The Use of Artificial Intelligence in Government Communication in the UAE

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Abstract

Background*: This study investigates the integration of artificial intelligence (AI) in government communication within the United Arab Emirates (UAE). It explores the current practices, challenges, opportunities, and future potential of AI in this sector, highlighting the experiences of communication practitioners.*

Aim*: The main objective of this research is to understand how AI is utilized in government communication in the UAE, assess the perceptions of professionals in the field, and identify the determining factors influencing AI adoption.*

Method*: Employing qualitative research methods, the study involved interviews with key public sector employees. This approach provided valuable insights into the dynamics and practices surrounding AI integration in governmental communication.*

Results*: The findings reveal that AI is prevalent in areas such as social media monitoring, citizen engagement, and data analysis. While communication experts generally view the incorporation of AI positively, concerns regarding reliability, ethical issues, and data protection persist. Participants expressed the need for ongoing training and collaboration among various governmental bodies to enhance AI engagement with citizens.*

Conclusion*: The research underscores the importance of ethical considerations and the cultivation of a culture that promotes responsible AI usage in government communication. It advances theoretical knowledge through frameworks like the Reasoned Action Theory and the Technology Acceptance Model, suggesting that ethical factors should be integral to AI adoption. Future research should explore a comparative approach, focusing on emergent AI technologies and ethical implications.*

Keywords: *Artificial Intelligence, Government Communication, UAE, Qualitative Research, Ethical Considerations, Citizen Engagement, Technology Acceptance Model.*

1- Introduction

1.1. Research Background

Government communication describes how private and public institutions use communication to achieve their goals and fulfil their missions. Over recent years, the public and private sectors have widely used communication to reach and achieve their goals. Government communication provides a multi-dimensional concept that views communication as a fundamental and constructive process in running operations. The impact of government communication, as viewed by Mahlangu (2020), is perceived as an essential element for the institution, an aspect that this research study seeks to visualize and determine how Artificial Intelligence influences the processes in this era.

The government of the United Arab Emirates (UAE) has, over time, focused attention on initiatives driven toward implementing communication in its plans and every government initiative. As the world becomes increasingly technology-oriented, the UAE becomes an island of smartness and future-oriented policy structures concerning implementing technology strategy. Recognizing the AI role of AI in promoting the community, the UAE has developed programs to take advantage of it in the policy of several sectors, such as public communication. Artificial intelligence largely affects governmental communication arrangements. It is a sign of a different way to join efforts between public institutions, citizens, stakeholders, and international organizations. Governments can reach citizens through AI-powered systems and the media to address their issues in a timely manner and provide innovative services customized to meet each need separately (Khalid, S. and Sarker, A.E., 2019).

On the other hand, these new technologies may open the door to many emerging possibilities. Still, there are also many ethical complications and social concerns involved. Raising the issues of data privacy, bias of algorithms, and accountability as AI becomes more and more mainstream requires careful consideration. Discussing the role of AI in the interaction with governments in the UAE is an issue that affects both theory and

practice. Policymakers must combat a problematic balance between technology, government institutions, and the community's trust so that policies respect people's values and ideals (Almarzooqi, A., 2019).

Communication professionals are on the brink of adapting to the changing norms and practices in an AI-driven world. They have to adjust their strategies to meet social media users' shifting expectations and choices. Researchers remain crucial actors behind the scenes of these complex world issues and busily bring forth studies, evidence, and recommendations that will eventually form the basis for policy decisions and industrial practices. As a result, this study can expand our understanding of how AI affects government communication in the UAE, both in practice and perils (Collins, H., 2018).

As the UAE's Vision 2021 transitioned from a concept to reality, the nation's path forward became illuminated. The UAE's primary goal was to transform its economy into a knowledge-based one, leveraging advanced technologies for development, innovation, and citizen well-being. A key part of this strategic implementation was the widespread use of AI as a solution provider across sectors, including governance and communication (Almarzooqi, A., 2019). This forward-thinking approach to AI application demonstrates the UAE's commitment to technological modernization and economic diversification. Realizing the transformative powers of AI, the UAE government started a significant expenditure on research and development into AI-based solutions. Such strategy revealed the innovation culture oriented at using technical means to solve various social problems, improve public services, and maintain the country's prominent position in the race for economic competitiveness (Almesafri, A. and Habes, M., 2022).

Consequently, AI became the core of the UAE development strategy, with programs dedicated to establishing innovation hubs, motivating talents, and collaborating between government and private sectors. AI surged to the forefront of the communication world, generating immense opportunities to rapidly disrupt conventional practices and transform public engagement into more effective and targeted provisions. Another significant use of AI in government communication involves using chatbots that function as virtual assistants to offer citizens immediate and personalized answers to questions and complaints (Al-Qudah, 2024). Such AI-powered chatbots not only cause the improvement of accessibility and the responsiveness of government services but also reduce labour burdens, allowing government agencies to distribute resources better.

Also, intelligent AI-powered predictive analytics have reset how governments observe public opinion, forecast new trends, and make data-driven decisions. AI can identify trends and insights from unstructured data across various social media and print news sources. This enables policymakers to stay aware and to deal with issues that may be worrying the public at any given time. Through this proactive form of communication, the government can develop transparency, trust, and the ability to engage with citizens in formulating policies that focus on the needs and aspirations of the people. Also, the AI application in government communication brings many benefits, critical challenges, and ethical issues. Firstly, the issue of data privacy is among the principal remands, as within a general personal data collecting and studying environment arises the questions of individual rights, consent, and surveillance (Tariq and Abonamah, 2021).

