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Trust engineering and urban mediation: An Info-Communicational Analysis of Human-AI interaction in Smart city public services

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Abstract

The integration of Artificial Intelligence (AI) into smart city public services is redefining the institution-citizen relationship. This article examines the determinants of user trust in a public service chatbot within the Moroccan context, articulating contributions from Information and Communication Sciences, the Technology Acceptance Model, and algorithmic trust theories. Based on a questionnaire survey of 300 users of the CHAT-ONCF chatbot and a PLS-SEM approach, we test five hypotheses on the relationships between perceived usefulness, algorithmic transparency, cognitive trust, and engagement intention. Results reveal that algorithmic transparency is a significantly stronger predictor of trust than perceived usefulness, inverting the classical TAM hierarchy. Trust partially mediates the effect of transparency on engagement. These findings advocate for a responsible communicational design of urban AI and contribute to a contextualized theory of public AI acceptability in the Global South.

Key words: Algorithmic trust, chatbot, digital mediation, Human-AI interaction, Smart City.

1. Introduction

According to the latest report from the Digital Development Agency (ADD, 2025), 67% of Moroccan public administrations have initiated at least one AI integration project in their citizen relations, compared to 23% in 2022. This acceleration — one of the fastest on the African continent — is part of the national "Maroc Digital 2030" strategy and responds to converging imperatives: state modernisation, reduction of transaction costs, and alignment with international e-government standards. Yet available adoption studies suggest a paradox: while the supply of smart interfaces is expanding, only 41% of users report trusting the responses provided by public conversational agents (HCP, 2024). This gap between technological deployment and social appropriation constitutes the empirical starting point of the present research.

Far from being a mere conjunctural indicator, this trust deficit questions the very heart of the Smart City project as it unfolds in Morocco. It refers to what Pasquale (2015) calls the "black box society": a configuration in which algorithmic decisions structure access to public services without citizens being able to decipher their logic. From this perspective, the question is no longer whether Moroccan cities are adopting AI — they are, massively — but under what communicational modalities

this adoption can be made compatible with the democratic requirements of intelligibility, accountability, and inclusion.

The concept of the Smart City, inscribed in the wake of the New Development Model (NMD, 2021), takes shape through a series of converging initiatives: the "Villes sans bidonvilles" programme, connected mobility projects led by ONCF, the e-government platforms of the Ministry of Digital Transition, and pilot experiments conducted in metropolises such as Casablanca, Rabat, Agadir, and Marrakech. These approaches are part of a global movement that aims, according to Townsend (2013), to make informational infrastructure the nervous system of urban governance. This urbanistic ambition is accompanied by a growing deployment of artificial intelligence interfaces — in particular conversational agents (chatbots) — in interactions between public administrations and users. These devices are not mere technical tools: they constitute, in Jeanneret's (2014) sense, "third-type media", i.e. forms of communication that profoundly transform the modalities of the service relationship, substituting an algorithmic entity endowed with an appearance of intelligibility, and sometimes simulated empathy, for the human agent.

1.1. Trust in AI: An Information-Communication Problem

Trust is a fundamental relational variable. In the social sciences, it is classically defined as a disposition to accept vulnerability towards another actor, on the basis of a positive expectation regarding their behaviour (Mayer, Davis & Schoorman, 1995). Applied to Human-AI interaction, this definition becomes considerably more complex: the entity towards which the user extends trust is neither an individual nor a clearly identified institution, but an opaque system whose decision-making mechanisms remain, for the vast majority of users, entirely inaccessible.

This constitutive opacity of AI — referred to today as the "black box" (Pasquale, 2015) or "algorithmic opacity" — represents a major challenge for the Information and Communication Sciences. Indeed, if communication is defined as a process of co-construction of meaning between actors sharing a minimum of common references (Winkin, 1996), what happens when one of the protagonists in the exchange is a system whose intentions and reasoning are not readable by the other? Trust, in this context, can no longer rest on traditional intersubjective reciprocity: it must be engineered, that is, deliberately constructed through design, institutional communication, and regulation.

