Capacity Building of the DKI Jakarta Provincial Government in Implementing E-Government

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Article Information	ABSTRACT
  Corresponding Author: Nurdin Silaen, Faculty of Economic and Business, Esa Unggul University, Jakarta, Indonesia. Email: nurdin76en@student.esaunggul.ac.id	This research focuses on developing the capacity of the DKI Jakarta provincial government in implementing E-Government. The research uses a literature study approach which aims to understand the context, background and theoretical implications of developing the capacity of the DKI Jakarta Provincial Government in implementing e-Government by referring to existing literature. Researchers analyze and understand concepts, theories and approaches that are relevant to developing the capacity of the DKI Jakarta Provincial Government in implementing eGovernment through previous literature. The aim is to build a strong and in-depth framework for thinking about the urgency of developing this capacity. Given the enormity of the challenges of urbanization, demographic growth, and the complexity of urban management, information technology-based solutions are becoming increasingly important. E-Government, which offers technology integration in government administration, is one of the strategic initiatives that is expected to increase efficiency, transparency and quality of public services in Jakarta. However, despite its great potential, implementing e-Government is not a simple process. Developing technology architecture, designing services that are responsive to citizen needs, and managing changes within the bureaucracy all require significant capacity. **Keywords:** capacity development, e-government implementation, Provincial Government

1. INTRODUCTION

Jakarta, as the capital and center of government in Indonesia, continues to lead in creating public service innovations. Given the significant challenges of urbanization, demographic growth, and urban management complexity, information technology-based solutions are increasingly essential. E-Government, which integrates technology into government operations, is a strategic initiative aimed at improving efficiency, transparency, and the quality of public services in Jakarta.

However, despite its significant potential, implementing e-Government is not a simple process. Developing the technology architecture, designing services responsive to citizens' needs, and managing bureaucratic changes all require substantial capacity. While e-Government offers many benefits, it also faces challenges that necessitate capacity building in several areas. Some of the main challenges in implementing e-Government include:

1. Limited Technology Infrastructure
2. Lack of Digital Literacy among government employees and the public
3. Resistance to Change within the organization
4. Data Security Issues and potential cyber threats
5. Integration of diverse systems across various government departments or units
6. Unclear or Unsupportive Regulations and Policies
7. Limited Human Resources in the IT field
8. Inadequate Evaluation and Feedback from the public

Addressing these challenges requires capacity building that focuses not only on technical aspects but also on organizational, human resources, and policy aspects. A holistic approach can ensure effective e-Government implementation and provide optimal benefits to society.

In the context of the DKI Jakarta Provincial Government, failing to develop capacity in e-Government implementation can lead to various negative impacts, including:

1. Decreased Quality of Service: Without adequate capacity building, the e-Government system may not function optimally, hindering or making public services inefficient.
2. Loss of Public Trust: Frequent problems or downtimes in the e-Government system can erode public trust in the government's ability to provide services.
3. Security Vulnerabilities: Without enhanced security capacity, government data and citizens' personal data could be vulnerable to cyberattacks, data theft, or other privacy breaches.
4. Resource Waste: Investments in the e-Government system could be wasted if the system does not function well or is not fully utilized due to capacity limitations.
5. Integration Challenges: Without adequate capacity, integrating various systems across different departments or units can be difficult, leading to redundancy and inefficiency.
6. Innovation Delays: In a rapidly changing world, delays in capacity development can mean falling behind in innovation, making it difficult for the city government to adopt new, more effective technologies or service methods.
7. Recruitment Difficulties: If the government is known to have outdated or problematic systems, it may struggle to recruit qualified IT personnel or form partnerships with the private sector.
8. Financial Losses: Issues in the e-Government system, such as errors in the taxation system or procurement system, can result in financial losses for the local government.

Without serious attention to capacity development, the vision of an efficient, transparent, and inclusive e-Government may be challenging to achieve.

2. LITERATUR REVIEW
E-Government Concept

E-Government, or electronic government, has become a central concept in public administration reform over the past two decades, marking a new era where information and communication technology (ICT) plays a crucial role in creating efficient and transparent public services. This concept, with its multidimensionality and theoretical depth, represents a paradigm shift in the interaction between the government and its citizens.