Furthermore, the built-in biases present within AI algorithms are a risk that can lead to reinforcing existing inequalities and promoting existing power relations, especially in contexts of decision-making with very consequential results. In addition, the government's reliance on AI-powered communications shows the value of gaining public trust and confidence in this technology and its applications. Transparency, accountability, and ethical principles of AI setup are necessary to avert risks and create an atmosphere that allows innovation and progress (Solaimani et al., 2020). Hence, the UAE government is proceeding on the path of combining the capabilities of AI with the protection of the rights and interests of its people.

1.2. Research Problem Statement

Integrating artificial intelligence (AI) into the communication practices of the UAE government at a certain level is the trigger of profound transformations. Despite the fast pace of the adoption process, the lack of comprehensive implications and effectiveness of AI can still be seen in its use. However, the researchers of communication experience the dilemma of producing holistic knowledge that encompasses the impact of machine learning on communication processes, public opinion, and organizations and also consider the fact that the aspects mentioned earlier, which are about the influence of machine learning in the communication processes, the public perception, and organizations are complex and complicated. The use of AI in communication plans should be looked into in terms of the actual effect on the level of citizen involvement in governance, delivery of services, and efficiency of governments in general (Jeljeli et al., 2024).

Artificial intelligence can be an excellent source for process automation and responsiveness, but its actual application in the delivery of high-quality government services and accessibility is yet questionable. Additionally, this insight into how people read their perception about government agencies and communication tools of the latter is critical to cultivating trust and enhancing meaningful relationships with citizens.

Furthermore, the ethical aspects of AI use in government belong to the sphere of the critical appraisals to make sure that these technologies are employed responsibly and ethically. Concerns about data privacy, algorithmic bias, and accountability must be addressed appropriately to ensure observance of principles of transparency, fairness, and justice principles. Lack of appropriate repression of the ethical questions may cause a loss of confidence in people in AI-based government communication projects and responsible and credible governance (Li et al., 2023).

Hence, such issues should be explored thoroughly by communication researchers in order to offer insights that will help informed intentional decisions to guide AI utilization in government communication. By tackling these problems by being direct and positive, we can extract the maximum power of AI for the requirement of transparent and effective communication within the UAE and beyond (Khan et al., 2022).

Research Questions

To address the objectives outlined above, the study will explore the following research questions:

- To what extent does AI automation influence the efficiency and effectiveness of government communication within organizations?
- How much do government communication professionals know about AI, and to what extent are they already using AI in their scope of practice?
- What is the influence of AI on the organization's external image?
- How significantly will AI affect the future of government communication in the UAE?

1.3. Aim & Objectives

The main aim of this research is to understand how AI is utilized in government communication in the UAE, assess the perceptions of professionals in the field, and identify the determining factors influencing AI adoption.

The secondary objectives of this study are:

- Explore the specific challenges faced by government communication practitioners in implementing AI technologies effectively.
- Evaluate the training and capacity-building needs of communication professionals to enhance their proficiency in utilizing AI tools.
- Investigate the ethical concerns associated with the use of AI in government communication, focusing on data privacy and accountability.
- Understand public perceptions and attitudes toward the implementation of AI in government services and communication.

1.4. Significance and Justification

The significance of this study is beyond the limits of the UAE to the policymakers, academic staff, and communication professionals worldwide who are interested in the modernization of government relations. Since AI is increasingly changing the global landscape, being aware of the role of AI in the governmental communication process is becoming essential for decision-makers and those responsible for planning. The analysis, which clearly shows the complicated interchanges between AI and communication, provides major guidance in policy formulation, ethical principles, and development of innovation in government use of communication not only in the UAE but in other countries that have the same challenges and opportunities. In addition, as AI continues to develop and penetrate different areas of life, the demand for ongoing research and debate becomes even more critical (Saidakhrarovich&Sokhibjonovich, 2022).

The study presented serves as a start for additional inquiries and dialogues on the emerging topic to stimulate interest, collaboration, and innovative thinking among the researchers and practitioners across the globe (Nuseir&Refae, 2022). Such research enables a better understanding of how AI can improve communication processes, contributing to more open, effective governance in our digital world.

2- Literature Review

Artificial intelligence (AI) holds the omnipotent capability to disrupt everything in the world of media, communications, and public relations. This section examines AI's criticality through its evolutionary becoming, dynamics in media, communication techniques, and ethical situations and consequences in Public Relations. Moreover, the diffusion of AI in the UAE context is looked at in light of the country's high level of investment in AI. Recognizing the historical past, present utilities, and ethical dilemmas of AI applications in other industries, such as the UAE and the world as a whole, is essential for policymakers, communicators, and researchers to understand the intrigue of AI integration from an international perspective (Srivastava et al., 2021). Through the analysis, stakeholders will be better informed about AI's possibility, risk, and impact, which will form critical inputs in formulating decisions and practices regarding ethics.

2.1. History and Background of AI

The evolution of artificial intelligence (AI) can be outlined back to foundational milestones, seminal discoveries, and technical progressions that have cumulatively led to what is now truly an instrumental power in its generated impact. Since the mid-20th century, these people have accomplished great heights using their intelligence, shown by their various research interests (Dabbous et al., 2022).

One of the most influential figures in the history of AI is Alan Turing, a British mathematician and computer scientist, who was well known for his contributions to computability and cryptography during World War II. Turing's idea of the Turing Machine became the forerunner to the modern computer and artificial intelligence theory. In the landmark work 'Computing Machinery and Intelligence' from 1950, Turing proposes what we now refer to as the Turing Test: a touchstone to assess a machine's capability to act intelligently in a way indistinguishable from humans.

