DIGITAL TECHNOLOGY AND PARLIAMENTARY QUESTIONING: INSTITUTIONAL CONDITIONS FOR ACCOUNTABILITY IN COMPARATIVE PERSPECTIVE

TECNOLOGIA DIGITAL E PERGUNTAS PARLAMENTARES: CONDIÇÕES INSTITUCIONAIS PARA A RESPONSABILIDADE EM PERSPECTIVA COMPARATIVA

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Abstract
This paper examines how digital technologies are transforming parliamentary questioning processes in the United Kingdom, Singapore, and Vietnam. While technology has contributed to faster procedures, greater transparency, and enhanced accountability—thereby reshaping the exercise of political power—its effects vary significantly across national contexts. The study proposes a four-level framework for digital transformation in parliamentary questioning, ranging from basic procedural digitization to advanced models that enable citizen co-creation of the questioning agenda. Based on this framework, the paper offers policy implications for improving the effectiveness and accountability of parliamentary questioning in the digital age.

Keywords: Parliament. Parliamentary Questioning. Digital Technology. Accountability. Digital Governance.

Resumo
Este artigo examina como as tecnologias digitais estão transformando os processos de questionamento parlamentar no Reino Unido, Cingapura e Vietnã. Embora a tecnologia tenha contribuído para procedimentos mais rápidos, maior transparência e maior responsabilidade — remodelando assim o exercício do poder político —, seus efeitos variam significativamente entre os contextos nacionais. O estudo propõe uma estrutura de quatro níveis para a transformação digital no questionamento parlamentar, que vai desde a digitalização básica dos procedimentos até modelos avançados que permitem a cocriação da agenda de questionamentos pelos cidadãos. Com base nessa estrutura, o artigo oferece implicações políticas para melhorar a eficácia e a responsabilidade do questionamento parlamentar na era digital.

Palavras-chave: Parlamento. Questionamento parlamentar. Tecnologia digital. Responsabilidade. Governança digital.

1 INTRODUCTION

Over the past three decades, parliamentary questioning—one of the most visible instruments of legislative oversight—has undergone substantial transformation under the

influence of information and communication technologies. Since the early 1990s, questioning practices in many legislatures have evolved from largely closed, procedurally rigid sessions into highly mediated events featuring live broadcasting, digital documentation, and real-time public engagement across multiple platforms. This transformation raises a fundamental question for contemporary constitutional and legislative studies: does digital technology merely accelerate and publicize parliamentary questioning, or does it fundamentally reshape its institutional nature and power dynamics?

This article argues that digital technology alters the nature of parliamentary questioning only when digitization reaches a sufficiently advanced and institutionalized level. At lower stages of digital adoption, technology primarily enhances procedural efficiency and transparency—by improving access to information, expanding public visibility, and streamlining administrative processes—without substantially changing the underlying balance of power between the legislature, the executive, and the public. By contrast, when data integration, public feedback, and accountability mechanisms are formally embedded into the questioning process, digitalization can transform questioning from a reactive oversight tool into a structurally empowered mechanism of continuous accountability.

To substantiate this argument, the study adopts a comparative approach, examining three jurisdictions that represent distinct political and institutional models: the United Kingdom (a Westminster system characterized by adversarial questioning and a free media environment), Singapore (a technocratic governance model combining advanced technological deployment with strong political control), and Vietnam (a socialist rule-of-law state undergoing incremental institutional reform and digital transformation). The research period from 1990 to 2025 captures the full trajectory of digital technology adoption in parliamentary questioning across these systems, allowing for both longitudinal and cross-system comparison.

Building on this comparative analysis, the article introduces and conceptualizes "Parliamentary Questioning 4.0" as an advanced configuration of questioning in the digital age. This model is characterized by multidimensional interactions among parliamentarians, executive agencies, citizens, and data infrastructures, supported by an institutionalized closed-loop feedback mechanism that links questioning, follow-up, evaluation, and responsibility. To operationalize this concept, the study develops a four-

level analytical framework for assessing the digital transformation of parliamentary questioning: Level I focuses on the digitization of documents and procedures; Level II emphasizes open data and expanded public interaction; Level III examines data governance and accountability mechanisms; and Level IV captures citizen participation in agenda-setting and issue framing.

By comparing questioning practices across liberal democratic, one-party technocratic, and socialist rule-of-law systems, this article contributes to the literature in three ways. First, it provides a structured framework for evaluating how digital technology reshapes legislative oversight beyond surface-level transparency. Second, it refines the concept of accountability in digital parliaments by linking technological capacity with institutional design. Third, it offers a comparative documentation of questioning practices that highlights how different political systems selectively absorb and constrain digital transformation. In doing so, the study seeks to move the debate beyond technological determinism and toward a more nuanced understanding of how digitalization interacts with constitutional structures and power relations in contemporary legislatures.

This article makes three distinct contributions to the literature on parliamentary studies, digital governance, and legislative accountability. First, it conceptualizes Parliamentary Questioning 4.0 as an institutional typology rather than a descriptive account of technological adoption, offering a structured four-level framework to distinguish superficial digitization from transformative oversight arrangements. Second, the article challenges technologically deterministic assumptions by demonstrating that digitalization does not automatically enhance accountability; instead, accountability emerges only when technology is embedded within specific institutional designs that integrate data governance, follow-up mechanisms, and enforceable political consequences. Third, by incorporating Vietnam as a comparative case, the study introduces a transitional model of digital parliamentary questioning that remains largely absent from an Anglo-centric literature, thereby extending comparative insights beyond liberal democracies and technocratic regimes. Together, these contributions reposition digital parliamentary questioning as a question of institutional configuration rather than technological capacity alone.

