Artificial Intelligence, Digital Civic Education, and Their Implications for Democratic Quality in Indonesia

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ABSTRACT

The rapid development of artificial intelligence (AI) has significantly transformed various aspects of public life, including political processes and civic engagement in Indonesia. Within the educational context, AI-driven political information circulating through digital platforms has become an informal learning environment that shapes citizens' democratic understanding and political behavior. This study aims to analyze the use of artificial intelligence in the Indonesian political system and examine its implications for democratic literacy and civic learning. Employing a qualitative approach with a descriptive-analytical design, this research conducts a desk review and normative analysis of academic literature, policy documents, and relevant regulations related to AI, digital governance, and civic education. The findings indicate that AI technologies increasingly influence political learning through data-driven practices such as personalized political content, voter micro-targeting, automated public services, and digital election monitoring. While these developments offer opportunities for innovation and efficiency in civic learning, the unregulated and ethically ungrounded use of AI poses serious challenges to democratic education, including the spread of disinformation, manipulation of political awareness, data privacy risks, and unequal access to digital learning resources. These conditions may weaken critical thinking, political autonomy, and informed participation among learners and citizens. Therefore, the integration of AI literacy, ethical digital education, and democratic values within civic education is essential to ensure that AI contributes positively to the quality of democratic learning and sustainable democracy in Indonesia.

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1. INTRODUCTION

The development of digital technology over the past two decades has brought fundamental changes to various aspects of social, economic, and political life. One of the most influential technological innovations is artificial intelligence (AI), an algorithm-based system capable of mimicking human cognitive abilities such as learning, analyzing data, recognizing patterns, and automatically generating decisions and content (Floridi et al., 2018). In the political realm, AI serves not only as a technical tool but has also become a strategic instrument that influences how political actors communicate, make decisions, and interact with citizens.

The transformation of the political system due to digitalization is increasingly visible with the shift in political communication patterns from conventional models to digital political communication based on data and online platforms (McNair, 2017). Emphasizes that the development of digital media has transformed political communication from a one-way model to a more interactive and personalized one. In this context, AI enhances this process through big data analysis, personalized political messaging (micro-targeting), the use of political chatbots, and the automated and mass production of campaign content. This technology enables political actors to reach voters more widely, quickly, and efficiently.

In Indonesia, the use of digital technology in politics has increased since the 2014 elections and continues to grow from the 2019 to 2024 elections. Social media, digital platforms, and online campaigns have become key arenas for political contestation. The emergence of AI has accelerated and deepened this digitalization of politics, particularly in digital political campaigns, voter data management, and technology-based government administration (Kreiss, 2016). Let's call this phenomenon data-driven politics, where political strategies and decision-making increasingly rely on large-scale data processing.

While offering many opportunities, the use of AI in political systems also poses serious challenges to the quality of democracy. On the one hand, AI has the potential to strengthen democracy by increasing the efficiency of political communication, expanding citizen participation, and enabling data-driven policymaking (Dahl, 2008); (Coleman & Blumler, 2009). However, on the other hand, AI also carries risks such as information manipulation, the spread of disinformation and political deepfakes, violations of voter data privacy, and imbalances in political power due to unequal access to technology (Wardle & Derakhshan, 2017; Zuboff, 2019). This phenomenon demonstrates that the use of AI in politics is ambivalent and requires careful management.

These challenges are further complicated in the Indonesian context, given the lack of specific regulations comprehensively governing the use of AI in political campaigns and elections. Existing regulations, such as the Electronic Information and Transactions Law and the Personal Data Protection Law, remain general and do not explicitly address the issues of political algorithms, microtargeting, or generative AI in democratic contests. This situation opens up room for misuse of technology that could potentially undermine democratic principles, such as political fairness, transparency, and electoral integrity.

Based on the background and focus of the study, this research is formulated to answer the problem of how to utilize artificial intelligence (AI) strategically in the Indonesian political system, especially in digital political campaigns, voter data management, government administration, and election governance, as well as how the use of this technology impacts the quality of democracy in Indonesia.

In line with these issues, the purpose of this study is to analyze the strategy of utilizing artificial intelligence in the Indonesian political system which includes digital political campaigns, voter data management, government administration, and election administration, and to assess its impact on the quality of democracy, especially from the aspects of political participation, transparency, political justice, civil liberties, and election integrity.