The term' machine intelligence' was broadly employed in 1956 during the Dartmouth Conference, a ground-breaking meeting that gathered esteemed scientists and mathematicians from various disciplines. This conference marked a milestone when AI was recognized as an interdisciplinary area for building intelligent agents. John McCarthy, sometimes known as the 'father of AI,' became a very influential person who significantly contributed to the early growth of the field and came up with the term' artificial intelligence.'

Following the Aid conference, there was a period of AI development, which went through phases associated with some specific approaches and methods. Symbolic AI, also called "good old-fashioned AI" or GOFAI, dominated early AI research. Symbolic AI encompasses rule-based models and logical reasoning to mimic human thinking. Scientists designed computer programs capable of utilizing human knowledge and intelligence to deal with complex problem areas. Symbolic AI had its share of pioneering achievements, such as developing expert systems that utilized symbolic reasoning and knowledge representation techniques to mimic humans' competence in particular fields. Expert systems were involved in different areas, including medicine, finance, and engineering, where they helped in decision-making and problem-solving (Sestino& De Mauro, 2022). Nevertheless, the shortcomings of symbolic AI were highlighted as researchers grappled with problems in scaling up knowledge bases, handling uncertainties, and real-world complexities.

Connectionism, which was based on the arrangements and workings of the human brain, preferred networks of neurons, which were elementary processing nodes. Neural networks, a mathematical model derived from connectionist principles, caught on in the 1980s and 1990s for using data and adopting complicated patterns. The AI's initial enthusiasm for the law was, however, followed by a period of stagnation known as the "AI winter" in the 1970s and 1980s, which was characterized by the lack of funding, less actualized expectations, and skepticism about the possibility of AI achieving human-level intelligent abilities. However, the area experienced a resurgence in the 20th century caused by developments in machine learning, big data, and computational power (Guzman & Lewis, 2020).

Machine learning, as a subfield of AI focused on developing algorithms aimed at learning from data and self-enhancement, has become the most popular paradigm of AI research. Deep learning, one of the essential subsets of neural networks with multiple layers, has transformed AI through the ability to process vast amounts of data and extract complex features. AI technologies have become the most influential component of our society because they can change and disrupt every industry, including healthcare, finances, transportation, and entertainment in the modern world (Farrokhi et al., 2020). AI has penetrated deep into the fabric of our lives,

though it has different roles in areas like virtual assistants, recommender systems, autonomous vehicles, and medical diagnosis.

The history of AI is a testament to its resilience and potential. From its theoretical beginnings in Turing's work and the Dartmouth Conferences, AI has evolved into machine learning and deep learning, becoming a powerful tool to solve some of the most challenging problems humans face. As AI continues to advance, we must consider ethical issues and responsible application, but we should also be optimistic about its potential to benefit society.

2.2. Applications of AI in Media and Communications Practice

Artificial intelligence (AI) has fundamentally altered the media and communication domain through its integration into dealing with the target audience and the content creation. AI-based technologies and resources are fundamentally changing the old patent methods, providing reduced content development methods, curation, and audience involvement (Kitsios&Kamariotou, 2021).

One of the primary uses of AI in media and content is content generation and curation. AI algorithms can analyze enormous amounts of data from different sources, including social media and related online news stories, and the semantics of the users' interaction to discover trends, patterns, and knowledge. This data is the primary source of content creation, and it comes in various forms, including articles, videos, and social media posts. AI-driven content generation helps you save time and resources, making content relevant and engaging for the target audience. AI-driven content creation benefits marketers and producers (Gomes et al., 2022).

Firstly, it lowers the time and resources spent on developing good content. AI algorithms can speed up manual research and drafting; the content creators no longer have to do everything manually. Instead, they can use algorithms to generate content based on already-defined parameters. This automation simplifies the creation process considerably, enabling content contributors to meet deadlines.

Furthermore, AI-based content generation leads to personalized messaging. It allows organizations to be more specific in their content delivery to address each audience segment's unique preferences and interests (Canhoto& Clear, 2020). By investigating user behavior, demographics, and engagement patterns, AI algorithms may create customized suggestions to make every piece of content appealing to its corresponding audience. This tailoring improves the effectiveness of a communication plan and stimulates audience engagement.

However, AI is not limited to content generation; it is also transforming the audience with the help of conversational agents like chatbots, virtual assistants, and voice-enabled devices. Such AI-based platforms interact with users, help them solve their questions, and suggest personalized recommendations immediately. Chatbots have become popular across industries, allowing users 24/7 support and advice. Using natural language and machine learning, a chatbot can understand user queries and provide correct responses or solutions (Painoli et al., 2021).

Additionally, AI-based virtual assistants and speech-equipped devices allow easy interface to information and services. Platforms like Amazon Alexa, Google Assistant, and Apple Siri can understand voice commands, do tasks, and conduct customized suggestions. Such virtual assistants simplify user interactions and save time while providing personalized service (Benbya et al., 2020).

Privacy and ethical issues are the main factors preventing new media and communications technologies from adopting AI. The issues include personal data protection, algorithmic fairness, and accountability. Companies must provide ethical AI use, which should mean keeping the user's privacy and communicating correctly about data collection and processing. Furthermore, handling algorithmic bias significantly guarantees that AI systems provide equivalence and impartial reactions. Intelligence applied in media and communication in the UAE within its vision of innovation in technology and digital transformation.