2 LITERATURE OVERVIEW

Research on parliamentary questioning has traditionally focused on its role as a mechanism of legislative oversight and executive accountability. From a delegation perspective, questioning serves to reduce information asymmetry between the legislature and the executive and to expose executive action to public scrutiny. Comparative studies show that the effectiveness of questioning varies significantly across political systems, depending on regime type, party competition, and constitutional structure.

A second strand of literature examines parliamentary questioning through the lens of mediatization and political communication. Televised question time and media coverage are understood to reshape incentives for political actors, encouraging performative behavior and symbolic confrontation. While this research highlights the growing visibility of questioning, it tends to focus on audience effects and communicative dynamics rather than on institutional consequences.

More recent scholarship on digital governance and algorithmic mediation suggests that digital technologies do not merely enhance efficiency or transparency, but can reconfigure political processes and power relations through data integration and platform-based visibility. However, this literature rarely engages directly with parliamentary institutions or with questioning as a specific oversight mechanism.

Taken together, existing studies reveal three limitations. First, research on parliamentary questioning and digital governance remains weakly integrated, with technology often treated as a background condition rather than an institutional variable. Second, empirical analysis remains heavily concentrated on liberal democratic contexts, particularly Westminster systems, leaving technocratic and socialist rule-of-law states underexplored. Third, the literature lacks a clear framework for distinguishing between superficial digitization and deeper institutional transformation in accountability and agenda-setting.

This article addresses these gaps by adopting a qualitative comparative approach that treats digital technology as institutionally mediated rather than technologically deterministic. By comparing the United Kingdom, Singapore, and Vietnam, the study examines how similar digital tools generate different outcomes under different institutional conditions. The four-level model of digital transformation and the three

analytical axes employed in this article provide a structured framework for assessing when digital parliamentary questioning becomes institutionally consequential.

3 RESEARCH

3.1 Ideological foundation

This study adopts a multi-dimensional theoretical framework to examine how digital technology reshapes parliamentary questioning beyond procedural change. Rather than treating technology as a neutral instrument, the framework situates questioning at the intersection of public deliberation, accountability, delegation, media logic, and algorithmic governance.

From the perspective of Jürgen Habermas's theory of the public sphere, parliamentary questioning functions as a communicative space in which political authority is exposed to public reasoning. Digital technologies—particularly live broadcasting and online dissemination—significantly expand the visibility of this space, enabling wider public access and participation. In this sense, digitization can strengthen the deliberative quality of parliamentary discourse.[1] However, Habermas's framework also alerts us to the risks associated with publicity without deliberation, including opinion fragmentation and the transformation of rational debate into symbolic or performative communication.

Extending this insight, Pierre Rosanvallon's concept of counter-democracy provides a crucial lens for understanding questioning as a mechanism of continuous public scrutiny. Parliamentary questioning operates not merely as an internal legislative procedure, but as a form of real-time judgment exercised by citizens and their representatives over those in power. [2] The public broadcasting and circulation of questioning sessions embody the logic of counter-democracy, whereby distrust is institutionalized as a democratic resource. Digital platforms intensify this function by allowing citizens to observe, evaluate, and react to questioning processes between elections.

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[1] Habermas, J. (1989). The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society. MIT Press.
[2] Rosanvallon, P. (2008). Counter-Democracy: Politics in an Age of Distrust. Cambridge University Press.

From the delegation–representation perspective, parliamentary questioning reflects a structural tension inherent in representative government. Legislatures delegate authority to executive bodies, yet must maintain effective oversight to prevent agency loss. Digital technology has the potential to reduce monitoring costs by enabling systematic documentation, verification of commitments, and longitudinal tracking of executive responses. At the same time, increased transparency amplifies public pressure on executive actors, thereby reinforcing the supervisory role of the legislature.[3]

However, the expansion of visibility also activates the dynamics of political mediatization. As media logic prioritizes attention, dramatization, and brevity, parliamentary questioning increasingly unfolds within a communicative environment shaped by spectacle.[4] Drawing on mediatization theory and dramaturgical sociology, question-and-answer sessions can be understood as a political "frontstage," where ministers and parliamentarians perform before a mass audience. Digital amplification enlarges this audience and heightens incentives for rhetorical sharpness and symbolic confrontation, sometimes at the expense of substantive policy reasoning.[5]

Finally, contemporary debates on algorithmic governance highlight a new structural condition of digital questioning. Social media and search engine algorithms increasingly mediate which questions, answers, and excerpts gain visibility.[6] These algorithmic filters can create feedback loops that reward sensationalism and polarizing content. Yet, when institutionalized properly, data derived from networked publics—such as online feedback, petitions, and issue trends—can also inform more socially responsive questioning agendas. The transformative potential of digital questioning thus depends not on visibility alone, but on whether algorithmic mediation is integrated into accountable and rule-based institutional designs.[7]

Taken together, these theoretical perspectives underscore that digital technology does not automatically democratize parliamentary questioning. Its impact depends on

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[3] Kiewiet, D.R., & McCubbins, M.D. (1991). The Logic of Delegation: Congressional Parties and the Appropriations Process. University of Chicago Press.

[4] Mazzoleni, G., & Schulz, W. (1999). "Mediatization of Politics: A Challenge for Democracy?" Political Communication, 16(3), 247-261. Strömbäck, J. (2008). "Four Phases of Mediatization: An Analysis of the Mediatization of Politics." The International Journal of Press/Politics, 13(3), 228-246.

[5] Goffman, E. (1959). The Presentation of Self in Everyday Life. Doubleday.

[6] Danaher, J., et al. (2017). "Algorithmic governance: Developing a research agenda." Regulating Technologies, 26, 128-147.

[7] Boyd, d. (2010). "Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications." In A Networked Self: Identity, Community, and Culture on Social Network Sites (pp. 39-58). Routledge.

how publicity, accountability, media logic, and data governance are institutionally configured. This framework provides the conceptual foundation for analyzing different levels of digital transformation in parliamentary questioning and for assessing whether technology merely enhances transparency or fundamentally restructures oversight power.