2. METHOD

This research employs a qualitative approach with a descriptive-analytical approach. The qualitative approach was chosen because this study aims to deeply understand the phenomenon of the use of artificial intelligence (AI) in the Indonesian political system and its implications for democratic

values. This approach allows researchers to examine socio-political realities contextually and interpretively through an examination of evolving concepts, discourses, and practices (Creswell, 2014). Specifically, this study combines desk research and normative analysis, namely by examining concepts, theories, and regulations related to the use of AI in politics and democracy. Desk research is used to explore academic thinking and previous research findings, while a normative approach is used to assess the conformity of AI utilization practices with democratic principles and technological ethics (Dahl, 1989; Floridi et al., 2018).

This research was conducted in 2024–2025. The research location is non-spatial, focusing on the context of Indonesia's political system in the digital space, specifically regarding the use of AI in political campaigns, elections, and governance. This non-spatial focus allows the research to examine the phenomenon of digital politics as a structural and normative process that transcends physical boundaries (Coleman & Blumler, 2009).

The data collection techniques used include: 1) Literature Review, namely reviewing books, scientific journals, academic articles, and research reports relevant to the topics of AI, digital politics, and democracy (Dahl, 1989; Kreiss, 2016). 2) Documentation Study, namely analyzing official documents such as the Election Law, the Personal Data Protection Law, and policies related to information and communication technology. 3) Secondary Data Search, namely using reports from national and international institutions regarding digital disinformation, data-based politics, and AI governance in democratic systems (Wardle & Derakhshan, 2017; Zuboff, 2019).

Data analysis was conducted using descriptive qualitative analysis through the following stages: Data Reduction, which selects, focuses, and groups data according to the research focus, namely AI utilization strategies and their impact on democracy. Data Presentation, which systematically organizes data in the form of analytical narratives based on predetermined sub-indicators. Conclusion Drawing, which interprets research findings by connecting theories, empirical phenomena, and normative frameworks to produce comprehensive conclusions. The analysis was conducted critically by linking research findings to theories of digital democracy, digital political communication, data-driven politics, and the principles of responsible AI as a framework evaluative on the use of AI in the Indonesian political system (Floridi et al., 2018; Rahman et al., 2022).

3. FINDINGS AND DISCUSSION

The strategy for utilizing artificial intelligence in Indonesia's political system can be explained through Kreiss's (2016) data-driven political theory. This theory is structured around key indicators, including: (1) data collection and integration, (2) analysis and modeling of political behavior, (3) message personalization and targeting, and (4) algorithm-based decision-making. These four indicators are used to assess how artificial intelligence shapes Indonesia's political dynamics.

3.1. Political Data Collection and Integration

According to Kreiss (2016), the primary foundation of data-driven politics is the ability of political actors to collect and integrate data on a large scale. This research finding shows that in Indonesia, AI is being used to combine voter data from various sources, including population data, election history, and digital activity on social media. This data integration allows for the formation of a much more detailed political information base compared to conventional election administration system.

In the Indonesian context, this practice strengthens the capacity of political actors and state institutions to map voters and electoral districts. However, the absence of a robust regulatory framework for algorithmic data management leaves citizens' personal data highly vulnerable to political exploitation. This condition aligns with the concept of surveillance capitalism (Zuboff, 2019). Where citizen data is treated as a strategic resource of power, not as a right that must be protected.

Most people think that AI is advancing at a rapid pace and will be here soon. However, AI is here now and if we don't make the rules soon, we will lose the game. Typically, AI refers to efforts to build computers that can perform activities that usually require human intelligence, such as thinking and decision-making (Frank, 2019). With the advent of information and technology, political campaigns

have become data-driven. Election campaigns now rely more heavily on big data. Political parties in democratic countries have begun analyzing big data to understand the profiles of electoral districts. Political parties and election strategists are more interested in understanding who are first-time voters, who are floating voters, how they behave, and the demographic and socio-economic conditions of the voters. This data then designs a political campaign strategy (what is being talked about with certain groups of voters), selects candidates, and builds pro-political party narratives. User-related data is now being collected through technology. Software applications like Google Maps, YouTube, Instagram, Facebook, Twitter, and many others contain vast amounts of user data. Advertisers have explored various ways to leverage social media data to understand consumer behavior. Hyper-targeted advertisements are based on online and in-person activity. What's new at this point is that political parties and politicians are approaching these advertisers (Rafif et al., 2024).

AI has become a crucial tool used by various political parties and participants to gain a competitive advantage in the 2024 Indonesian elections. The advantages of AI in elections lie in its accuracy and sophistication in analyzing data and understanding voter preferences and trends. This sophisticated AI technology not only brings benefits to the implementation of elections in Indonesia, but also risks and challenges faced by the Indonesian government.likedata privacy, information manipulation, transparency, and vulnerability to cyber attacks (Ayu & Puspasari, 2024).