Meanwhile, the UAE government witnessed the influence of AI on different activities to overcome hurdles of efficiency and quality of life. Artificial intelligence is the weapon that helps the UAE build its technology reputation worldwide. Media and communications innovation has been demonstrated through mass customization of content to communication-assisted- human interaction. AI digital platforms allow the creation

of engaging, relevant, and personalized content and thus help develop and improve the organization's communication tactics and the audiences' engagement. The AI adoption process, however, can only be successful with morality considerations, but they ensure transparency and fairness and protect privacy (Al-Qudah, 2024).

In the UAE, AI implementation goes hand in hand with the national strategy for technological progress, and AI is a crucial component for innovation and digital transformation in all sectors. AI expansion might be perceived as a sign that it is becoming more powerful in the media contexts and mass communication options, paving the way for more incredible innovation and improvement of arts (Tariq &Abonamah, 2021).

2.3. Ethics and Challenges in the Use of AI in Public Relations

The imagination of AI integration into educational settings reveals both possibilities and risks, and ethics is the first thing to be considered when it comes to AI. AI is a powerful tool for PR, and otherwise, ethical issues get raised that should be taken into consideration at all times (Solaimani et al., 2020).

One of the primary ethical issues in AI application into PR is that AI-based algorithms are a threat to fairness and equality. AI systems, as the machine learning model, are trained using historical data, and the sociocultural biases that are already active in society may find this way into the system. Consequently, AI algorithms can become carriers of stereotypes or marginalize certain groups if the system of control is poorly introduced. Such media monitoring AI tools could supply news stories that exhibit mainstream typical people or events or reflect the dominant cultural narratives instead of those that represent minor people or views (Solaimani et al., 2020). AI algorithms' bias can be averted by PR professionals through examining the datasets which are used to train the AI algorithms and introducing steps in the process to diversify and balance the data in order to achieve good representation (Jeljeli et al., 2024).

Moreover, continuous observation and auditing of AI systems can identify and mitigate biases that might be present, thereby empowering organizations to arrive at decisions based on data to ensure fairness and diversity. Besides privacy and data security, AI ethics in PR involve another challenge. AI technologies operate based on large quantities of data accumulated from the many channels through which users provide their personal information either through social media, websites, or customer handling (Li et al., 2023). Organizations must make sure that they treat personal information appropriately and in accordance with privacy law requirements to protect people's rights and to prevent hackers or misuse of personal data (Khan et al., 2022).

An AI-based PR campaign that uses sentiment analysis to measure public opinion about a particular issue may accidentally pick up the personal data of social media users without them being aware or adequately informed. In order to overcome this challenge, PR specialists should pay attention to user privacy and consent by introducing open data collection policies, providing clear information on how the collected data will be used, and getting explicit permission from the individuals for collecting and analyzing their data (Saidakhrarovich&Sokhibjonovich, 2022).

Besides using AI-generated content like deep fakes and synthetic media, there are moral dilemmas for PR practitioners. Therefore, such techniques can be used to alter audio, video, and text so that truth and falsehood may not be easily distinguishable, prompting fears about lies, deception, and the reliability of information in communication (Nuseir&Refae, 2022). For example, an edited video of a political figure saying something very offensive circulates online very fast, perhaps influencing the public's perception of the candidate before people get a chance to verify the information. PR experts must be alert for any information and disinformation networks designed to take advantage of AI tools to deceive the broad public by faking the narratives (Srivastava et al., 2021).

Despite the diversity of these ethics' issues relating to AI, PR professionals are able to restrain ethical risks by creation of a transparent and accountable practices. Organizations can take care of ethical standards and stakeholder trust by developing robust data governance policies, completing periodic audits of the AI algorithms, and focusing on the privacy and consent of the users. PR professionals should also do continual communication with stakeholders in series of e.g. policymakers, industry experts and advocacy groups so emerging ethical issues can be addressed and AI technologies can be used properly and ethically. AI offers substantial chances for a new generation of innovative and efficient PR practices, opening up exciting possibilities for the industry. Through the transparency, accountability, and user privacy as the primary, AI can

leverage the communication strategies and thus ethical standards as well as the audiences' trust by public relations professionals.

2.4. AI in the UAE

The UAE is the leader in the entire world in terms of the adoption of AI as a means of embracing the power of AI for multifaceted areas that represent different domains of society. In 2017, UAE unveiled its National Artificial Intelligence Strategy with a vision of making the country the top one in the field of AI innovation and adoption by 2031. It emphasizes the government's endeavor to capitalize on AI technologies for economic development, improvement of public services, and innovation (Zerfass et al., 2020).

The UAE's leadership in AI investment is transparent, with its robust support for research, development, and implementation projects across key sectors such as healthcare, transportation, and government services. AI has transitioned from a supporting role to a leading one in these frameworks, emerging as the primary catalyst for change in these domains. For instance, the healthcare industry is leveraging AI-driven predictive analytics and diagnostic tools to achieve early disease detection, personalized medicine plans, and enhanced patient outcomes (Sestino& De Mauro, 2022).

Similarly, in transportation, AI-powered systems are revolutionizing traffic management, enhancing public safety, and ushering in the era of automated vehicles. The UAE's AI strategy places significant emphasis on smart cities that utilize AI technologies to optimize urban development, promote sustainability, and enhance the quality of life for city residents. These innovative urban applications encompass intelligent transportation systems, energy management solutions, and building technologies (Guzman & Lewis, 2020). By integrating AI into urban planning and governance, the UAE is on track to build more practical, comfortable, and secure cities for its growing population.

