential of these advancements while mitigating potential risks and challenges.

The study's findings highlight the need for public administration training programs to incorporate content on the implications of AI and big data for public policy and service delivery. Participants reported gaining a deeper understanding of the opportunities and challenges presented by these technological advancements and developing strategies for their integration into public administration practices. This suggests that the incorporation of AI and data-driven content into training curricula can better prepare public leaders to navigate the evolving technological landscape and leverage these tools to enhance public service delivery.

Additionally, the study underscores the growing need for digital skills across the broader public administration education and training landscape. As public leaders increasingly grapple with the integration of emerging technologies, the development of robust digital competencies among all public sector professionals, not just those in leadership roles, becomes crucial for ensuring the effective and responsible implementation of these advancements in the public sphere. Several challenges require deeper attention:

– Cybersecurity risks: The increasing digitalization of governance exposes institutions to cybersecurity threats. Training programs should include risk assessment, data protection strategies, and crisis management simulations.
– Inclusion and digital divide: Ensuring marginalized communities are not left behind in digital governance requires targeted training on inclusive policymaking.
– Resistance to change: Overcoming bureaucratic inertia and fostering a culture of innovation in public administration is critical for successful digital transformation.
– Political instability: The sustainability of digital training programs depends on political commitment, requiring adaptable strategies to ensure continuity despite political shifts.

However, the successful implementation of collaborative training programs requires overcoming organizational barriers, such as resistance to change, siloed mentalities, and limited resources for professional development. Additionally, ensuring the long-term sustainability of these programs remains a critical challenge, necessitating the commitment of political leadership, dedicated funding, and the integration of the program into broader public administration education and development initiatives. Although this study focuses on the Portuguese context, the findings provide valuable insights for other countries undertaking public administration reforms. The collaborative, competency-based training model described herein can inform international efforts to modernize public leadership development, particularly in jurisdictions facing similar digital transformation challenges and demands for intersectoral governance.

8. Conclusion

The study highlights that policymakers should prioritize the institutionalization of collaborative, digital-oriented training frameworks within public administration systems. Investing in flexible, competency-based training pathways linked to formal education credits (such as ECTS) is essential to foster an agile, digitally skilled, and collaborative public sector workforce. The findings of this study highlight the significant potential of collaborative training programs to enhance the capacities of public administration leaders in navigating the evolving challenges of modern governance, including the integration of digital technologies, artificial intelligence, and big data. By fostering the development of essential competencies, such as strategic thinking, problem-solving, cultural awareness, and digital literacy, and promoting cross-sectoral collaboration, these programs equip public leaders

with the necessary skills, knowledge, and collaborative mindset to effectively address complex, multi-faceted issues in public service delivery.

Moreover, the collaborative nature of these training programs enables public leaders to gain a deeper understanding of diverse stakeholder perspectives and the ability to navigate complex, multi-stakeholder environments. This enhanced cross-sectoral engagement and understanding are crucial for public leaders to effectively collaborate and co-create solutions to the pressing challenges facing the public sector.

However, the study also underscores the organizational and sustainability challenges inherent in implementing such collaborative training programs, including resistance to change, siloed mentalities, and limited resources for professional development. This highlights the need for a holistic, systemic approach to public administration education and development, with ongoing support from political leadership, dedicated funding, and the integration of the program into broader public administration education and development initiatives.

8.1. Policy implications

The findings of this study suggest several important policy implications for the reform of public administration training systems:

a. Institutionalize competency-based and collaborative training models: Governments should adopt formal policies that embed competency-based, practice-oriented, and collaborative training frameworks within public administration development programs. Such models should replace or complement traditional, theory-heavy training approaches.

b. Integrate digital competencies across training curricula: Policy reforms must ensure that digital skills — including data analytics, e-governance, artificial intelligence applications, and cybersecurity — are systematically integrated into public administration education and training programs.

c. Create flexible accreditation mechanisms: Training systems should be aligned with higher education standards (e.g., through the European Credit Transfer and Accumulation System – ECTS), enabling the recognition of professional training for academic credit and fostering lifelong learning pathways for public sector managers.

d. Promote cross-sectoral collaboration: Training policies should encourage the design and delivery of programs involving partnerships between public administration institutions, universities, and other stakeholders to strengthen practical and interdisciplinary learning environments.

e. Secure sustainable funding and political support: Ensuring the long-term viability of collaborative training models requires dedicated funding mechanisms and continuous political commitment, independent of electoral cycles or administrative changes.

These policy directions aim to professionalize public leadership, increase adaptability to digital transformation, and enhance the overall effectiveness and legitimacy of public administration systems.

Addressing these organizational and sustainability challenges and ensuring the long-term viability of collaborative training programs will be crucial for empowering public leaders to drive innovation, responsiveness, and positive changes in the public sector. By investing in the continuous professional development of public administrators through collaborative, technology-integrated training programs, governments can better equip their leaders to navigate the complex and evolving landscape of modern governance, enhancing the delivery of public services and the well-being of the communities they serve (Noordt and Misuraca, 2020; Sousa *et al.*, 2019; Mikhaylov, Estève and Campion, 2018; Morkhat *et al.*, 2019).

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