It is precisely this issue of trust engineering that this article sets out to examine, using as its observational field a particularly instructive case: the chatbot deployed by ONCF (Office National des Chemins de Fer du Maroc) as part of its strategy to digitalise customer relations. This system has the advantage of combining several dimensions — public service, urban mobility, multilingualism (Arabic, French, Darija), diversity of user profiles (resident citizens and international tourists) — making it a privileged observatory of the information-communication dynamics at work in the Moroccan Smart City.

1.2. Research Problem and Questions

The central research problem of this article may be formulated as follows:

In the Moroccan socio-cultural context, what are the cognitive, affective, and institutional determinants that condition user trust in a public service chatbot, and to what extent can these determinants be mobilised as levers of a communicational trust engineering approach?

From this problem, three operational research questions arise:

RQ1. To what extent does perceived usefulness (TAM) influence cognitive trust in the ONCF chatbot, and is this relationship moderated by user profile (citizen vs. tourist)?

RQ2. What role do algorithmic transparency signals and institutional data protection guarantees play in building lasting trust towards AI systems in public services?

RQ3. Does the digital mediation operated by a chatbot transform the nature of the public service relationship, and if so, according to what information-communication modalities?

1.3. Research Hypotheses

On the basis of the theoretical traditions mobilised (TAM, UTAUT, initial trust model, AI disclosure literature) and the specificity of the Moroccan socio-institutional context, we formulate five central hypotheses to be empirically tested within this research.

H1. The perceived usefulness (PU) of the CHAT-ONCF chatbot exerts a positive and significant effect on users' cognitive trust (CT).

H2. Perceived algorithmic transparency (PT) exerts a positive and significant effect on cognitive trust (CT), and this effect is greater than that of perceived usefulness.

H3. Cognitive trust (CT) exerts a positive and significant effect on users' behavioural engagement intention (BI).

H4. Cognitive trust (CT) mediates the relationship between algorithmic transparency (PT) and engagement intention (BI).

H5. User profile (resident citizen vs. tourist) moderates the relationship between algorithmic transparency (PT) and cognitive trust (CT), with the effect being more pronounced among resident citizens.

To address these hypotheses, the article is organised as follows. We begin by deploying a literature review articulated around three conceptual nodes: digital mediation in public services, theories of cognitive trust in technological contexts, and the specificities of Human-AI interaction. We then present the methodological framework, based on a questionnaire survey and structural equation modelling. We subsequently report the empirical results. In the final section, we present the theoretical and practical implications, limitations, and prospects for smart urban AI governance in Morocco.

2. Theoretical foundations and state of the art

2.1. Digital Mediation and Technological Acceptance

The notion of mediation, inherited from the work of Davallon (1992) and Jouët (1993), designates the process by which a technical or symbolic device intervenes in a relationship to transform its terms. The transition from the physical counter to the conversational interface constitutes what Merzeau (2009) calls a revolution of presences: in Smart Cities, AI interfaces no longer only mediate a punctual transaction, but participate in the construction of a continuous, personalized, and predictive relationship between the city and its inhabitants (Cardon, 2015). Misuraca and van Noordt (2020) have shown that this algorithmic mediation tends to redistribute information asymmetries between users and institutions, sometimes to the detriment of populations least equipped in digital capital. For Morocco, Berrada and Kettani (2021) have highlighted a structural tension between the institutional supply of digital services and the effective demand of users, attributed in part to a trust deficit. Moroccan multilingualism (classical Arabic, Darija, French, English) adds its own complexity, as language registers have asymmetric implications in terms of institutional legitimacy (Ziamari & De Ruiter, 2020).

The Technology Acceptance Model of Davis (1989) postulates that the intention to use a technological system is determined by perceived usefulness (PU) and ease of use (PEOU). Venkatesh et al. (2003), with the UTAUT, responded to the criticisms of a-sociality of TAM by integrating moderators such as social influence and facilitating conditions, particularly relevant in collectivist contexts. In parallel, McKnight, Choudhury, and Kacmar (2002) developed an initial trust model distinguishing perceived benevolence, integrity, and competence, taken up for chatbots by Følstad and Brandtzæg (2017). Gefen, Karahanna, and Straub (2003) showed that TAM and trust are complementary: trust acts as an antecedent of perceived usefulness by reducing perceived uncertainty. Heerink et al. (2010), with their Almere Model, introduced the notion of technological anxiety as a negative moderator of trust, particularly relevant for vulnerable populations or those unfamiliar with conversational interfaces.