The World Bank (2001) defines e-Government as the use of information technology by the government sector to enhance public information and services for citizens. However, as explained by Heeks (2003), this definition is foundational but does not encompass all aspects. Heeks expands our understanding of e-Government by emphasizing the transformation of the government's relationships with society, the private sector, and other government agencies. This transformation not only enables service improvement but also creates a platform for more inclusive, participatory, and transparent dialogue driven by digital technology.

Gartner Group (2000) deepens the understanding of e-Government by highlighting the provision of public services via the internet as its core. In this way, governments can offer quick, convenient, and efficient access to their citizens. However, the e-Government paradigm extends beyond just efficiency or convenience; it includes deeper dimensions that need to be considered.

The Organization for Economic Cooperation and Development (OECD) in 2003 added another dimension to the e-Government discussion, arguing that beyond just services, e-Government is about participation and the democratization of information. In other words, technology enables citizens to participate more actively in decision-making processes, creating more inclusive and democratic governance.

Aligned with this thinking, the existence of e-Government creates a framework where society has the opportunity to interact with its government more dynamically. This shifts the paradigm from the government as a sole service provider to a collaborative partner in meeting societal needs.

Thus, the evolution of the e-Government concept marks a significant shift in thinking about how governments should function and interact with their citizens. E-Government is not just about technology or better service delivery but about creating more democratic, transparent, and inclusive public governance.

Organizational Capacity in Implementing E-Government

Organizational capacity is often the key to successfully implementing e-Government initiatives. It involves not just having the right technology but also ensuring that the organization possesses the skills, knowledge, and culture to effectively leverage that technology.

The United Nations Development Programme (UNDP, 1998) defines organizational capacity as the ability of an entity—whether individuals, communities, or organizations—to perform functions, solve problems, and set and achieve objectives. In the context of e-Government, this means the government's ability to design, develop, and manage technology-based solutions that meet citizens' needs.

According to Baser and Morgan (2008), organizational capacity is not just about skills or resources but also about the willingness and ability to learn and adapt. E-Government, with its dynamic and ever-changing nature, requires a high level of adaptive capacity from the government.

Horton et al. (2003) argue that capacity development should focus on three main areas: individuals, organizations, and society. In the context of e-Government:

1. Individuals: This involves training government employees in IT skills, project management, and other relevant skills.
2. Organizations: This includes structural changes, policies, and procedures to support e-Government initiatives. It also involves the organization's readiness to adapt to technological changes and needs.
3. Society: This involves understanding societal needs and expectations and ensuring that e-Government solutions are developed to meet these needs.

The concept of 'organizational resilience,' as explained by Pfeffer and Salancik (1978) in "The External Control of Organizations," provides insights into how organizations can overcome external challenges and pressures. E-Government, with its need to adapt to technological changes and societal demands, requires a high level of resilience.

Furthermore, Evans and Yen (2005), in their study on e-Government in Southeast Asia, emphasize the importance of inter-departmental collaboration and system integration to build effective e-Government capacity. Without close cooperation between various government units, e-Government efforts can become fragmented and inefficient.

Finally, Gil-García and Pardo (2005), in their research on the success factors of e-Government, emphasize that beyond technology and processes, another key factor is an organizational culture that supports innovation, learning, and adaptation.

Therefore, organizational capacity in the context of e-Government is not just about having the right resources but also about building the culture, structure, and processes that enable optimal utilization of those resources. It requires a holistic approach that considers individuals, organizations, and society as integral components of effective e-Government capacity.

Organizational Resistance in Implementing E-Government

In any change or innovation introduced within an organization, resistance often emerges as a natural reaction. E-Government, as a form of transformation in how the government interacts with its citizens, certainly has the potential to generate significant resistance, especially when it brings about substantial technological and procedural changes.

Lawrence (1954) in "Roadblocks to Change" argues that resistance to change is not an irrational reaction but rather an effort to maintain existing balance. This is highly relevant in the context of e-Government, where the implementation of new technology can threaten the status quo.