3.2 A new definition for a new type of questioning

Building on the structural changes brought about by digital technology, this article proposes the concept of "Parliamentary Questioning 4.0" to capture a new operational configuration of parliamentary questioning in the digital age. In this configuration, traditional questioning is expanded and multidimensionally interconnected among parliamentarians, the executive branch, the public, and digital data. The central premise is that information flows and feedback from citizens must be formally incorporated into the questioning process; simultaneously, data generated during questioning sessions should be systematically collected and analyzed to inform agenda setting and oversight activities. In this sense, the feedback loop between citizens and the state is partially institutionalized through technological means.

The defining feature of Parliamentary Questioning 4.0 lies in the degree of connectivity and data integration. Where technology is deployed merely for surface-level presentation or interaction—without mechanisms to channel public information into decision-making processes—the questioning system cannot be considered to have reached the 4.0 stage in a substantive sense.

3.3 Three main axes of transformation in digitalized questioning

To facilitate systematic comparison and measurement of how questioning practices are transformed under the influence of technology, this paper identifies three principal axes of change.

3.3.1 First, technical efficiency

This axis captures the extent to which the questioning process is digitized and operationally optimized, including reduced response times, automated scheduling, and

enhanced capacity for retrieving digital records. It primarily measures procedural and administrative performance.

3.3.2 Second, transparency and accountability.

This axis reflects both the degree to which information related to parliamentary questioning is made publicly accessible and the extent to which those subject to questioning are held accountable. Transparency is manifested through live broadcasts, comprehensive disclosure of minutes or open data, and the traceability of past commitments. Accountability is evidenced by the consequences following questioning, such as resolutions, reporting obligations, and political or institutional pressure on officials. This axis therefore evaluates not only the scope of transparency (selective versus comprehensive) but also the depth of substantive accountability.

3.3.3 Third, the restructuring of power

This axis examines whether technology alters the balance of power among key actors—the legislature, the executive, and the public. It assesses whether digital tools strengthen parliamentary oversight or expand meaningful public participation in the questioning process. In an ideal 4.0 model, new factors such as data, algorithms, and digitally mediated public opinion become integral components of power relations.

These three axes are interrelated but analytically distinct. A political system may achieve high technical efficiency while maintaining low transparency, or it may display extensive transparency without any meaningful redistribution of power. Consequently, each axis must be assessed independently before being synthesized into an overall evaluation.

3.4 A four-level classification of digital transformation in parliamentary questioning

Based on the manner in which technology is applied and its substantive impact on the questioning process, this study proposes a four-level classification of digital transformation, ranging from minimal to advanced integration.

Table 1

Four-Level Classification of Digital Transformation in Parliamentary Questioning

Level	Core Features	Objectives and Impact
Level I: Document and Process Digitization	Digitization of internal administrative procedures, such as electronic submission of questions and digital agendas.	The primary objective is improved internal efficiency; public engagement remains minimal.
Level II: Open Data and Expanded Public Access	Broader disclosure through televised sessions, livestreams, and online publication of minutes and recordings.	Transparency is enhanced and limited one-way or two-way interaction emerges, but without binding commitments. Questioning records gradually become public digital assets (e.g., electronic Hansard).
Level III: Data Integration and Accountability	Formal integration of citizen data and feedback into the oversight cycle.	Parliament uses data to monitor post-questioning commitments and incorporates public petitions into agenda planning. Accountability is significantly strengthened.
Level IV: Citizen Co-Shaping of the Agenda	Systematic and direct public participation in defining the content and objectives of questioning.	Agenda-setting power is partially shared with citizens through digital tools, completing the feedback loop between society and the legislature.

Figure 1

Parliamentary Questioning 4.0: A Conceptual Framework

Figure 1. Parliamentary Questioning 4.0: A Conceptual Framework
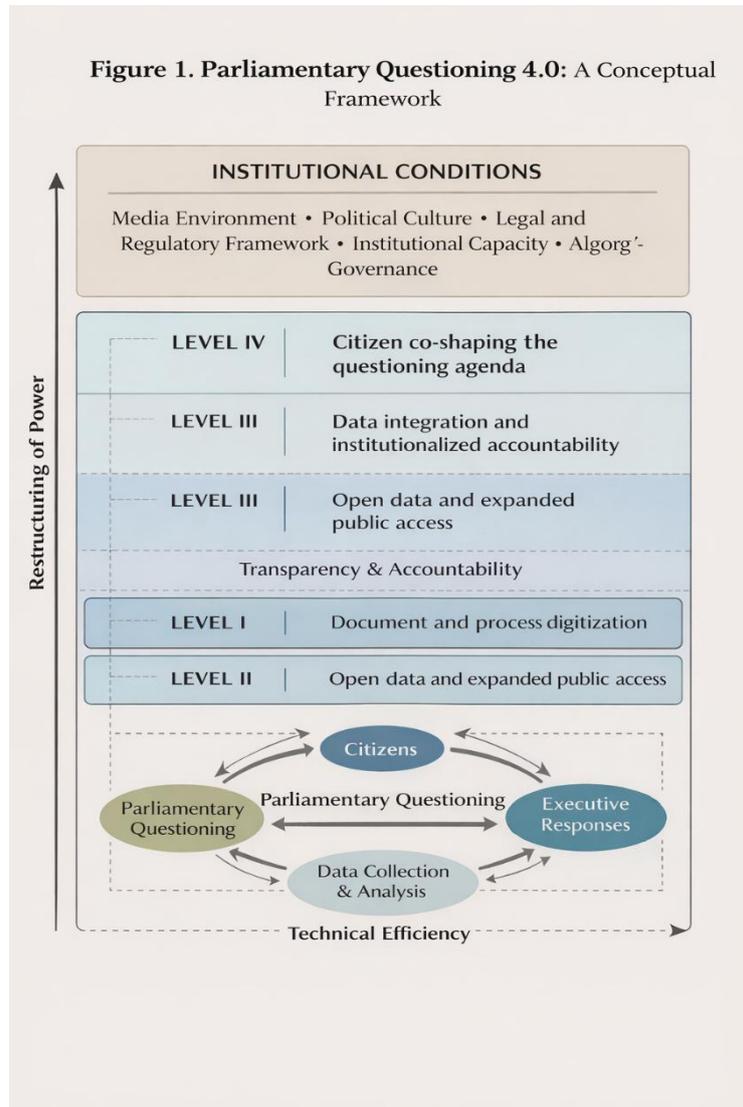
(The figure illustrates four levels of digital transformation in parliamentary questioning along three analytical axes—technical efficiency, transparency and accountability, and restructuring of power. It highlights how questioning becomes institutionally transformative only when higher levels of data integration and citizen feedback are embedded within supportive political and institutional conditions).

