Role Of Artificial Intelligence In Public Policy Cycle

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Abstract – Artificial intelligence refers to the simulation of human intelligence or mimic their actions. By adoption of Artificial intelligence in public policy cycle is likely to strengthen the foundational principles of good governance i.e. 3Es – Efficiency, Economy and Effectiveness. This paper aims to understand the role of Artificial intelligence in public policy process and to examine how AI can mitigate the challenges that arise at various stages of policy cycle.

Keywords – Artificial intelligence, Public policy cycle, Efficiency, Economy, Effectiveness and Challenges

Introduction – Public Policy is framework of decisions,plans and actions adopted by the government to address public issues and achieve its social and economic objective. In today's digital era Artificial intelligence acting as a catalyst in the accomplishment of goals . By enhancing data processing capabilities, predictive analytics and decision making processes , Artificial intelligence is increasingly being integrated into various stages of the policy cycle

i.e. Agenda setting, policy formulation, implementation, monitoring, evaluation and feedback (Howlett etal;2020) . It's ability to analyse vast datasets and identify patterns offers new opportunities for evidence based policy-making and personalized service delivery (Sun& Medglia,2019) . This research article explores the role of Artificial intelligence in public policy cycle and aims to understand how emerging technologies i.e. Artificial intelligence can transform traditional governance models.
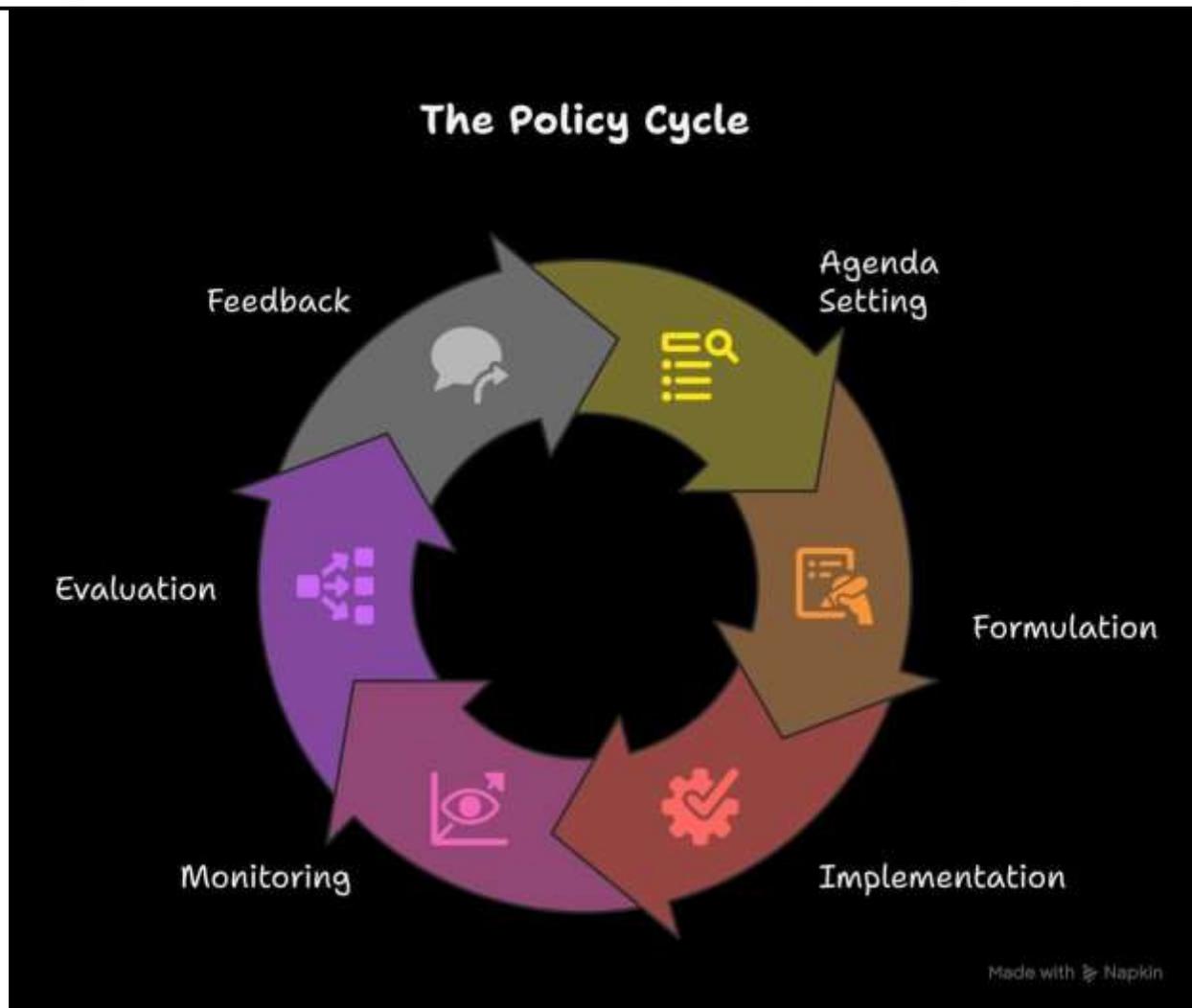
Source- Based on available data