Kotter & Schlesinger (1979) present several common reasons for resistance to change, including fear of the unknown, loss of existing benefits, belief that the change is not beneficial, and too many changes in a short time. In the context of e-Government, this could mean fear of job loss due to automation, concerns about data security, or uncertainty about how to use the new system.

Rogers (1995), in "Diffusion of Innovations," describes how innovation spreads within a society or organization. There are groups that quickly embrace innovation (innovators and early adopters) and those that are slow or even resistant (late majority and laggards). Identifying and working with these groups can help address resistance in implementing e-Government.

Oreg (2003) emphasizes that individual traits also play a significant role in resistance. Some people are naturally more open to change, while others are more conservative and require additional support to adapt to change.

From a systems perspective, Lewin (1947) in his change theory describes three stages: 'unfreezing' (realizing the need to change), 'changing' (making the actual change), and 'refreezing' (reinforcing the change and making it part of the norm). Understanding these stages can help governments plan and implement e-Government initiatives more effectively.

Another challenge that might arise is from an organizational culture perspective. As explained by Schein (1985), organizational culture defines the basic norms, values, and behaviors within an organization.

In organizations where the culture of technology is not yet accepted or understood, resistance to e-Government initiatives might be greater.

Thus, organizational resistance in implementing e-Government is a complex issue involving a combination of individual, systemic, and cultural factors. Understanding and addressing this resistance requires a holistic and adaptive approach, as well as readiness to collaborate with various stakeholders in the change process.

System Integration in E-Government

In the evolution of e-Government, system integration emerges as a major challenge and necessity to ensure that various technological platforms work effectively and efficiently, providing consistent and unified information to users. Without good integration, e-Government risks becoming a collection of isolated systems operating independently, leading to redundancy and inefficiency.

According to Markus & Tanis (2000), system integration is the process of combining various information technology subsystem components (hardware, software, databases, etc.) into one coordinated functional system. In the context of e-Government, this means connecting various existing government information systems from different departments and agencies into a unified service platform for citizens.

Pardo & Tayi (2007) emphasize that system integration in e-Government can yield various benefits such as:
1. Process Simplification: Citizens do not need to interact with many separate systems.
2. Data Redundancy Reduction: The same data does not need to be stored in many places.
3. Better Decision-Making: With access to unified data, the government can make better decisions.

However, system integration also brings its own challenges. As explained by Gil-García & Pardo (2005):
1. Technology Compatibility: Many existing government systems may use outdated technology that is not compatible with new systems.
2. Organizational Culture: Each government department or agency may have its own working methods and procedures, making integration difficult.
3. Security Issues: Integrating systems means there are more access points that can be exploited by unauthorized parties.

Zachman (1987) in his information architecture framework emphasizes the importance of planning system integration with a holistic approach, considering business, data, application, and technology infrastructure aspects.

Weill & Ross (2004) indicate that good IT governance is key to successful integration. With clear governance, organizations can prioritize integration efforts, allocate resources appropriately, and ensure that all stakeholders are involved in the process.

Silcock (2001) stresses that to achieve successful system integration, a project-based approach is needed, considering the specific needs of each stakeholder, from IT technicians to end-users. Orlikowski (1992) also highlights the importance of an adaptive approach in system integration, emphasizing continuous adaptation and iteration during the implementation process to ensure that the developed solutions meet changing needs.

Therefore, system integration in e-Government is not just a technical issue but also an organizational and managerial one. The success of integration depends on the government's ability to combine technological, organizational, and human aspects in a coherent and coordinated approach.

Impact of E-Government Implementation on Public Services

The implementation of e-Government affects how the government serves its citizens, with broad and varied impacts on the quality, efficiency, and reach of public services.

Model Konseptual

Sumber: diolah peneliti;2022

3. RESEARCH METHOD
Research Approach

In this study, the most appropriate approach is a literature review. This approach enables the researcher to understand the context, background, and theoretical implications of the capacity development of the DKI Jakarta Provincial Government in implementing e-Government by referring to existing literature. The researcher analyzes and comprehends concepts, theories, and approaches relevant to the capacity development of the DKI Jakarta Provincial Government in implementing e-Government through previous literature. The goal is to build a strong and in-depth framework of thought regarding the urgency of this capacity development.