4 COMPARISON OF DIGITAL TRANSFORMATION IN PARLIAMENTARY QUESTIONING ACROSS COUNTRIES

4.1. Case 1: the british parliament (westminster system)

4.1.1. Legal and historical framework

Parliamentary questioning in the United Kingdom is deeply rooted in constitutional convention and parliamentary practice rather than codified constitutional rules. Questions to the Prime Minister (PMQs) were institutionalized as a regular practice in 1961 and, since 1997, have been conducted as a fixed 30-minute session every Wednesday at noon. This routine has become a defining feature of the Westminster system and a focal point of executive accountability.

A critical stage in the technological evolution of questioning was the introduction of live radio broadcasts in 1975, followed by live television broadcasts of House of Commons proceedings in 1989. These developments were preceded by prolonged parliamentary debate, reflecting concerns that televised proceedings might encourage performative or theatrical behavior among Members of Parliament. Over time, such concerns have been overtaken by the normalization of media exposure.[8] Today, televised parliamentary questioning is an integral component of political life in the UK, and weekly PMQs are widely recognized and closely followed by the public.

In parallel, the official parliamentary record (Hansard) underwent early digitization. By the early 2000s, full transcripts of parliamentary proceedings were made freely available online and subsequently distributed through open data formats and application programming interfaces (APIs), enabling extensive reuse by media organizations, researchers, and civil society actors.[9]

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[8] Mark O'Brien. (2024, Nov 21). "Cameras in the Commons: 35 Years of Broadcasting Parliament." Commons Hansard blog.

[9] Goh Yan Han. (2024, May 6). "AI-powered search engine makes S'pore Parliament debates more accessible." The Straits Times

4.1.2. Application of technology

All public parliamentary sessions in the UK are broadcast live through dedicated channels, notably BBC Parliament, as well as via official online platforms such as Parliamentlive.tv, which also provides comprehensive video archives. This real-time accessibility has significantly expanded public exposure to questioning sessions. Selected excerpts frequently circulate on social media, contributing to what has been described as "soundbite politics," in which short, dramatic exchanges gain disproportionate visibility relative to substantive policy discussion.

Beyond official platforms, the UK benefits from a dense ecosystem of parliamentary data tools operated by civil society organizations. Websites such as TheyWorkForYou, which aggregates and analyzes Hansard data, and PM Tracker, which monitors governmental commitments, illustrate how open parliamentary data can be transformed into instruments of public scrutiny. The UK Parliament has also experimented with AI-assisted initiatives to improve data retrieval and analysis.

Social media further intensifies immediacy and public engagement. The hashtag #PMQs frequently trends on UK-based platforms during and after questioning sessions, enabling near-instant feedback loops between parliamentary debate, media framing, and public opinion.[10]

4.1.3. Substantive outcomes

A defining feature of the UK model is the strong traceability of commitments made during questioning. Although the House of Commons does not adopt formal resolutions following PMQs, the combination of opposition scrutiny, investigative journalism, and committee oversight creates a powerful informal enforcement mechanism. Parliamentary committees frequently summon ministers for follow-up hearings when issues raised during questioning remain unresolved.

Data transparency is exceptionally high. All parliamentary transcripts are published online, with preliminary versions often available on the same day and final versions released the following morning. Video recordings are archived and made

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[10] Rob Salmond (2014), "Parliamentary Question Times: How Legislative Accountability Mechanisms Affect Mass Political Engagement", Journal of Legislative Studies 20(3).

accessible within hours of the conclusion of each session. In comparative terms, the UK's provision of open parliamentary data approaches the highest global standards.

Public and political pressure associated with questioning is substantial. PMQs are widely regarded by Prime Ministers as one of the most politically demanding weekly obligations. Poor performance or evasive responses can immediately undermine political credibility, and sustained pressure generated through Parliament and the media has, in some cases, contributed to resignations or leadership crises.

4.1.4. Evaluation based on the three axes of transformation

4.1.4.1 Technical efficiency

The UK has achieved a very high level of technical efficiency. Digital tools enable rapid access to parliamentary data, automated organization of questions, and sophisticated retrieval of historical records. In this respect, the UK Parliament ranks among global leaders in parliamentary digital transformation.[11]

4.1.4.2 Transparency and accountability

Transparency is near-comprehensive, with live broadcasts, uncensored transcripts, and highly accessible archives. Accountability is reinforced through strong political and reputational sanctions. However, this level of openness also exposes the confrontational and adversarial nature of parliamentary politics, which may contribute to public cynicism or declining trust in political institutions.[12]

4.1.4.3 Restructuring of power

Digitalization has contributed to a recalibration of oversight power in favor of Parliament and public opinion. Online reactions influence the framing of questions by MPs, while instruments such as electronic petitions provide indirect channels for agenda

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[11] Inter-Parliamentary Union (IPU). (2022). World e-Parliament Report 2022. IPU.
[12] Hansard Society. (2019). Tuned in or Turned off? Public attitudes to Prime Minister's Questions. Hansard Society. (B. Allen & others).

influence. Technology also lowers entry barriers for backbenchers and smaller opposition parties, amplifying their visibility and voice. Overall, the oversight capacity of Parliament has been strengthened.