Additionally, the UAE has positioned itself at the forefront of global AI companies and talent hubs, and many informed entrepreneurs and researchers worldwide have contributed to developing its flourishing AI ecosystem. Initiatives aimed to catalyze the level of AI research, education, and entrepreneurship, such as the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) and the Dubai Future Foundation's AI Accelerator program, are essential to serve this purpose. At this point, the programs also promote engagement of academia, business, and government, but they also allow new talents to shape AI and generate innovations (Farrokhi et al., 2020).

The UAE's involvement in AI is not limited by the country's borders. The country participates in international cooperation and strengthens AI development and research initiatives. By conducting events like the AI UK-UAE Taskforce and the Roundtable for Global AI Governance, the UAE is working to open up the conversation on ethics and governance of AI internationally. By making the exchange of ideas and collaborations on AI issues possible, the UAE sees a future where AI technologies will be created and used in a responsible, unbiased, and ethical way (Soni et al., 2020). Exponential benefits of AI are apparent in the UAE, which, however, bring about data protection, privacy, and ethics concerns in connection with AI use. While AI technologies develop and become a more intrinsic part of our lives, the UAE should implement robust governance systems as well as standards that counter disruptions and attacks. Furthermore, the UAE needs to focus on educational investments and workforce development in AI to ensure its citizens can obtain the skills and knowledge needed to compete in an AI-enabled economy (Kitsios&Kamariotou, 2021).

The UAE's AI strategy, as ambitious as it is, shows the country's consistent dedication to innovation, progress, and excellence. With an AI technology embracement, promotion of an innovation and collaboration culture, and application of AI, UAE is on its way to achieving its vision of becoming a global AI innovation and deployment leader. The country remains on the path to lead AI-based transformation and stays strong in using all available resources, mainly AI, to grow its people and the entire world (Gomes et al., 2022). On the other hand, AI progress in the UAE has come through several challenges and implications, one of which is in the realm of governance, ethics, and societal impact. With AI technologies becoming increasingly prominent in our lives, the UAE should actively address these concerns and make sure that AI deployment connects with the country's values, legislation, and strategic trajectory in the long term (Canhoto& Clear, 2020).

2.5. Integration of TRA and TAM in Understanding AI Adoption in Government Communication

TRA (theory of reasoned action) and TAM (technology acceptance model) are considered foundation theories of human behavioral studies and technology adoption. The two models originate from psychology and information systems, and each provides key lessons about individuals' decision-making processes regarding the adoption of new technologies.

The Theory of Reasoned Action (TRA) is a broad theory that explains how individuals form intentions and then translate them into action. Proposed by Martin Fishbein and IcekAjzen in 1975, TRA posits that behavior is determined by intentions, which are influenced by two primary factors: views on the behavior and feelings of individuals. Evaluations of the conduct relate to individuals' attitudes or feelings about the given behavior. People whose attitudes toward a behavior are favorable are more inclined to program themselves toward that behavior. As such, an individual who thinks that recycling helps the environment will likely have a positive attitude towards recycling and, therefore, choose to recycle more often.

The Technology Acceptance Model (TAM), described by Fred Davis in 1989, proposes a systematic framework to study people's adoption of information technology. TAM theories believe that these factors, namely perceived usefulness and ease of use, act as the basic components of incorporating new technology. People's utilization of technology results from their perception of usefulness, which is the extent to which they think a particular technology will help them accomplish a particular task or goal. This perception of usefulness informs their decision-making, making them feel informed and rational. For example, suppose workers believe introducing a new project management software reduces workflow and improves cooperation and productivity. In that case, they are likely to view the technology as applicable and to be willing to accept it (Al-Qudah, 2024).

TRA and TAM, as a combination, offer a broader perspective for AI integration in government communication. TRA highlights subjective norms and attitudes that impact the formation of intentions, while TAM looks into which one is perceived to be more helpful or user-friendly. Supporting this understanding with these frameworks will help understand the factors in individuals' attitudes and intentions to adopt AI-driven communication technologies (Jeljeli et al., 2024). Concerning the sector of government communication, where the introduction of AI can pose important considerations for service provision and citizen engagement, understanding the main factors that drive AI adoption is highly necessary (Khan et al., 2022). Applying the TRA and TAM can help in an in-depth understanding of the AI's adoption processes in the governments.

- First, TRA highlights the influence of subjective norms (interpersonal expectations of society and organizational culture) on people's intentions to include AI in government communication. For example, if government officials endorse the application of AI in communication and emphasize its significance, many people may start embracing these technologies.
- Secondly, TAM allows researchers to evaluate people's cognition concerning the importance and ease of AI-based communication technologies. Relevance concerns the feasibility of individuals using AI technologies in their communication processes, such as increasing communication efficiency or reducing the need for human intervention in data analysis for decision-making. Unlike self-efficacy, however, perceived ease of use concerns how these technologies are perceived to be user-friendly and accessible.

Examining this issue with the help of these frameworks will yield key drivers and barriers to AI introduction in governmental communication systems. For instance, the AI system may be perceived as very useful but difficult to use; in that case, the efforts may be directed toward user interfaces or training by supporting system end users to facilitate the acceptance. As such, this combined model allows academics to account for the interplay between subjective norms, attitudes, perceived usefulness, and ease of use and its influence on consumer intentions toward AI adoption (Saidakhrarovich&Sokhibjonovich, 2022).

