

Effect of User Characteristics on Digital Inclusivity in E-Justice Systems for Persons with Disabilities

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Abstract

The shift of court processes to digital platforms assumes that users have the requisite skills, confidence, and sense of security to manage legal procedures online without assistance. For people with disabilities, that assumption is especially fragile. This paper investigates how three user-level attributes (digital literacy, perceived trust, and perceived security) affect digital inclusivity in e-justice environments. Framed by the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) and the Social Model of Disability, the research used a sequential explanatory mixed-methods approach. Quantitative data were gathered from 362 court users, judicial officers, and advocates in Nairobi County, Kenya, using stratified random sampling (Cochran's formula, 95% confidence level, 5% margin of error). Covariance-based structural equation modelling (CB-SEM) showed that, when treated alone, user characteristics positively and significantly predict digital inclusivity ($\beta = 0.638$, $p < 0.001$), accounting for 40.7% of its variance. Within the construct, perceived trust was the largest contributor (loading = 0.652), followed by digital literacy (0.620) and perceived security (0.556). Semi-structured interviews with persons who have visual, hearing, and mobility impairments provided qualitative context and triangulation. The study argues that user characteristics matter, but they should not be interpreted as innate shortcomings; rather, they are socially produced abilities shaped by prior institutional experiences. For policy, the evidence suggests that enhancing digital skills, fostering trust, and clarifying security protections must accompany systemic accessibility reforms, not replace them.

Keywords:

digital inclusivity; digital literacy; E-Justice; Kenya; perceived security; perceived trust; persons with disabilities; Social Model of Disability; user characteristics; UTAUT2

Introduction

Modern judicial administration increasingly rests on an unspoken premise: that people can engage independently with online legal services because they have the digital competence, institutional trust, and confidence in security required. Systems for electronic filing, virtual

hearings, and online case tracking are typically designed for a generic user, one able to read conventional interfaces, distinguish trustworthy platforms from fraudulent ones, and manage personal data (Mulcahy & Tsalapatanis, 2022; Quintanilla et al., 2023). Although moving courts online is often argued to expand access, scholars warn that digitisation can also create new exclusions for those who do not fit this assumed profile (Ahmed, 2023). For persons with disabilities, estimated at 16% of the world's population (World Health Organization, 2022).

Three illustrative cases highlight the problem. A litigant with a visual impairment may be digitally capable yet encounter an interface that, despite technical compliance, remains practically unusable. Studies indicate that mere adherence to the Web Content Accessibility Guidelines (WCAG) does not necessarily translate into better usability for visually impaired users, exposing a gap between formal conformity and real access (Vollenwyder et al., 2023). A person with a cognitive disability might trust judicial institutions but struggle with the plain-language supports needed to navigate multi-step filings. Systematic reviews confirm persistent obstacles for people with cognitive disabilities in multi-step digital tasks despite decades of standards work (Gartland et al., 2022; Volkmann et al., 2025), and analyses of government forms reveal recurrent failures to meet plain language criteria that disproportionately harm this group (Martínez et al., 2024). Any court user with an impairment may perceive the system as insecure, not necessarily because of actual technical flaws, but because accessibility practices they rely on (for example, sharing credentials with an assistant) raise legitimate privacy concerns. Research documents that users who are persons with disabilities often fear that third-party access to accounts can expose sensitive disability-related data without adequate consent (Marsh & Milne, 2024), and that privacy protections in many assistive technologies are weak regarding third-party disclosures (Crawford et al., 2024).

These intersecting issues place the user squarely at the centre of digital justice debates, yet e-justice research has typically foregrounded technological and institutional factors over user-side variables (Correia et al., 2024; Yavuz et al., 2022). When scholars do address user characteristics, the focus is frequently on adoption intent rather than on completing legally consequential tasks (Ahmed et al., 2026; Blut et al., 2022; Wu et al., 2026). This omission matters: in legal contexts, procedural mistakes, missed deadlines, incorrectly filled forms, and unintended disclosures have real consequences. Differences in digital literacy, trust, and security perceptions, therefore, affect not just satisfaction but the core question of access to justice. This paper fills that gap by investigating digital literacy, perceived trust, and perceived security as combined determinants of digital inclusivity in e-justice systems for people with disabilities.

Anchored in UTAUT2 and critically viewed through the Social Model of Disability, the study aimed to assess how these characteristics jointly influence digital inclusivity in e-justice. The structure of the paper is as follows. Section two situates the research in UTAUT2 and the Social Model of Disability and reviews empirical evidence on each user characteristic. Section three outlines the mixed-methods approach, sampling, and analysis. Section four reports quantitative evidence on measurement and model testing, enriched by qualitative insights. Section five discusses theoretical and practical implications, and section six concludes with actionable recommendations.