Taken together, the UK model corresponds to an advanced form of Parliamentary Questioning 4.0, operating firmly at Level III and approaching Level IV in terms of citizen-influenced agenda-setting.

4.1.5 Limitations and emerging challenges

Despite its strengths, the UK questioning model exhibits notable limitations. PMQs are frequently criticized for excessive noise, limited substantive depth, and an increasingly adversarial tone resembling "gladiatorial combat" rather than deliberative policy evaluation. The pervasive presence of cameras amplifies performative behavior, incentivizing dramatic exchanges over nuanced inquiry.

Moreover, the dominance of short video clips and confrontational moments in media coverage risks diverting public attention from less visible but substantively important parliamentary work. These dynamics underscore a broader tension between transparency, media logic, and the deliberative quality of parliamentary oversight in highly digitalized environments.

4.2 Case 2: Singapore (technocratic model of digital transformation)

4.2.1 Legal and historical framework

Singapore operates a unicameral parliamentary system modeled on the Westminster tradition, but embedded within a highly centralized and disciplined political environment. Although parliamentary questioning follows formal Westminster procedures, its practical operation reflects a technocratic governance ethos emphasizing order, predictability, and administrative efficiency.[13] Until 2021, Singapore refrained from broadcasting parliamentary sessions live, citing concerns that real-time exposure could encourage performative behavior aimed at pleasing audiences rather than

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[13] Lai, Linette. (2020, Sept 5). "In-principle agreement to live-stream Parliament sittings." The Straits Times.

facilitating substantive deliberation. This position changed in early 2021, when parliamentary sittings began to be livestreamed on YouTube. Official parliamentary records (Hansard) have been digitized since 1996 and made publicly accessible online since 2000. Between 2015 and 2016, the entire historical archive dating back to 1955 was systematically uploaded, reflecting a long-term commitment to comprehensive record-keeping.[14]

4.2.2 Application of technology

Singapore has developed a comprehensive e-Parliament system to manage legislative documentation, session scheduling, and the electronic submission of parliamentary questions.[15] The Parliament has also integrated artificial intelligence tools, including speech recognition technologies to generate draft transcripts and Pair Search, an AI-powered search engine based on large language models for querying Hansard records. These initiatives demonstrate substantial investment in parliamentary data infrastructure and operational efficiency.

At the same time, the use of technology is accompanied by strict controls over information flows and public interaction. Parliamentary livestreams on YouTube disable public comments and offer no mechanisms for real-time engagement. Coverage by major state-linked media outlets is highly selective, typically emphasizing consensus while downplaying disagreement. Moreover, institutionalized channels for binding public feedback—such as e-petitions or integrated social media interfaces—are largely absent, rendering public input non-binding and peripheral to the questioning process.

4.2.3 Substantive outcomes

In terms of procedural performance, Singapore's questioning system operates with exceptional speed and efficiency. Members of Parliament submit approximately

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[14] Goh Yan Han. (2024, May 6). "AI-powered search engine makes S'pore Parliament debates more accessible." The Straits Times

[15] GOVTech Singapore: < https://www.tech.gov.sg/products-and-services/for-government-agencies/productivity-and-marketing/transcribe/>

1,500 questions annually, both oral and written, and responses are delivered promptly and systematically. Technical efficiency is therefore widely regarded as excellent.[16]

Public access to parliamentary data is formally guaranteed through free online transcripts; however, unlike the UK Parliament, Singapore has not yet introduced an open API to facilitate independent data reuse and civic-tech initiatives. Indicators of public feedback integration remain low.

With respect to post-questioning accountability, Singapore does not adopt formal resolutions or conduct structured post-interpellation audits. Follow-up actions are largely discretionary and internally managed by the executive. Transparency may thus be characterized as selective: information is disclosed in full but is curated and mediated through official channels. Despite the extensive application of digital tools, the oversight capacity of Parliament and the role of the opposition remain largely unchanged. No ministerial resignation has been directly attributable to parliamentary questioning, and the balance of power continues to be dominated by the ruling People's Action Party (PAP).

4.2.4 Evaluation based on the three axes of transformation

4.2.4.1 Technical efficiency

Singapore approaches an optimal level of technical efficiency. The questioning process is fully digitized, streamlined, and executed with minimal delay. Sessions follow carefully planned agendas, leaving little room for spontaneity or disruption.

4.2.4.2 Transparency and accountability

Transparency is best described as controlled rather than open. While information is publicly accessible, accountability mechanisms remain predominantly internal, relying on party discipline rather than adversarial scrutiny or public pressure. Consequently, instances of officials being publicly sanctioned as a result of questioning are rare.

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[16] Lai, Linette. (2020, Sept 5). "In-principle agreement to live-stream Parliament sittings." The Straits Times.

4.2.4.3 Restructuring of power

Digitalization has produced little to no redistribution of power. Parliament functions primarily as a managed forum for accountability, and technology serves as an administrative instrument in the hands of the state rather than a catalyst for enhanced public participation or legislative empowerment.

According to the proposed classification framework, Singapore firmly operates at Level II (Open Data and Expanded Public Access), but lacks the defining feature of Level III, namely the institutionalized integration of citizen feedback into data governance and accountability structures.