3.2. Analysis and Modeling of Voter Behavior

The second indicator in Kreiss's theory is the use of AI to analyze behavior and predict political tendencies. The research findings show that AI in Indonesia is being used to segment voters, map political preferences, and predict electoral opportunities. These practices enhance the strategic rationality of campaigns and enablemore efficient allocation of political resources.

In line with Anstead (2020), the use of predictive analytics strengthens the electoral competitiveness of political actors. However, this research also shows that AI-based behavioral modeling narrows citizens' political understanding to mere statistical variables, thus ignoring the normative and deliberative dimensions of democracy. Thus, voters are positioned as objects of prediction, rather than autonomous political subjects.

In today's digital era, AI has emerged as a transformative force across various sectors, even integrating into political aspects, particularly elections. The integration of AI into the electoral context marks a new era in political campaign strategies, voter engagement, and election management (Ayu & Puspasari, 2024).

However, the implementationmust be carried out carefully, responsibly, and human-centered. Close collaboration between the government, election organizers, technology experts, and civil society is needed to build a strong legal and ethical framework, and ensure that AI is used to strengthen, not weaken, democracy in Indonesia. The use of AI in elections also has the potential to pose unprecedented challenges and threats to the integrity of election structures and democratic processes (Chen, 2024). Artificial intelligence can improve decision-making processes by predicting consumer trends and behavior based on data collected from various digital channels. This technology supports predictive marketing, enabling companies to plan campaigns that are more aligned with customer preferences, based on analysis of past behavior (Rolando et al., 2022).

In the future of indonesian democracy: using ai for secure and integrity-based elections, it is stated that artificial intelligence is capable of processing voter data quickly and accurately, enabling political actors to understand voter preferences and trends (e.g., demographics, response behavior to certain issues). This means that AI can improve the quality of political information available to voters while helping political parties tailor their political messages to the needs of more rational voters. However, this study also notes that the use of AI technology needs to be ethically monitored because personal data and information manipulation can undermine public trust in the democratic process (Ayu & Puspasari, 2024). AIcan also make predictions of voter behavior based on profile patterns and big data from digital platforms which is in line with global research that found that AI can influence voter

preferences through personalized political messages (personalized Political *Communication*) which is more effective but risks reducing the quality of public political deliberation (Behavior & Shahid, 2025).

Arctic social media and artificial intelligence applications in voter preferences and participation in General Elections show that digital technology and AI contribute to election engagement by attracting 59.3% of respondents to use AI-based applications to obtain election-related information. AI in this context expands the quantity of election behavior data because it is able to cover more individuals across various segments of society in a more efficient manner than traditional survey methods. In a global context, research on the Effect of Artificial Intelligence Tools on Political Campaigns and Voting Behavior (which uses quantitative methods such as surveys and ANOVA) found that the use of AI, especially through personalized advertising and customized content, significantly increased political interest and voting intentions while raising concerns regarding the potential for data manipulation that could influence voter behavior output.

AI can be part of election information services that influence voter behavior. For example, global research in the journal AI Preference Prediction and Policy Making shows that AI can predict public preferences and systematically deliver policy information, thereby helping voters better understand political options a form of information service that enhances voters' ability to make informed decisions (Lim & Savulescu, 2025). Furthermore, in the context of campaigns in Indonesia, AI is being used to create campaign content that appeals to voters, particularly the younger generation, thereby helping to improve the quality of voter interaction with relevant political information. While not administratively a public service, this is still a form of information provision that influences voter perceptions and choices (Afrilia & Geraldine, 2025).

3.3. *Personalization and Targeting of Political Messages*

Kreiss (2016) emphasized that message personalization is a key characteristic of data-driven politics. This research finding indicates that in Indonesia, AI is being used to tailor campaign messages to the psychological, demographic, and behavioral characteristics of voters. Social media algorithms reinforce this process by optimizing the distribution of content that has the greatest potential to influence each individual.

This practice is in line with the findings of Hersh (2015) and Klinger & Svensson (2018) that personalization increasesThe effectiveness of political communication. However, as Yeung (2017) and Sunstein (2018) warn, AI-based microtargeting also blurs the line between persuasion and manipulation. This research shows that in Indonesia, AI-based campaigns tend to prioritize emotional resonance and mobilization, rather than political education and rational deliberation, potentially undermining the quality of democracy.