2.2. Human-AI Interaction: An Info-Communicational approach

Reeves and Nass (1996) theorised the Computers Are Social Actors (CASA) paradigm, showing that humans spontaneously apply social schemas to their interactions with machines. Liao, Geyer, and Mukherjee (2018) identify three informational needs to maintain trust: accuracy, completeness, and contextualization. Radziwill and Benton (2017) distinguish four dimensions of chatbot quality: content, conversation, relationship, and overall experience. From the ICS side, Salaün and Arsenault (2009) distinguish cognitive mediation (which facilitates understanding), pragmatic mediation (which facilitates action), and institutional mediation (which legitimizes the source). This triptych allows trust to be analysed not as a monolithic variable but as a multidimensional construction.

Recent works (2022–2025) have renewed the understanding of trust dynamics. Bansal et al. (2024) demonstrate a "humanization paradox": the more the chatbot appears human, the more errors are perceived as a betrayal. Shin (2023) identifies four dimensions of algorithmic trustworthiness — FATE: Fairness, Accountability, Transparency, Explainability — now structuring for European regulators (AI Act, 2024). In the Maghreb, El Amrani and Bouazza (2024) confirm a linguistic asymmetry: Darija generates stronger proximity trust but weaker institutional trust. Tlili et al. (2023) show that Global South users display high initial trust in AI systems perceived as vectors of modernization, but that this trust is more fragile in the face of failures. The literature thus constituted allows us to formulate an integrative conceptual framework, represented in Figure 1.

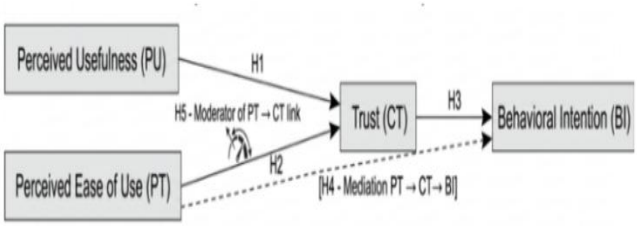

Figure 1: Research Conceptual Model

PU: Perceived Usefulness

PT: Perceived Algorithmic Transparency

CT: Cognitive Trust

BI: Behavioural Intention

3. Methodology

3.1. Design and Field

This research is grounded in a positivist paradigm and adopts a deductive quantitative design. Structural equation modelling (SEM) constitutes the core of the analytical apparatus (Hair, Ringle & Sarstedt, 2011). The choice of a PLS-SEM approach via SmartPLS 4.0 is justified by the exploratory-confirmatory nature of the study and by the sample size (Ringle, Wende & Becker, 2015). The CHAT-ONCF chatbot constitutes a relevant field: it is a system in direct interaction with heterogeneous users (regular travelers, citizens, tourists), mobilizing natural language processing technologies in a multilingual context. As the ONCF is an emblematic public operator, interaction with its chatbot activates trust mechanisms based on organizational reputation (McKnight et al., 2002).

3.2. Instrument, Sample, and Procedure

The instrument comprises 12 items distributed across four latent constructs (3 items each), measured on a five-point Likert scale: Perceived Usefulness (PU, Davis, 1989), Algorithmic Transparency (PT, Liao & Mukherjee, 2021), Cognitive Trust (CT, McKnight et al., 2002), and Engagement Intention (BI, Venkatesh et al., 2003). These items were formulated with direct reference to ONCF AI services to ensure content validity. The constructs and their example items are presented in Table 1.

Following Liao et al. (2020) and Shin's (2023) FATE framework, PT was operationalised as the perception of disclosure signals *emitted* by the system (sources, data uses, response limits) rather than as the user's subjective feeling of understanding, in order to preserve discriminant validity from perceived ease of use.