For example, positive attitudes towards AI technologies will strengthen the connection between acceptance and adopting intentions. Conversely, negative attitudes or resistance at the organizational level may lead to resisting or avoiding adopting intentions. TRA and TAM integration offers a theoretical framework that encompasses the intricate dynamics of decision-making amidst AI advancement in government communication. The framework can also become helpful to strategists, policymakers, and communication experts as the basis for unraveling

factors influencing people's attitudes and intentions. Therefore, it can be used in decision-making for the public sector, which demands ethics and AI effectiveness.

3- Methodology

To study AI adoption in government communication of UAE comprehensively, an empirical study design of qualitative research was implemented. Using interviews, observation, and document analysis, the methodology helped to conduct an array of data about people's stances, the hindrances, and good practices involved in AI implementation. Recruitment of sample participants was done through purposive sampling to ensure representation of government sectors at different levels.

3.1. Research Design

For this study, a qualitative approach was chosen to explore in-depth the subtle nuances of adoption of AI in government communication within the UAE. Using qualitative methods, like interviews, observations, and document analysis, researchers can identify deep-rooted dynamics in AI acceptance, consisting of feelings, difficulties, and success stories (Bhangu, Provost, &Caduff, 2023). This approach ensured the development of a comprehensive grasp of the social, cultural, and organizational factors in formulating AI-based communication strategies with government agencies.

3.2. Sampling and Sample

During this research, the sample was selected by purposive sampling to ensure that organizations with varied divisions, like government agencies and non-government sectors, were included. Using this selection method helped target the instances most appropriate to the research problem and aims. The local and federal authorities' governments were analyzed, including the ministries, departments, and municipal agencies responsible for the communication initiatives (Strijker, Bosworth, &Bouter, 2020).

Inclusion Criteria:

- Organizations must be either government agencies or non-governmental sectors operating within the UAE that have a focus on public communication.
- Organizations should be actively using or integrating AI technologies within their communication strategies, including but not limited to social media monitoring, citizen engagement, and data analysis.
- Organizations must have relevant divisions or departments involved in communication initiatives and decision-making processes regarding AI adoption.
- Participants must include key employees or practitioners who have direct experience or knowledge of AI practices in their organizations.

Exclusion Criteria:

- Organizations that do not focus on public communication or are outside the scope of government and relevant non-government sectors will be excluded.
- Organizations that are not implementing or do not show any intent or signs of integrating AI technologies into their communication processes will be excluded.
- Organizations lacking a dedicated communication department or a significant role in communication initiatives may be excluded.
- Organizations where key personnel are unavailable or unwilling to participate in the study will be excluded.

3.3. Data Collection Procedures

Data collection for this study was mainly obtained through semi-structured interviews with the key stakeholders responsible for the organization's communication and implementation of AI in selected organizations. Interviews were conducted either face-to-face or via video conferencing, depending on the convenience and access that participants prefer. The interview protocol was designed to get all informative quantitative data about the participants' experiences, opinions, and challenges regarding AI adoption in government

communication. On the other hand, documentary analysis of organization documents, reports, and communication materials served alongside the interview data, further understanding how AI implementation has succeeded and failed (Denny &Weckesser, 2022). Ethical guidelines regulated all the data collection processes to uphold the confidentiality of the participants and obtain their consent.

3.4. Data Analysis Techniques

Interviews and document analysis are the main qualitative data sources that were analyzed using thematic analysis, a flexible, systematic technique for discovering commonalities, patterns, and meanings within the data. This data-driven method involved iterative processes such as initial codes, searching for themes, reviewing themes, defining and naming them, and report production. Two researchers, each independently, coded the interviews and documents to ensure the reliability and validity of the analysis. Any coding issues were discussed and resolved through a consent agreement (Sallis, Gripsrud, Olsson, &Silkoset, 2021). NVivo, a qualitative data analysis software, was employed to manage and sort the data during the analysis process, and therefore assist in tracing and comparing the themes across the cases.

3.5. Ethical Considerations

Research that involves human participants requires ethical consideration. To ensure the research adheres to ethical guidelines. It protects the rights and welfare of participants, and approval was obtained from the relevant institutional review board prior to the commencement of the study. Informed consent of all participants was attained, ensuring them about the goal and voluntary nature of participation while maintaining the anonymity and confidentiality of their answers. The participant's right will be to stop their participation at any time without consequences. Confidentiality was also ensured by assigning pseudonyms to participants and removing identifying information from the transcripts and documents if they wanted to be mentioned anonymously. Risks such as discomfort or emotional distress were managed using an empathetic interviewing style during the interview process. Furthermore, the research was sure to bind the principles of beneficence, non-harm, and justice that benefit the study outcome in knowledge acquisition while minimizing harm and equity rules for participants.

4- Results

The purpose of interviews in this study is to gain a thorough and profound understanding of AI applications in government communication in the UAE. Key actors in the public sector, such as directors of communication, public relations officers, and media relations representatives, were submerged in fruitful discussions. Through this choice, they pointed to the people who formed the communication strategies and implemented AI in their agencies and ministries. The research was conducted by many stakeholders, who had multiple roles and points of view, to understand the current conditions of AI implementation in government communication in UAE (Iaia et al., 2024). Throughout the research, ensuring that the feedback contributed from the interviews would represent the wide range of views and experiences was one of the concerns helpful for the analysis of the AI adoption trend and the issues faced by the public sector.