Data Collection Process

a. Sources: Identifying relevant literature sources, including textbooks, journal articles, government reports, and other publications relevant to the theme.
b. Literature Search: Using academic databases such as Google Scholar, JSTOR, and ProQuest to search for relevant literature.
c. Source Evaluation: Evaluating the credibility, relevance, and quality of the literature sources found.

Data Analysis

a. Information Extraction: Identifying important information from relevant literature to answer the research questions.
b. Categorization: Grouping information based on themes or topics, such as organizational capacity development, e-Government implementation, benefits, challenges of e-Government, and others.
d. Integration: Integrating information from various sources to form a coherent narrative or argument.
e. Contrast and Comparison: Comparing and contrasting opinions or findings from various sources to obtain a more holistic perspective.

Data Validation

Although a literature review does not involve the collection of primary data, the validity of the information remains important. This is achieved by:
a. Source Triangulation: Ensuring information or findings are supported by multiple literature sources.
b. Cross-Verification: Comparing information with other credible sources to ensure its accuracy.

Conclusion Drawing

At the end of the process, conclusions will be drawn based on the literature analysis conducted. These conclusions will provide insights into the urgency of capacity development for the DKI Jakarta Provincial Government in implementing e-Government and its implications in the context of public administration.

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4. RESULTS AND ANALYSIS

As the capital and center of economic, social, and cultural activities in Indonesia, DKI Jakarta has special needs in providing responsive services to its highly heterogeneous and dense population. E-Government, with its transformative potential, emerges as a solution to address these unique challenges. However, in its implementation, several aspects of capacity need to be considered for e-Government to function optimally.

Aligning Technological Capacity with Human Resources

In the era of digital governance, technological capacity often becomes the main focus. Advanced infrastructure, integrated platforms, and cloud-based solutions are seen as the heart of e-Government. However, without harmonizing with competent Human Resources (HR), all these technological investments could be in vain.

First, no matter how great the technology is, it requires people to operate it. This is why the importance of investing in HR training and development cannot be understated. An advanced e-Government platform can provide maximum benefits only if the employees who use it understand its functionality and potential well. Additionally, with rapid technological development, the role of HR in evaluating, selecting, and adopting new technological solutions becomes crucial.

Second, while technology can be upgraded or replaced, the experience and knowledge possessed by HR have long-term value. Knowledge about community needs, local government challenges, and interdepartmental dynamics is an invaluable asset. E-Government technology should be designed to support and maximize this knowledge, not replace it.

Third, the human aspect also plays a role in interactions with the community. Although e-Government allows the automation of many processes, there is still a need for human-to-human interaction, especially in handling complaints, providing clarifications, or dealing with situations that cannot be addressed by standard technological solutions.

Thus, along with technological advancements, increasing HR capacity becomes equally important. Ensuring that employees are involved in the digitalization process, well-trained, and equipped with the necessary tools to succeed is key to ensuring that e-Government is not only efficient but also effective in serving the community. Harmonizing technology and HR is the bridge that connects e-Government aspirations with the reality of quality public service.

Cultural Adaptation and Organizational Resilience

In today's digital era, change is the only constant. Especially when dealing with revolutionary technologies like e-Government, an organization must be able to adapt. However, beyond technical and financial constraints, often the biggest challenge faced is organizational culture and resistance to change. Organizational culture, which includes values, norms, assumptions, and beliefs, significantly determines how quickly and effectively changes are accepted and integrated (Oreg, 2003).

It is not uncommon for employees to feel threatened by new technology, not because of its complexity, but due to fear of uncertainty and potential loss of control or status. Therefore, communication is key. Communicating the benefits, risks, and roadmap of upcoming changes can help alleviate fears and increase employee understanding (Lewis, 2006). Moreover, involving employees in the planning and implementation of e-Government gives them a sense of ownership, ultimately enhancing acceptance and commitment (Armenakis & Bedeian, 1999).