Table 1: Constructs, Items, and Theoretical Anchoring

Construct	No. Item	Example Item	Anchoring
Perceived Usefulness (PU)	3	"AI allows me to find information more efficiently"	Davis (1989)
Transparency (PT)	3	"The chatbot makes the sources and limits of its responses visible to me"	Liao et al. (2020); Shin (2023)
Cognitive Trust (CT)	3	"I consider AI a reliable source of information"	McKnight et al. (2002)
Engagement Intention (BI)	3	"I intend to use these AI services regularly"	Venkatesh et al. (2003)

The survey was distributed between October and December 2025 via ONCF channels (mobile app, web portal, station QR codes) as well as institutional social networks. The target population includes users of digital public transport services in Morocco: resident citizens regularly in contact with digital services, and national and international tourists who used ONCF online services in the past six months. After cleaning incomplete responses and aberrant patterns, 300 valid responses were retained. The sample consists of 61.3% men and 38.7% women, with a mean age of 34.2 years ($\sigma = 9.7$), comprising 72.7% resident citizens ($n = 218$) and 27.3% tourists ($n = 82$). The most represented socio-professional categories are executives and intermediate professions (38%), students (27%), and tourists on business or leisure trips (18%).

3.3. Common Method Bias Control

Common method bias (CMB) was controlled along three lines. Procedurally (Podsakoff et al., 2003), anonymity was guaranteed, items were presented in randomised order, scale anchors were alternated, and a temporal separation was introduced between predictor and criterion blocks. Statistically, Harman's single-factor test indicates that the first factor explains 34.7% of total variance, below the 50% threshold. The latent marker approach (Lindell & Whitney, 2001) yields partial correlations below 0.15 between an unrelated construct and the focal constructs. Finally, Kock's (2015) full collinearity test was performed: all inner-model VIFs are below 3.3 (range: 1.42–2.87), well below the 3.3 threshold that signals method bias contamination in PLS-SEM. The three diagnostics converge: CMB does not constitute a serious threat to the validity of the results.

4. Results

4.1. Descriptive Statistics and Psychometric Qualities

Descriptive statistics reveal that Perceived Usefulness has the highest mean (M = 3.87; SD = 0.72), indicating relatively strong agreement among respondents that AI systems add value to urban management. Engagement Intention also shows favourable values (M = 3.71; SD = 0.81). In contrast, Algorithmic Transparency presents the lowest mean score of the entire instrument (M = 2.94; SD = 0.96), reflecting a mixed and often critical perception of the ability to understand how AI systems function. This result constitutes one of the most salient findings of the study and warrants particular analytical attention in the discussion. Cognitive Trust is at an intermediate level (M = 3.42; SD = 0.88), suggesting conditional and potentially fragile trust. Composite reliability (CR) and Cronbach's alpha exceed 0.70 for all constructs; AVE is above 0.50, confirming convergent validity (Table 2).

Table 2: Descriptive Statistics and Psychometric Indicators

Construct	M	SD	α	CR	AVE
PU	3.87	0.72	0.831	0.887	0.663
PT	2.94	0.96	0.863	0.911	0.718
CT	3.42	0.88	0.844	0.895	0.681
BI	3.71	0.81	0.852	0.902	0.697

4.2. Discriminant Validity

The Fornell-Larcker criterion (1981) is met: the square root of the AVE of each construct (diagonal of Table 3) is greater than its correlations with the other constructs. The HTMT ratio (Henseler et al., 2015), calculated as a complement, presents values between 0.54 and 0.78, below the conservative threshold of 0.85. The strongest correlation is observed between PT and CT (r = 0.67), ahead of that between PU and CT (r = 0.54), which foreshadows the central result of the study.

Table 3: Correlation Matrix (Fornell-Larcker; √AVE on diagonal)

	PU	PT	CT	BI
PU	0.815	—	—	—
PT	0.49**	0.847	—	—
CT	0.54**	0.67**	0.825	—
BI	0.58**	0.61**	0.71**	0.835

*** p < 0.001 (bilateral). Diagonal: square root of the AVE.*

4.3. Structural model and hypothesis testing

The PLS model fit indices (Henseler, Hubona & Ray, 2016) are satisfactory: SRMR = 0.058 (< 0.08), NFI = 0.91 (> 0.90), VIF < 3.3 for all indicators. Stone-Geisser Q^2 values are positive (CT: 0.34; BI: 0.39), attesting to predictive relevance. The R^2 of Cognitive Trust reaches 0.548 and that of Engagement Intention 0.612, levels deemed substantial. The standardized coefficients (Table 4) confirm hypotheses H1 to H4: Algorithmic Transparency is the most powerful predictor of CT ($\beta = 0.61$; $p < 0.001$), ahead of Perceived Usefulness ($\beta = 0.29$; $p < 0.001$). CT exerts a direct effect on BI ($\beta = 0.58$; $p < 0.001$). Bootstrap (5,000 resamplings) confirms partial mediation of CT between PT and BI (indirect $\beta = 0.35$; 95% CI = [0.27; 0.44]).