Role of Artificial intelligence in Public Policy Cycle:-

1- **Agenda setting -** It is the first step in policy making process because it determines what gets discussed and what gets ignored. According to Herbert Simon decision making theory stages – Intelligence activity, design activity and choice activity can be applied to the agenda setting stage of public policy. Traditional methods of agenda setting are time consuming but with the help of Artificial intelligence this process can becomes more efficient and rational in identifying and prioritizing key issues . Artificial intelligence can effectively analyse data from social media platforms like tweets , posts , comments, hashtags in various ways like sentiment analysis, misinformation, hate speech detection, trend detection and geographic mapping. Through machine learning and natural language processing, Artificial intelligence systems are capable of analysing textual and behavioral data to reveal shifts in public opinion and sentiment (Dwivedi et al .2021) . In this way Artificial intelligence helps policy maker to set agenda in optimal way.

2- **Policy Formulation –** In this stage, plans and actions are formulated to address problems i.e. identified during agenda setting. Policy formulation is collective process in which both state and non state actors participate. Artificial intelligence facilitates this process by cost benefit analysis, Predictive analytics, simulation and analysis of big data . This enables policymakers to overcome challenges in policy formulation like lack of reliable data, time constraints, non participation of different groups and weak

institutional capacity. Furthermore, Artificial intelligence systems support cost benefit analysis by integrating historical and real time data , allowing for evidence based strategic planning (Kaka et al ;2020)

3- **Policy Implementation -** It is a process in which plans , decisions pr policies are put into action. Without effective execution, even the best designed policies can fail . Challenges faces during the policy implementation stage – bureaucratic resistance, technological challenges , corruption, lack of coordination, political interference, unqualified personnel, lack of resources and financial aid , unrealistic policy design, delay in execution. By using Artificial intelligence, these challenges can be tackle by automating routine administrative tasks , virtual assistants and chatbbots , optimised resource allocation, E – learning plateforms, facial recognition, biometric verification, simulation and scenario testing. In this way , Artificial intelligence enhances implementation by minimum leakage and maximum impact and ensure that services reach the right people at right time.

4- **Policy Monitoring -** Policy monitoring is the ongoing process during policy implementation in which it tracks the progress and performance of policy and it ensures whether the predetermined objective of the policy are being achieved or not. Problems faced during monitoring lack of reliable and timely data , poor coordination, manual and paper based systems, weak institutional capacity. Artificial intelligence tools like sensors, mobile apps, online forms , digital dashboards , cloud systems , automated reports , remote sensing, geo-tagging, data visualization tools helps in optimum way to achieve the predetermined goals

5- **Policy Evaluation -** It refers to the process of measuring the impact of a policy on the target group , including its benefits and drawbacks, success or failure and whether the goal achieved or not . Challenges faced during policy evaluation are political pressure, unreliable data , unqualified evaluators , methodological challenges , resistance form implementing agencies etc. By using Artificial intelligence tools like satellite imagery, online surveys, mobile apps , Artificial intelligence systems with Natural language processing, AI based tracking tools and audit systems , mixed method evaluation through correlation analysis and machine learning models help overcome traditional challenges.

6- **Feedback –** It is the final stage of the policy cycle and it is used to revise , continue or discontinue a policy and guide future actions. Machine learning algorithms can detect trends and suggest modifications to improve policy design and delivery (Reis et al; 2019) . Artificial intelligence algorithms detect patterns, hidden trends ,issues and highlights region specific issues

Conclusion – The adoption of AI in public policy cycle can make the entire process more transparent,cost effective and capable of addressing multiple issues simultaneously. Traditionally completing a full policy cycle from agenda setting q qto feedback could take several years . However, with the help of Artificial intelligence,this time period can be reduced. This technological integration ensure that urgent and complex policy matters are addressed more efficiently and with greater responsiveness and allowing policy makers to engage with a wider range of problems at once.

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