

Chapter 5

Artificial Intelligence (AI) and Digital Competencies in the Public Sector

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ABSTRACT

Artificial intelligence (AI) is rapidly transforming the public sector, offering immense potential to enhance efficiency, transparency, and citizen engagement. However, effectively harnessing this potential requires a public workforce equipped with the necessary digital competencies. This research chapter explores the symbiotic relationship between AI and digital competencies, highlighting their impact on public sector transformation. AI has the potential to significantly enhance public sector efficiency and productivity by automating repetitive tasks, thereby freeing human resources for more strategic endeavors. Data-driven decision-making, another crucial advantage, allows AI to analyze extensive datasets and generate actionable insights, improving policy decisions and resource allocation. Additionally, AI-powered chatbots and virtual assistants can provide continuous citizen support, streamlining service delivery and personalizing citizen interactions to build trust and satisfaction.

DOI: 10.4018/979-8-3693-6547-2.ch005

INTRODUCTION

Digital competency refers to the set of skills, knowledge, and attitudes required using digital technologies efficiently. In the context of public services, it is essential because government functions are increasingly being moved online to improve efficiency and access. Digital literacy is no longer optional; it is a basic skill for public servants to handle e-governance platforms, manage public databases, interact with citizens through digital channels, and ensure data security (Casalino, et al., 2020). The importance lies in how it enhances service delivery by reducing bureaucratic delays, cutting costs, and providing citizens with faster, more accessible services. Competency in this area helps employees adapt to the ever growing technological changes shaping modern governance.

Governments are making significant investments in digital technologies. Countries such as Estonia and Singapore have led the charge in creating e-governance models where almost all public services are digital. This trend extends to digital identity management, online tax filing systems, and even electronic voting. Another trend is the use of Artificial Intelligence (AI) and Big Data in public services to analyze and predict societal needs. Digitalization has helped in crisis management, such as during the COVID-19 pandemic, where digital tools ensured continuity in services, facilitated contact tracing, and allowed remote governance. The United Nations E-Government Development Index (EGDI) ranks countries based on the extent of their digital transformation, showing that countries worldwide are pushing for better usage of digital tools into public services.

Primary objective of digital competency for public officials is to improve service delivery. As digital platforms become more prevalent, public servants need to be able to learn these platforms proficiently. This includes having the skills to operate software, communicate securely over digital platforms, and manage large volumes of data. Another key objective is transparency and accountability. By using digital tools, officials can ensure that processes are more transparent, making it easier for the public to track services or expenditure. Efficiency is also a key goal; digital competency aims to cut down the time taken to deliver services and to optimize workflow within government departments.

Cheetham and Chivers (1998) first introduced a comprehensive framework of professional competence that consists of five sets of competencies: cognitive (including knowledge, understanding, and informal tacit knowledge); functional (including skills and know-how); personal (behavioral competences); ethical (including appropriate personal and professional values); and meta-competences (learning, reflection, and the capacity to deal with uncertainty).

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