4.2.5 Limitations and emerging challenges

The Singapore case illustrates a central paradox of digital governance: advanced technological infrastructure can coexist with limited democratic transformation. Digital tools are deployed vertically, reinforcing top-down governance rather than enabling co-creation between the state and society. As a result, parliamentary questioning, despite its high degree of digital sophistication, does not generate correspondingly higher levels of democratic engagement. [17]

Public interest in parliamentary questioning remains relatively low, partly due to the absence of dramatic confrontation or visible contestation. Technology, in this context, tends to amplify a singular, dominant narrative rather than facilitate pluralistic debate. This outcome underscores the broader theoretical insight that digitalization, when embedded within a tightly controlled political environment, is

4.3 Case 3: Vietnam (A Socialist Rule-Of-Law State in Digital Transition)

4.3.1 Legal and historical framework

A decisive turning point in the institutionalization of parliamentary questioning in Vietnam occurred in mid-1994, when the Ninth National Assembly organized the first

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[17] Lai, Linette. (2020, Sept 5). "In-principle agreement to live-stream Parliament sittings." The Straits Times.

nationwide live-televised interpellation session.[18] Since then, live broadcasting has become a standard feature of questioning sessions. In terms of transmission infrastructure, in addition to national television (VTV), multiple media outlets simultaneously livestream questioning sessions on digital platforms such as YouTube and Facebook, substantially expanding public access and visibility.

With regard to post-questioning institutionalization, since approximately 2015 the National Assembly has introduced a model of "re-interpellation," requiring members of the Government to report on the implementation of commitments made during questioning. Interpellation resolutions are now issued at each session, specifying tasks, timelines, and responsibilities. In parallel, the National Assembly has placed increasing emphasis on voter petitions and public opinion. The former Committee on Citizen Petitions under the Standing Committee has been upgraded to the Committee on Citizen Petitions and Supervision, which reports monthly on voter petitions, public concerns, and feedback gathered from the press and social media. This committee has also cooperated with Viettel to develop an online voter-petition management system, scheduled for completion by 2025.[19]

From a technological perspective, deputies have been equipped with tablets and internal applications to support questioning activities. While the National Assembly's electronic portal rapidly publishes session-related information, detailed transcripts of individual questioning sessions remain largely internal and are not yet publicly released.

Over the past three decades, Vietnam's questioning practice has evolved from limited internal disclosure to broad transparency, and more recently toward transparency combined with structured post-audit mechanisms and experimental forms of public listening through petitions and digital media.

4.3.2 Application of technology

Interpellation resolutions adopted by the National Assembly constitute a key legal instrument for post-questioning monitoring, identifying unresolved problems and

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[18] Le Nhung - Thu Ha (2011), "From pre-approved speeches to live television broadcast", Vietnamnet newspaper, January 8, 2011.
[19] Hoang Ngoc (2025), "Committee on Citizen Petitions and Supervision Training on the System for Managing Voter Petitions and Complaints and Denunciations", People's Representatives Newspaper, October 15, 2025.

imposing deadlines on governmental responses. Follow-up questioning sessions further reinforce expectations of progress and compliance. The Committee on Citizen Petitions and Supervision serves as the institutional focal point for receiving voter petitions and monitoring governmental responses, while also tracking media reporting and online public opinion.

Vietnamese media actively function as informal "reminder mechanisms," exerting pressure to ensure follow-up on commitments and conducting what may be described as post-interpellation checks. Public opinion is collected through multiple channels, including formal petitions, press reporting, social media, and constituency meetings held by deputies prior to each parliamentary session.

Overall, post-questioning activities in Vietnam have received significantly greater attention than in earlier periods. Although follow-up mechanisms may at times remain formalistic and lack strong sanctions for non-compliance, the conceptual and procedural foundations of post-questioning oversight have been established, creating conditions for further institutional development.

4.3.3 Substantive outcomes

Although the proportion of voter petitions that are ultimately transformed into formal parliamentary questions is difficult to quantify, such petitions constitute an important source for committees when identifying salient issues for questioning. Transcripts of questioning sessions are prepared on the same day but are circulated internally rather than publicly released. Nevertheless, archived videos on digital platforms and extensive media coverage ensure that the substance of questioning is publicly known within hours.

In several instances, questioning sessions have contributed to concrete policy adjustments, including reforms related to fuel taxation, responses to examination fraud, and measures addressing illegal lending practices. While questioning does not directly trigger dismissals, ministers who provide hesitant or unsatisfactory answers may experience a decline in political credibility, a dynamic reflected in mid-term confidence votes conducted by the National Assembly.[20]

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[20] Trung Hung (2023), "Results of the confidence vote for 44 people holding positions elected and approved by the National Assembly", Nhan Dan newspaper, October 25, 2023.

In terms of data capacity, the National Assembly currently lacks a specialized unit dedicated to large-scale analysis of public opinion data. The online monitoring system developed by Viettel primarily supports advisory and operational functions and has not yet been fully leveraged to inform questioning practices. Data infrastructure remains fragmented: the electronic portal exists, but no official open datasets on questioning, draft legislation, or voter feedback are available, limiting systematic reuse and analysis.

4.3.4 Evaluation based on the three axes of transformation

4.3.4.1 Technical efficiency

Compared with earlier periods, technical efficiency has improved markedly. Questioning procedures are more structured, and the volume of questions has increased. Nonetheless, significant potential remains for deeper technological integration and analytical sophistication.

4.3.4.2 Transparency and accountability

Transparency is high within the existing framework, with livestreamed sessions and relatively free press coverage. Accountability mechanisms have strengthened through the issuance of interpellation resolutions and mandatory governmental reports, although further institutionalization is required to ensure consistent enforcement.