Table 4: Structural Coefficients and Hypothesis Tests

H	Relationship	β	t	p	Decision
H1	PU → CT	0.29	4.72	< 0.001	Supported
H2	PT → CT	0.61	9.84	< 0.001	Supported
H3	CT → BI	0.58	10.17	< 0.001	Supported
H4	PT → CT → BI (mediation)	0.35	7.63	< 0.001	Supported (partial)
—	R^2 CT / R^2 BI	0.548 / 0.612	—	—	Substantial

4.4. Multi-Group Analysis (H5)

The multi-group analysis (MGA) tests hypothesis H5 relating to moderation by user profile. Among resident citizens (n = 218), the PT → CT link is significantly stronger (β = 0.64) than among tourists (β = 0.55; Δβ = 0.09; p = 0.041). H5 receives modest support: the moderation effect, while statistically significant (p = 0.041), is of small magnitude (Δβ = 0.09) and approaches the conventional decision threshold. The pattern remains theoretically interpretable — citizens, as recurrent users of the public service, develop more precise institutional expectations and are accordingly more sensitive to transparency signals — but its empirical robustness should be confirmed on larger sub-samples.

Conversely, tourists present a higher mean Perceived Usefulness score (M = 4.11 vs 3.78; p < 0.01), probably due to novelty effects and the absence of comparison with a national reference service. Table 5 summarizes the differences observed between the two sub-populations.

Table 5: Comparison of Coefficients by Sub-Group

Relationship	Citizens (n=218)	Tourists (n=82)	Δβ	p-value
PU → CT	0.27	0.34	-0.07	0.168
PT → CT	0.64	0.55	0.09*	0.041
CT → BI	0.60	0.53	0.07	0.092
Mean PU Score	3.78	4.11	-0.33**	< 0.01

*Note. * p < 0.05; ** p < 0.01. H5 supported: the PT → CT effect is significantly stronger among citizens.*

5. Discussion

5.1. Transparency as the Pillar of Trust: A Comparative Reading

The most structuring result is the primacy of Algorithmic Transparency over Perceived Usefulness as a predictor of Cognitive Trust. This result enters into productive dialogue with TAM (Davis, 1989): in the context of AI public services in Morocco, the question is not so much "is this system useful to me?" but "does this system seem honest and understandable to me?". This nuance invites extending TAM toward a model that explicitly integrates the communicational dimension of technological acceptance. Our results also resonate with comparable works. Schmidt and Weber (2023) also identify transparency as a major determinant of trust in Germany, but with a lower β (0.42 vs. 0.61), presumably due to stronger diffuse institutional trust — what Luhmann (1979) calls systemic trust. Conversely, Wang, Liu, and Chen (2024) observe in China a primacy of perceived usefulness (β_PU = 0.58; β_PT = 0.31), which they attribute to a political culture where efficiency takes precedence over the visibility of mechanisms. There is therefore no universal hierarchy of antecedents of algorithmic trust: it is the historical configuration of the citizen-institution relationship that weights the determinants.

From an ICS perspective, this result can be interpreted through the lens of the concept of institutional mediation of Salaün and Arsenault (2009). Algorithmic transparency functions as a legitimacy signal: by making its reasoning partially readable, the AI system endows itself with a form of communicational authority that compensates for its intersubjectivity deficit. Technical opacity can thus be partially compensated by a deliberate communication policy about the system's functioning, its limits, and the data it mobilizes. This is precisely what Liao and Mukherjee (2021) designate under the term AI disclosure, which we propose to extend to the concept of communicational trust engineering. This conceptual shift has operational implications: it invites designers to no longer think of transparency as a regulatory requirement to be minimally satisfied, but as a strategic lever for the institutional relationship as a whole.