Literature Review

Theoretical Grounding

This research combined two theoretical lenses that are sometimes presented as being at odds but are in fact, complementary for understanding e-justice accessibility. The extended Unified Theory of Acceptance and Use of Technology (UTAUT2) offered a comprehensive account of user-side drivers of technology engagement. Developed by Venkatesh et al. (2012), UTAUT2 extends the original framework to include hedonic motivation, price value, and habit alongside constructs such as performance expectancy, effort expectancy, social influence, and facilitating conditions. Meta-analyses support the model's applicability across contexts, including public-sector digital services (Blut et al., 2022; Marikyan & Papagiannidis, 2025). Yet UTAUT2 often treats user characteristics as relatively fixed personal traits.

The Social Model of Disability provided an important corrective here. Emerging from Mike Oliver's work and advanced by disability scholars, the Social Model argued that disability results not from individual impairments but from environmental and institutional barriers that fail to accommodate diversity (Thorneycroft, 2024; Zhang, 2024). Applied to digital literacy, trust, and security perceptions, this perspective reframed these as socially produced capacities rather than inherent shortcomings. A person's digital literacy reflected the availability and accessibility of training they have received. Their trust in e-justice stems from institutional transparency, dependability, and fair treatment they have experienced, while their sense of security depended on how clearly institutions explain data protection and privacy safeguards. Consequently, this study adopted an integrated stance: user characteristics are important predictors of digital inclusivity, yet they are not external to the system. Instead, they are shaped by the same environmental factors that the Social Model identifies as central targets for intervention. The analytical aim was to understand how user characteristics mediate the link between systemic accessibility and inclusive outcomes rather than to choose between UTAUT2 and the Social Model.

Digital Literacy as a Determinant of Digital Inclusivity

Digital literacy encompasses more than basic technical ability; it includes the cognitive, navigational, and interpretive skills needed to make sense of interfaces, assess risks, and perform transactional tasks accurately (Duan & Dong, 2025). In e-justice settings, digital literacy affects users' ability to find legal information, follow procedural instructions, complete filings, and recover from errors (Melro et al., 2023; Salyzyn et al., 2024).

Studies repeatedly show a strong link between digital literacy and uptake of e-government services. Ahmed et al. (2026) found that user capability significantly shapes perceived ease of use and behavioural intention in e-justice contexts. But accessing a platform does not equate to inclusivity. Increasingly, evidence indicates that digital literacy influences whether users can complete tasks with legal significance, not just whether they log on (Salyzyn et al., 2024; Zhetpissov, 2025). For people with disabilities, literacy challenges are often intensified by inaccessible training, limited assistive technology support, and legal interfaces that are cognitively demanding (Kaarakainen & Saikkonen, 2023).

In Kenya, Karanja and Kimalu (2025) found that persons with disabilities face hurdles such as complex legal language, scarce user guidance, and unfamiliarity with e-justice procedures, leading to lower confidence, higher anxiety, and dependence on third parties, which raises

confidentiality and autonomy concerns. Importantly, digital literacy is not a fixed personal trait but an outcome of institutional supports, design decisions, and capacity-building efforts (Bjælde & Lindberg, 2018). Interventions such as training initiatives, plain-language content, and guided user flows have been shown to reduce literacy-related barriers and improve inclusivity (Al-nuwaier, 2025; Chohan & Hu, 2022).

Perceived Trust as a Determinant of Digital Inclusivity

Perceived trust acted as a crucial mediator in engagement with digital justice platforms, encompassing confidence in system reliability, institutional legitimacy, procedural fairness, and outcome integrity. In judicial settings, trust extends beyond technology acceptance to beliefs about impartiality, accountability, and respect for rights (Reiling & Contini, 2022). Trust conditions whether users are willing to depend on digital platforms for legal actions and whether they accept online interactions as valid alternatives to in-person procedures. Research in e-government and justice-related digital services indicates that trust significantly influences adoption, satisfaction, and sustained use; in high-stakes domains where legal or personal consequences are significant, trust becomes even more determinative (Gupta et al., 2025; Hooda et al., 2022).

For persons with disabilities, trust shortfalls often reflect historical marginalisation and prior negative experiences with legal institutions. Digital justice systems that neglect accessibility and accommodations risk reaffirming feelings of exclusion and institutional neglect (McVeigh, 2025). Studies of persons with disabilities using e-government services show that inaccessible interfaces and poor consultation practices erode confidence in digital public services (Agangiba, 2020). Despite this, trust is frequently operationalised narrowly in e-government research, measured mainly as intention to use rather than as tolerance for errors, procedural outcomes, or help-seeking behaviours.

Perceived Security as a Determinant of Digital Inclusivity

Perceived security captures users' beliefs about the safety of their personal information, the confidentiality of legal data, and a system's resistance to misuse or unauthorised access. In e-justice contexts, these concerns are salient because of the sensitivity of legal records and the harm that could follow data breaches. Empirical work regularly positions perceived security as a precursor to trust and usage in digital government services (Bélanger & Carter, 2008; Kanaan et al., 2023).