However, cultural adaptation alone is not enough. An organization must also ensure it has sufficient resilience to withstand challenges. In the context of e-Government, organizational resilience relates to an entity's ability to respond, adapt, and grow amid change and uncertainty. One way to enhance resilience is by creating a learning culture. Each failure and success in the implementation process should be viewed as a learning opportunity, providing valuable lessons for the organization to improve (Senge, 1990).

In today's interconnected world, collaboration and networking are essential. Organizations must be able to build and maintain strong networks both within and outside the organization. Collaboration can facilitate the exchange of knowledge and resources, giving organizations access to innovations and solutions they might not encounter on their own (Powell, 1990). Furthermore, effective and inspiring leadership can ensure that teams remain motivated and enthusiastic, even amidst the greatest obstacles and challenges (Bass, 1991).

Combining cultural adaptation with organizational resilience provides the recipe for successful e-Government implementation. E-Government is not just about applying technology but also about how the technology is accepted, adopted, and maximally utilized by the organization and its stakeholders.

5. CONCLUSION

Capacity development is a key element in the successful implementation of e-Government in DKI Jakarta. Considering the complexity and dynamics of a metropolis city like Jakarta, a solely technological approach will not suffice. The success of e-Government heavily depends on how the DKI Jakarta Provincial Government builds and enhances its capacity from the technological, human resources, and organizational culture perspectives. Solid technological capacity, including reliable infrastructure, integrated systems, and stringent data security, forms the foundation for e-Government. However, without trained and competent human resources, this technology will not function optimally. Continuous training and development for employees are vital to ensure they remain relevant in a rapidly changing digital era.

Furthermore, organizational culture adaptation and flexibility in embracing change and innovation are also critical. A culture that supports innovation, inter-departmental collaboration, and responsiveness to feedback from the community will ensure that e-Government is not only implemented but also provides maximum benefits to the people of Jakarta.

Thus, comprehensive and integrated capacity development becomes the primary determinant of e-Government success in DKI Jakarta. It's not just about investing in technology but also investing in people and organizational culture.

Suggestions
1. Enhancement of Transparency and Accountability: The implementation of e-government in the Jakarta Provincial Government is expected to enhance government transparency and accountability to the public. By providing data openly, public trust in the government can be increased.
2. Sustainable Development: E-Government in DKI Jakarta requires continuous evaluation and development. This involves the readiness of supporting infrastructure, as well as the enhancement of the human resources capacity of government employees and the community.
3. Optimization of Reporting Applications: The implementation of applications used for reporting public complaints needs to be optimized. This includes handling misdirected reports, prompt response from the government, and monitoring the performance of the application itself.

Academic Implications

1. Holistic Approach: The Jakarta Provincial Government needs to adopt a holistic approach in the implementation of e-Government, ensuring integration between technology, human resources, and business processes.
2. Ongoing Training: Given the rapid pace of technological change, regular and ongoing training for employees is essential to ensure that they are always updated with the latest developments.
3. Inter-Departmental Collaboration: Inter-departmental support and system integration are crucial. This requires good communication and a shared understanding of the goals of e-Government.
4. Security Priority: Considering the sensitive data being managed, system security must be a priority. Investment in cybersecurity technology and security training for employees is essential.
5. Community Feedback: To ensure that e-Government truly meets the needs of the community, effective feedback mechanisms must be implemented. This will enable the Jakarta Provincial Government to continuously improve and adapt its services as needed.

Managerial Implications
1. Sustainable Research: Considering the complexity and dynamics of e-Government implementation in metropolitan areas like Jakarta, there is a need for ongoing research examining the impacts, challenges, and potential solutions.
2. Case Studies: DKI Jakarta, with its uniqueness and challenges, could be an interesting case study for academics seeking to understand the dynamics of e-Government in the context of a large city.
3. Interdisciplinary Approach: The implementation of e-Government in DKI Jakarta involves various disciplines, ranging from information technology, management, sociology, to political science. This allows for collaboration across disciplines for deeper research.

Educational Curriculum: Findings from the implementation of e-Government in DKI Jakarta can be integrated into educational curricula, preparing future generations with relevant knowledge and skills for the digital era. By understanding and applying these managerial and academic implications, the Jakarta Provincial Government is expected to maximize the potential of e-Government, while the academic world gains valuable insights for future research and education.
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