5.2. Communicational Design of Trust

The relatively low score of Algorithmic Transparency (M = 2.94) signals a significant institutional distance between designers and users: the majority of respondents do not understand how AI processes their requests, nor how their data are protected. Following Cardon (2015), one can read here a deficit of what he calls "algorithmic capital" — the capacity to decode, anticipate, and orient the logics of information processing systems. This finding fits within a broader framework of digital inequalities: the rise of AI interfaces in public services often precedes, in Morocco, the establishment of corresponding algorithmic literacy devices. The Smart City thus risks reinforcing pre-existing digital divides rather than resolving them (Ndung'u & Signé, 2020).

The results allow sketching a communicational design of trust articulated around three levers. The first is the readability of reasoning: clarification messages ("I am responding based on official timetables updated on [date]") reduce perceived opacity and reinforce cognitive trust, even when they remain schematic. The second is the communicational management of errors: a system that acknowledges its limits and proposes

a human alternative is perceived as more reliable than a system producing an erroneous response with confidence — a phenomenon designated as algorithmic hallucination in the field of natural language processing. The third is visible regulatory compliance: the proactive display of compliance mentions with Law 09-08 (Moroccan equivalent of GDPR, supervised by the CNDP) constitutes a strong institutional signal, likely to reduce informational anxiety and support trust. These three levers are inexpensive to deploy but have a substantial impact on the perception of transparency, the most discriminating variable identified by our model.

5.3. Implications and limitations

This research makes three theoretical contributions. It enriches TAM by demonstrating that, in a Global South public service, algorithmic transparency takes precedence over usefulness as an antecedent of trust. It articulates Francophone ICS (Salaün & Arsenault, 2009) with the quantitative models of Information Systems, via the triptych of cognitive / pragmatic / institutional mediation. It finally opens the way to a contextual theory of public AI acceptability, sensitive to the socio-institutional variables of the Global South. On the managerial level, the results call upon operators like ONCF to integrate contextual explainability devices (sources mobilized, data timestamps, traceability); the CNDP would benefit from establishing an algorithmic readability label visible from the first interaction; the designers of "Morocco Digital 2030" should articulate every urban AI deployment with an algorithmic literacy accompaniment plan.

Three limitations must be made explicit. The cross-sectional nature of the study does not allow for the establishment of strict causal relationships; a longitudinal study measuring the evolution of trust after malfunction episodes would be valuable. Recruitment via ONCF's digital channels introduces a selection bias in favor of already familiar users, excluding non-users who are nonetheless informative. The results obtained on a specific operator cannot be generalized to all Moroccan public services. The research agenda comprises three axes: an experimental study manipulating transparency levels; an ethnographic study mobilizing phenomenological interviews; a comparative inter-African cities study to build a contextualized theory of public AI acceptability.

6. Conclusion

This study pursued a dual objective: to contribute empirically to understanding the determinants of trust in AI systems in Moroccan public services, and to propose an integrative theoretical framework articulating contributions from Human-Computer Interaction, Information and Communication Sciences, and technological acceptance models. The results obtained from a sample of 300 users of digital transport services, analysed by structural equation modelling, converge towards an analytically robust conclusion: in the Moroccan socio-cultural context, algorithmic transparency is the primary determinant of cognitive trust towards AI systems, ahead of perceived usefulness, and decisively conditions user engagement intention.

Theoretically, this result invites a revision of the implicit causal hierarchies of the Technology Acceptance Model (Davis, 1989) and UTAUT (Venkatesh et al., 2003), making the communicational dimension of trust — rather than functional utility alone — the pivot variable of AI acceptance in public service contexts. Practically, the implications for smart urban governance are substantial. Designing a socially sustainable Smart City is not reduced to deploying high-performance technologies: it requires treating trust as a communicational infrastructure in its own right, to be engineered with as much rigour as technical architectures. A communicational design of trust — readability of algorithmic reasoning, transparent data management, multilingual accessibility, visible CNDP/Law 09-08 compliance — is the sine qua non condition for AI interfaces to become genuine mediators of urban inclusion rather than additional vectors of the digital divide.

Ultimately, the question of trust in AI in smart cities is not a technical question. It is a profoundly human, communicational, and political question, which ICS researchers are particularly well equipped to address. It is our collective responsibility to make this voice heard in the governance arenas where the informational architecture of tomorrow's world is being shaped today.