4.3.4.3 Restructuring of power

Oversight capacity has increased as the National Assembly has adopted a more proactive role. Public influence on the agenda has expanded indirectly through voter petitions and media pressure, exemplified by the questioning of the Minister of Transport on vehicle registration issues in June 2023. However, this restructuring occurs within a system of unified state power, characterized by division of labor, coordination, and internal control rather than adversarial opposition. Core political authority remains concentrated in the Party and the Government.

According to the proposed classification framework, Vietnam currently operates at Level II, while gradually progressing toward Level III. Transparency and interaction are well established, but data governance and institutionalized accountability remain in early stages. The National Assembly has yet to develop an open database of parliamentary questions or a formal digital channel through which citizens can submit questions directly.

4.3.5 Limitations and remaining challenges

To progress toward Level III of digital transformation in parliamentary questioning, Vietnam faces several interrelated challenges.

First, limitations in human resources and technological capacity constrain the ability to process and analyze large volumes of voter petitions and online public commentary. Enhancing data analytics capabilities—particularly in aggregating, filtering, and interpreting public feedback—is therefore a critical prerequisite.

Second, challenges persist with respect to deliberative standards. Improving the quality of questioning requires concise, focused inquiries and precise, non-evasive responses, while simultaneously preserving a culture of respect and avoiding populist dynamics that may undermine substantive oversight.

Third, heightened transparency in the digital environment increases vulnerability to misinformation. This necessitates the development of rapid media-response mechanisms capable of correcting false narratives while maintaining political stability.

Finally, as the National Assembly moves toward greater openness and potential publication of parliamentary data, a comprehensive legal framework on data protection and privacy becomes indispensable to safeguard personal information.

Between 1994 and 2025, parliamentary questioning in Vietnam has undergone a substantial transformation—from an internal institutional practice to a nationally visible political and media event. While digital technology has played an enabling role, the primary drivers of this evolution have been institutional reform and growing societal expectations for accountability and participation. These factors, rather than technology alone, underpin Vietnam's gradual progression toward Parliamentary Questioning 4.0.

Table 2

Vietnam's gradual progression toward Parliamentary Questioning 4.0

Country	Technical Efficiency	Transparency and Accountability	Restructuring of Power	Level of Digital Transformation
United Kingdom	High (advanced digital ICT; drawback: excessive performative noise)	Very high (near-complete transparency; accountability enforced through elections and a free press)	Relatively strong (Parliament and public opinion exert substantial influence over the executive)	Level III (open records and open data used for monitoring), approaching Level IV (e-petitions)
Singapore	Very high (efficient and disciplined e-Parliament system)	Selective transparency; low public accountability (few visible sanctions)	No significant change (agenda controlled by the ruling party; limited public participation)	Level II+ (livestreaming and digitized records), with Level III technical elements but lacking data sharing and feedback loops
Vietnam	Moderate to high (continuous system upgrades; multi-channel livestreaming entails higher costs)	High transparency (televised sessions and open press); medium accountability (monitoring mechanisms and confidence votes)	Gradually increasing (stronger role of the National Assembly; indirect public influence)	Level II, progressing toward Level III (interpellation resolutions and voter petitions, with further development of open data required)

5 TECHNOLOGY AND THE SHAPING OF PARLIAMENTARY QUESTIONING

5.1 Institutional conditions shaping the impact of technology

Comparative analysis of digital transformation in parliamentary questioning demonstrates a consistent but often misunderstood pattern: similar technologies generate markedly different outcomes across political systems. The reason is straightforward yet theoretically significant—technology does not operate autonomously. Its effects are mediated, filtered, and ultimately determined by institutional and socio-political conditions.

The first mediating factor is the media environment. In systems characterized by a free and pluralistic press, such as the United Kingdom, digital tools readily enhance transparency, visibility, and procedural efficiency. By contrast, in jurisdictions where media remains closely regulated, as in Singapore, technology improves administrative performance but contributes only marginally to substantive oversight. Vietnam occupies an intermediate position: although traditional media operates under constraints, social

media platforms partially compensate by enabling horizontal information flows and public scrutiny beyond formal channels.

The second condition concerns regulatory frameworks and algorithmic governance. Digital dissemination of parliamentary information can be amplified or constrained by legal and technical controls. While the UK and Vietnam allow relatively open circulation of political content, Singapore's regulatory approach, exemplified by the Protection from Online Falsehoods and Manipulation Act (POFMA 2019), demonstrates how legal interventions can significantly narrow the democratic potential of digital tools by shaping what information circulates and how it is prioritized.

A third determinant is institutional capacity. Parliaments that invest strategically in digital infrastructure, data governance, and professional expertise are better positioned to translate technology into oversight power. The UK and Singapore illustrate how strong administrative capacity enhances technological leverage, whereas limited integration between data systems and oversight mechanisms can dilute impact, regardless of technological sophistication.

Finally, political culture plays a decisive role in shaping interaction. A deliberative culture that values contestation and public justification, as in the UK, encourages active engagement and substantive questioning. Conversely, a conflict-averse culture, such as Singapore's, tends to prioritize efficiency and consensus over adversarial scrutiny. In Vietnam, technology has been broadly welcomed by both legislators and the public, reinforcing societal expectations for a more assertive oversight role by the National Assembly.

Taken together, these factors confirm that political and social institutions, not technology itself, determine whether digitalization becomes a driver of democratic accountability or merely an accessory reinforcing existing power arrangements.

5.2 Theoretical consequences

Revisiting the core research questions and theoretical premises of this study, the comparative examination of three parliamentary systems over sustained periods of technological adaptation yields several important theoretical implications.

First, technology alters the nature of parliamentary questioning only when transparency is coupled with an institutionalized feedback loop. In the UK, publicly

accessible information feeds into electoral accountability and media scrutiny, creating tangible consequences for officeholders. In Vietnam, a comparable transformation would occur if post-questioning commitments were legally formalized and systematically monitored, shifting questioning from a symbolic display of authority to a mechanism of enforceable accountability.