4.1. Analysis of Interview Findings

4.1.1. Extent of AI Utilization in Government Communication

Individuals in the research created outlooks due to different ways in which AI is employed in UAE government communication to demonstrate how advanced it is at this moment. Social media network surveillance represents another AI implementation where AI achieves good results. The discussions focused on the use of AI-driven tools to monitor public sentiment while analyzing social media data. It encourages government departments to garner information on public attitudes towards policies, programs, and initiatives.

One of the participants indicated on Social Media Monitoring: *"AI tools have transformed how we monitor social media. We can now track public sentiment in real-time, which helps us understand how citizens perceive our policies and initiatives."*

AI-powered social media monitoring allows communication professionals to trace the trends, detect early concerns, and measure social sentiment in real-time. Therefore, it allows them to make the right decisions on time and have the strategic communication plans tailored.

One of the participants indicated on Decision-Making: *"With AI-driven insights, we can identify trends and potential issues before they escalate. This proactive approach allows us to tailor our communication strategies effectively."*

Alongside this, the role of AI is also anticipated to be important in social initiatives that aim to engage the citizens. Automation is increasingly used to assist citizens by chatbots and virtual assistants, who respond to inquiries and provide information about government services. One of the main principles of media relations advocated was AI's ability to smoothly handle the repetitive questions and requests from the general public via interactive communication platforms. AI performs all these tasks with automation, thus minimizing the communication processes, although, with it, the citizens' experience is enhanced with immediate and correct answers.

One of the participants indicated on Citizen Engagement: *"Chatbots have been a game changer for us. They handle repetitive inquiries efficiently, allowing our team to focus on more complex issues while ensuring citizens get immediate responses."*

Additionally, AI has become a key player in data analysis processes within the government's communication approach. Participants examined how AI algorithms process bulks of data, extract insight and find patterns. This leads to the use of data-informed decisions, improved communication strategies, and the delivery of messages in an efficient manner. AI-powered data analytics tools are particularly good for making complicated data sets understandable and generating useful information, allowing communication professionals to create evidence-based strategies targeted to their audiences (Kubatko et al., 2024).

One of the participants indicated on Data Analysis: *"The ability of AI algorithms to analyze vast amounts of data is remarkable. It helps us extract meaningful insights that inform our communication strategies and ensure we are addressing the right issues."*

One of the participants indicated on Automation Benefits: *"By automating routine communication tasks, we not only streamline our processes but also enhance the overall experience for citizens. They appreciate getting timely and accurate information."*

The participants' points also highlight AI's growing role in the UAE's government communication strategies. Through social media monitoring, data analysis, and citizen engagement to enhance their responsiveness, efficiency, and effectiveness, AI can now become a central component of the communication strategies of government agencies. With the advancement of AI, its use for government communication is likely to increase, hence presenting both new opportunities and challenges for communication professionals working in the public sector.

One of the participants indicated on Future Prospects: *"As AI continues to evolve, I believe its role in our communication strategies will only grow. We are just scratching the surface of what is possible with AI in government communication."*

4.1.2. Challenges and Opportunities of AI Adoption

Participants of the study underlined quite several challenges and opportunities that concerned the use of AI in the government communications practices in the UAE. The participants indicated that accuracy and reliability of AI-produced analysis as a major issue. Despite the fact that AI algorithms are able to analyze great amounts of data and to draw conclusions, you will need to verify if these conclusions are correct in order to avoid misinformation or misinterpretation (Zhou, 2025). Participants underline the significance of double checking the AI-based data by quality assurance processes and human participation for ensuring its accuracy and reliability when using it as the basis for decision-making purposes.

One of the participants indicated on Challenges and Opportunities: *"While AI presents incredible opportunities for improving our communication, we must also navigate the ethical implications and ensure we maintain transparency with the public."*

However, the practical issues related to the AI impact on the ethical aspect of the communication in the government are also discussed by the participants. Data privacy protocols and algorithm biases in AI algorithms have become the main issue of the people. In addition, participants agreed on the need for creating rules and

regulations for the gathering, storing and utilization of data in AI-based communication efforts (Habes et al., 2024).

On the other hand, these decisions should undergo a layer of transparency and accountability so that the ethical standards are respected and the privacy rights and autonomy of individuals are not violated. In addition to the challenges that AI poses for government communication, the adaptations or transformations that it offers have also been noticed by the participants as well (Zhang & Agnihotri, 2024).

AI can be used for streamlining communication, increasing citizen engagement and will eventually lead to an improvement in service delivery. Participants explored how AI-enabled tools like chatbots or virtual assistants could automate the routine tasks and allow government agencies to provide answers at once and information more promptly. Additionally, AI-driven data analysis technologies can help government agencies to understand the people's views and intentions, thus they can edit their communication strategies based on the demands and desires of the citizens.

Moreover, there was the AI feature that could improve accessibility and inclusion concerning the government communication campaigns as observed by the respondents. Technologies based on AI can be tailored to meet the requirements of differently abled people and those with languages that are different from English thereby increasing accessibility to government services and information among all citizens (Rodriguez, & Peterson, 2024). Through the implementation of AI to enhance accessibility, government entities would encourage an additional participation among citizens, and thus building an open and responsive governance body. On the other hand, the challenges of AI adoption in the government communication were highlighted. However, participants argued that AI could be a game changer in making communication more efficient, effective and inclusive. Through data accuracy, privacy, and ethics issues, government bodies can fully enjoy the opportunities provided by AI by better serving and interacting with their citizens in the UAE (Arce et al., 2024).