References

1. ADD (2025). Annual report on the digital transformation of Moroccan administrations. Digital Development Agency.

2. Bansal, G., Nushi, B., Kamar, E., Horvitz, E., & Weld, D. S. (2024). Challenges in evaluating human-AI collaboration. Proceedings of the CHI Conference on Human Factors in Computing Systems.

3. Berrada, K., & Kettani, D. (2021). E-Government adoption in Morocco. Journal of e-Government Studies and Best Practices, 12(1), 1-14.

4. Cardon, D. (2015). À quoi rêvent les algorithmes. Paris: Seuil.

5. Davallon, J. (1992). Le musée est-il vraiment un média ? Publics et Musées, 2, 99-123.

6. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of IT. MIS Quarterly, 13(3), 319-340.

7. El Amrani, H., & Bouazza, S. (2024). Adoption des chatbots publics au Maghreb. Revue Africaine de Management Public, 8(2), 45-72.

8. Følstad, A., & Brandtzæg, P. B. (2017). Chatbots and the new world of HCI. Interactions, 24(4), 38-42.

9. Fornell, C., & Larcker, D. F. (1981). Evaluating SEM with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39-50.

10. Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping. MIS Quarterly, 27(1), 51-90.

11. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. Journal of Marketing Theory and Practice, 19(2), 139-152.

12. HCP (2024). National survey on the use of digital public services. High Commission for Planning of Morocco.

13. Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research. Industrial Management & Data Systems, 116(1), 2-20.

14. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based SEM. Journal of the Academy of Marketing Science, 43(1), 115-135.

15. Jeanneret, Y. (2014). Critique de la trivialité. Paris: Éditions Non Standard.

16. Jouët, J. (1993). Pratiques de communication et figures de la médiation. Réseaux, 11(60), 99-120.

17. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. International Journal of e-Collaboration, 11(4), 1-10

18. Liao, Q. V., Mas-ud Hussain, M., Chandar, P., Davis, M., Khazaeni, Y., Crasso, M. P., … & Geyer, W. (2018). All Work and No Play? Conversations with a question-and-answer chatbot in the wild. In Proceedings of the 2018 CHI Conference (pp. 1-13). ACM.

19. Liao, Q. V., & Mukherjee, S. (2021). AI transparency: How much do users need to know? ACM CHI Conference, 1-14.

20. Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance. Journal of Applied Psychology, 86(1), 114-121.

21. Luhmann, N. (1979). Trust and Power. Chichester: Wiley.

22. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. Academy of Management Review, 20(3), 709-734.

23. McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce. Information Systems Research, 13(3), 334-359.

24. Merzeau, L. (2009). Du signe à la trace: l'information sur mesure. Hermès, La Revue, 53, 21-29.

25. Misuraca, G., & van Noordt, C. (2020). AI Watch: Artificial intelligence in public services. European Commission, JRC.

26. Pasquale, F. (2015). The Black Box Society. Harvard University Press.

27. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research. Journal of Applied Psychology, 88(5), 879-903.

28. Radziwill, N. M., & Benton, M. C. (2017). Evaluating quality of chatbots and intelligent conversational agents. Software Quality Professional, 19(3), 25-36.

29. Reeves, B., & Nass, C. (1996). The Media Equation: How People Treat Computers, Television, and New Media Like Real People and Places. CSLI Publications & Cambridge University Press.

30. Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. Boenningstedt.

31. Schmidt, J., & Weber, L. (2023). Algorithmic transparency and trust in public service chatbots: Evidence from Germany. Government Information Quarterly, 40(3), 101823.

32. Shin, D. (2023). Algorithmic trustworthiness: FATE dimensions in public AI. AI & Society, 38(2), 567-585.

33. Tlili, A., Shehata, B., Adarkwah, M. A., et al. (2023). ChatGPT as a case study of using chatbots in education. Smart Learning Environments, 10(1), 15.

34. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425-478.

35. Wang, Y., Liu, X., & Chen, H. (2024). Determinants of citizen trust in AI-powered government chatbots: Evidence from China. Public Administration Review, 84(3), 512-528.

36. Winkin, Y. (1996). Anthropologie de la communication. Paris: De Boeck Université.

37. Ziamari, K., & De Ruiter, J. (2020). Pratiques linguistiques au Maroc. Langage et Société, 169, 47-71.