Global studies on content personalization as a defining feature of political microtargeting suggest that personalized content tends to increase voter engagement because messages are tailored based on individual predispositions and preferences, which in turn can raise awareness of specific political issues and deepen the quality of democratic discourse, although it also raises concerns regarding privacy and algorithmic bias (Decker, 2025). Global research on personalized political microtargeting shows that AI algorithms can send millions of different message variations to voter groups based on their demographic data and digital behavior. This increases the number of automatically generated and distributed messages, far beyond human capabilities. For example, modern political campaigns can reach different voter segments with message variations automatically optimized by algorithms, which increases message quantity but also creates echo chambers (information bubbles) if messages are too focused.

Influence on candidate credibility, social presence, and voting intentionsexamined the use of interactive AI tools, such as AI chatbots, in campaigns. The study found that tools like GenAI chatbots, which provide personalized conversations with voters, can increase social presence (a sense of social closeness) with candidates and influence voter intention. This suggests that fast and responsive personal engagement is one aspect of service delivery that can be enhanced through AI.

3.4. *Algorithmic Decision Making and Governance*

The final indicator of Kreiss's theory is the use of AI to support political and administrative decision-making. This research finding shows that in Indonesia, AI is being used in population data verification, digital public services, election monitoring, and disinformation detection. This strengthens bureaucratic efficiency and the state's capacity to manage the complexity of political data.

However, as Eubanks (2018) points out, algorithmic governance without transparency can reproduce bias and reduce public accountability. This research found that many AI systems in Indonesia operate as black boxes, making their decisions difficult to audit or challenge by citizens. In the context of elections, this has the potential to shift public trust from democratic institutions to technological systems that are not fully subject to oversight.

With AI's ability to process big data and produce output based onmachine learning, amount recommendations or decisions generated automatically are greatly improved compared to manual methods. For example, algorithms can predict social trends, public service needs, or disease patterns quickly and at scale, providing policymakers with a wide range of recommendations. A literature review article shows that the integration of AI technology in Government decisions are now increasing rapidly, and AI is no longer limited to analytical tasks alone but is becoming part of decision support systems in public contexts (Caiza et al., 2024). However, this increased quantity also means that many recommendations could leave policymakers limited or dependent on algorithmic advice without adequate human oversight, thus compromising the quality of democratic processes if not combined with transparent controls. Automated processes also have the potential to trigger public resistance if decisions are not clearly explained.

One important dimension in algorithmic service delivery is the accountability and legitimacy of automated decisions, especially in the context of public governance. The legitimacy of algorithmic decision-making study shows that fully automated decisions are generally perceived as having lower legitimacy than those involving humans, particularly in the context of democratic input (public participation) and procedural aspects of the decision (Grimmelikhuijsen & Meijer, 2022).

3.5. *Theoretical Implications for Indonesian Digital Democracy*

Overall, the findings of this study confirm Kreiss's (2016) argument that data-driven politics produces new power relations determined by access to data and technology. In the context of Indonesia as a democracy undergoing consolidation, the dominance of actors who master AI increases political inequality and weakens the principle ofdemocratic equality.

These findings also reinforce the framework of responsible AI (Floridi et al., 2018), which emphasizes that without ethical regulation, algorithmic transparency, and the protection of citizens' rights, AI will not strengthen democracy but instead deepen its vulnerabilities. Thus, this study confirms that the primary challenge to AI politics in Indonesia lies not with the technology itself, but rather with its normative and institutional governance.

4. CONCLUSION

Based on the findings and discussions, it can be concluded that guidance and counseling services The use of artificial intelligence (AI) in Indonesia's political system demonstrates a significant shift toward data-driven politics, particularly in digital political campaigns, voter data management, government administration, and election governance. AI technology has served as a strategic instrument that improves the efficiency of political communication, the accuracy of data management, and the effectiveness of election administration and oversight processes. To some extent, the use of AI also has the potential to expand political participation and support data-driven policymaking. However, the findings of this study indicate that the use of AI still tends to be oriented toward technocratic and electoral interests, while aspects of ethics, political justice, transparency, and protection of data are often overlooked. Citizens' rights have not been fully integrated systematically into digital political practices in Indonesia.

Furthermore, this study confirms that without a comprehensive regulatory framework and governance based on responsible AI principles, the use of artificial intelligence has the potential to undermine the quality of democracy. The risks of disinformation and manipulation of public opinion, violations of voter data privacy, and imbalances in political power due to asymmetric access to technology are key challenges that require a serious response. Therefore, strengthening adaptive regulations, increasing digital political literacy, ensuring algorithmic transparency, and collaboration between the state, election organizers, political actors, and civil society are essential prerequisites for AI use to not only improve political efficiency but also strengthen substantive democratic principles in Indonesia.

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