Second, technological advancement does not automatically translate into deeper democratization. While algorithmic governance and digital platforms enhance informational efficiency, they cannot substitute for political will. Democracy ultimately depends on elites' readiness to share power and accept scrutiny—conditions that no technological innovation can generate independently.

Third, digital transformation has reshaped political communication by aligning parliamentary activity with media logic. This development produces ambivalent effects. On the positive side, political processes become more visible and accessible to citizens. On the negative side, it risks fostering a "performance syndrome," in which parliamentarians prioritize visibility and personal branding over problem-solving, while citizens increasingly consume politics as entertainment rather than governance.

Fourth, more advanced technology does not necessarily result in more effective oversight. Although digital tools reduce information costs, the efficacy of surveillance depends on underlying incentive structures. In the UK, competitive elections motivate responsiveness. In Vietnam, the ruling party's need to sustain public trust creates incentives for the National Assembly to exercise substantive oversight. In both cases, technology functions as a facilitator rather than a causal driver.

In sum, technology neither democratizes nor de-democratizes parliamentary questioning by itself. It amplifies and accelerates the institutional dynamics already embedded within a political system. A genuine transformation in the nature of questioning—one that redefines power relations—emerges only when digital innovation is aligned with profound institutional reform.

6 DISCUSSION

To enhance the substantive effectiveness of parliamentary questioning, the Vietnamese National Assembly should continue its transition toward Parliamentary Questioning 4.0, with a strategic focus on achieving Level III and Level IV digitalization.

This transformation requires a combination of technological infrastructure, institutional discipline, and selective adaptation of international experience, rather than an uncritical replication of foreign models.

6.1 First, establishing an open and standardized questioning database should be treated as a structural priority

An effective digital transformation cannot be achieved without a unified data architecture. The National Assembly should adopt binding data standards to ensure that all questioning sessions, responses, and follow-up outcomes are systematically recorded in a structured and machine-readable format. Drawing on the UK experience, the development of an Open API would enable public access, academic research, and civic-tech initiatives, thereby expanding societal participation beyond the parliamentary chamber. Technological investment should prioritize advanced search functions, Vietnamese-language speech recognition for automatic transcription and subtitling, and AI-assisted retrieval systems comparable to Singapore's Hansard digitization. At the same time, robust legal safeguards on data security and privacy are indispensable, including clear rules on anonymizing personal data in publicly accessible petitions and feedback.

6.2 Second, the post-interpellation process must be fully institutionalized to convert questioning into measurable accountability

Questioning achieves real oversight only when commitments made during interpellation are translated into enforceable obligations. Each governmental response should therefore be linked to explicit performance indicators, implementation timelines, and reporting responsibilities. The National Assembly should publicly announce a fixed schedule for reviewing the execution of interpellation conclusions, reinforcing predictability and transparency. In parallel, an online citizen feedback mechanism should be established to collect public assessments of policy implementation outcomes, allowing parliamentary oversight to be informed not only by administrative reports but also by lived societal experience.

6.3 Third, international experience should be selectively internalized rather than mechanically transplanted

From the UK, Vietnam can draw valuable lessons on transparency standards, traceability of political commitments, and systematic evaluation of questioning outcomes, including the practice of publishing periodic analytical reports on parliamentary questions and answers. The Hansard Society's approach to surveying public perceptions of parliamentary scrutiny offers a useful reference for assessing democratic impact beyond formal procedures. Singapore's experience provides insights into process optimization and AI-supported record management; however, such techniques should be applied cautiously to avoid reducing questioning to a purely formalistic exercise devoid of substantive contestation. The central lesson is that technology should serve deliberation and accountability, not merely efficiency.

Taken together, these policy implications suggest that the success of Parliamentary Questioning 4.0 in Vietnam depends less on technological sophistication per se than on the alignment between digital tools, institutional incentives, and democratic objectives. When embedded within a coherent oversight framework, digital transformation can elevate questioning from a procedural ritual to a dynamic mechanism of public accountability.

7 CONCLUSIONS

This study demonstrates that digital technology does more than streamline parliamentary questioning; when embedded institutionally, it has the capacity to recalibrate oversight power itself. Such transformation occurs only when data, public feedback, and digital interaction are formally integrated into the questioning architecture rather than treated as auxiliary tools. The comparative analysis reveals distinct trajectories: the United Kingdom has consolidated technology as an instrument of substantive accountability; Singapore has achieved procedural enhancement without altering underlying power dynamics; and Vietnam is in a transitional phase, showing meaningful progress toward a more flexible, effective, and participatory oversight model.

By introducing the concept of Parliamentary Questioning 4.0, the paper advances a four-level digitalization model and a three-axis comparative framework to explain how

technology interacts with institutional design. The findings underscore that technology does not autonomously democratize oversight; it amplifies existing institutional logics. Accordingly, Parliamentary Questioning 4.0 becomes transformative only when digital innovation is coupled with deliberate institutional reform. When this condition is met, technology not only brings parliament closer to citizens but also channels citizens' voices into parliamentary deliberation, revitalizing questioning as a transparent, responsive, and authoritative mechanism of democratic control.

Although the empirical analysis focuses on the United Kingdom, Singapore, and Vietnam, the analytical framework developed in this article has broader applicability. The four-level model of Parliamentary Questioning 4.0 can be used to examine digital questioning practices in other East Asian legislatures, hybrid political regimes, and emerging digital parliaments where institutional reform and technological adoption unfold simultaneously. By emphasizing institutional configuration rather than regime type, the framework offers a transferable tool for comparative analysis across diverse political and constitutional contexts.

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All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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