4.1.3. Perceptions of AI among Communication Professionals

Positive remarks of communication professional about AI adoption in government communication within the UAE were common. AI has been widely accepted by the participants as a great tool for improving efficiency and effectiveness in communications. They recognized the possibility of the AI powered technologies either to automate the repetitive tasks, analyze the countless amount of data or even gain the information about public opinion. However, while participants were excited about AI usage, they also expressed worries about the need of proper training and capacity building among communication professionals. However, many argued that although AI technologies provide great advantages, they require the right level of skill to be utilized (Nag et al., 2024). Participants stressed the necessity of a complete training plan supplemented by regular support to communication experts so that they are equipped with the right cognitive abilities to fully utilize AI tools for their intended purposes.

In addition, participants also mentioned an important thing, which is to address any hesitation or rejection of AI by communication experts. Others expressed their concerns regarding job loss due to AI, and the complexity of AI technologies. To overcome these challenges, participants recommended focusing change management strategies and communication campaigns to ensure staff understands these benefits of AI adoption and to mitigate any fears or doubts (George et al., 2024). Participants acknowledged the importance of relational modeling, communication, and technical abilities to effectively implementation of AI, and thus the training and capacity building were seen as an essential factor. In this context, the government can achieve a lot by empowering communication professionals with the necessary skills and support. This will allow them to fully benefit from AI adoption and innovate their communication strategies and service delivery.

4.1.4. Future Role of AI in Government Communication

During the interviews, the participants exhibited their high level of optimism about the future's function of Artificial Intelligence in the governmental communications in the UAE. They are convinced that AI is a premier determinant of citizen engagement policy and how citizens should communicate in the future. Another point is made by a participant which highlights the advantage AI offers by bringing more individual and engaging communication between authorities and citizens. By applying AI tools like chatbots, virtual assistants, and personalized messaging platforms government offices can tailor-make their communications which are effective for the individuals of different preferences and choices. For instance, an improved user experience and a greater engagement and trust between government agencies and citizens are the results achieved (Iaia et al., 2024).

Government organizations can teach us how AI can be used to hasten adoption of AI in government implementation, achieving efficiency and innovation throughout the public sector.

The series of interviews conducted enable to know what extent AI has been implemented and the associated complexities and the perceptions of the public towards the government communication in the UAE. However, even though questions exist regarding data precision and ethical issues, the future place of AI in communication emerges as promising. Intelligence sharing and cooperation among various government agencies will be paramount driving the diffusion of AI in communication practices, thus increasing citizen engagement and the quality of services rendered (Gholami& Al Abdwani, 2024).

5- Discussion

The results of the interviews this study was conducted with gave an interesting view of the adoption of artificial intelligence (AI) in government communication within the UAE. The public sector key players, who are directors of communication, public relations officers, and media relations specialist, contributed their views towards the application of AI technologies in communication practices (Kubatko et al., 2024). In this section, the discussion part of the research, the findings are critically analyzed and compared with existing literature, the relevance of the research to theory and practice is explored, the research questions are addressed, the limitations of the research are acknowledged, and suggestions for further research.

In small sample studies, future research efforts could be made on the consistency of this study results with previous literature targeting AI in government campaigns. Preceding studies have been pointing out that artificial intelligence has largely been adopted in public sector communications, where the main benefits have been highlighted as efficiency improvement, enhanced citizen engagement, and personalized services delivery (Chadwick, 2020, and Macnamara& Kenning, 2019). Furthermore, the interviews have shown that the AI use is pervasive in a wide range of government communication in the UAE encompassing social media monitoring, citizen's engagement and data analysis. This cohesion with existing literature highlights the fact that the use of AI to optimize communication practices is a global trend that underscores the significance of the findings of this study across all relevant sectors of the AI adoption in the public sector (Oyekunle&Boohene, 2024). On the other hand, the research showed some specific discoveries that are tied to the UAE case. Collaboration and exchange of knowledge were, among other things, mentioned as being critical by the participants for the effective use of AI within the ranks of government agencies in the Emirates. The remark indicated the simultaneous presence of a peculiar organizational culture in the area of government communication in the country (Zhou, 2024). The study findings show that background factors or the culture of a workplace and the government policies are the ones that influence AI communication strategies adoption and implementation, thus motivating further research on complexity of AI adoption in different national contexts.

Conclusion

This paper explores the adoption of Artificial Intelligence (AI) in government communication in the United Arab Emirates (UAE). It explores the challenges and opportunities of AI implementation, the perception of AI among authorities and communication professionals, and the future role of AI in government communication. The study interviewed stakeholders from the public sector, including communication directors, public relations officers, and media relations specialists. The results align with global practices of utilizing AI to optimize communication and service delivery. The study also highlights the need for collaboration, ethical considerations, and ethical considerations in AI communication strategies. The study provides practical recommendations for communications specialists and policymakers involved in AI integration projects, emphasizing data privacy protocols, algorithmic transparency, and interdepartmental collaboration. AI can increase efficiency, citizen engagement, and service delivery, making governments more agile and responsive to the dynamic world. However, the study's limitations include its geographic location and potential issues like social desirability bias and recall bias. Future research could explore comparative methods, longitudinal studies, and deeper AI technologies and ethical considerations.

Recommendations for Future Research

This research has provided several insights which needs to be considered for future research.

- Use comparative approach to understand changes in AI adoption across national contexts.
- Empirically investigate how context influences AI adoption.

- Conduct longitudinal studies to track gradual AI integration in government communication.
- Report AI for government communications in UAE context.
- Examine results against relevant literature for comparative analysis.
- Discuss theoretical implications and practical applications.
- Conclude with limitations and future directions to advance existing knowledge.

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