Users are less likely to use e-filing and case management tools if they suspect risks of data exposure or cyber vulnerabilities. Such worries are heightened in systems using artificial intelligence, where opacity and automated decision-making add further security anxieties (Grimmelikhuijsen, 2023). For persons with disabilities, security worries intersect with reliance on assistive technologies and intermediary support. Needing help to operate platforms can amplify fears of privacy loss and unauthorised access to sensitive legal information. Elsayed (2026), in a comparative security assessment of virtual and robotic assistive systems, identified unauthorised access, adversarial manipulation, and privacy breaches as major threat vectors, risks that carry over to e-justice contexts where users depend on screen readers, predictive text, and voice recognition.

Although cybersecurity receives attention in e-government studies, few link perceived security directly to justice outcomes. Mayayise (2024), in a review of fifty-one e-government adoption

studies, noted a consistent omission of information security controls, privacy measures, and security awareness in existing frameworks.

Research Gap

Although existing literature affirms the importance of individual user characteristics in e-government contexts, three critical gaps persist. First, no study has examined the combined influence of digital literacy, perceived trust, and perceived security on digital inclusivity within a functioning e-justice system serving persons with disabilities. Second, prior research rarely integrates user-reported perceptions with objective, task-based performance outcomes, limiting the depth of empirical insight. Third, evidence from Global South settings remains scarce, as few peer-reviewed studies have been published from the region.

This study addresses these gaps by testing the following overarching hypothesis:

H1: *User characteristics (digital literacy, perceived trust, and perceived security) jointly exert a positive and statistically significant influence on digital inclusivity in e-justice systems for persons with disabilities.*

Research Methodology

A sequential explanatory mixed-methods design was used (Creswell & Clark, 2017) where the quantitative phase (survey) was implemented first (April–June 2025), followed by qualitative semi-structured interviews (June–August 2025). The mixed method research was chosen because understanding how user characteristics shape digital inclusivity for persons with disabilities requires both hypothesis testing and exploration of lived experiences.

Target Population and Sampling

The study population included court users, judicial officers, court staff, and advocates who interact with e-justice systems in Nairobi County, Kenya. Persons with disabilities were included in the population. Nairobi County was purposively selected as the judiciary's most digitally advanced cluster. Sample size was computed using Cochran's (1977) formula for finite populations:

$$n_0 = Z^2pq / e^2 \quad \dots(1)$$

where $Z = 1.96$ (95% confidence), $p = 0.5$, $q = 0.5$, and $e = 0.05$. This produced an initial n_0 of 384. Adjusting for a finite population of 14,224 with the standard correction:

$$n = n_0 / (1 + (n_0 - 1)/N) \quad \dots(2)$$

The required sample was 375 and this was used for the data collection. After accounting for non-responses, 362 valid responses remained (96.5% response rate). Stratified random sampling ensured representation across four strata: persons with disabilities (visual, hearing, mobility impairments), judicial officers, court employees, and advocates. For the qualitative phase, 8 key informants were purposively selected: persons with visual impairment ($n = 3$), mobility impairment ($n = 2$), and hearing impairment ($n = 3$), all of whom had directly used the e-justice system.

Data Collection Instruments

The structured questionnaire included 42 items on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Eighteen items measured user characteristics across three sub-dimensions: Digital Literacy (6 items, adapted from Ali et al. (2023) and Blut et al. (2022), Perceived Trust (6 items, adapted from AlAwadhi et al. (2024), and Perceived Security (6 items, adapted from Gupta et al. (2025)). The dependent variable, Digital Inclusivity in E-Justice Systems (DIS), was captured with 24 items spanning Effort Expectancy, Assistive Technology Compatibility Score, Information Search and Retrieval Time, and User Satisfaction. The semi-structured interview guide included open questions probing how digital literacy, trust, and security perceptions affected participants' experiences with e-justice platforms.

Ethical Considerations

Ethical clearance was granted by the United States International University-Africa Institutional Review Board (IRB Approval No. USIU-A/ISERC/US605-2025) and the Kenya National Commission for Science, Technology & Innovation (NACOSTI/P/25/417979). All participants gave informed consent prior to participation. Participation was voluntary while confidentiality and anonymity were assured. Data were securely stored and access restricted to the research team. No conflicts of interest were declared.

Data Analysis

Quantitative data was processed using SPSS version 25 and SmartPLS4. Covariance-based structural equation modelling (CB-SEM) tested measurement and structural models. Model fit was assessed with χ^2 , CFI, TLI, RMSEA, and SRMR, using thresholds of CFI/TLI ≥ 0.90 , RMSEA ≤ 0.08 , and SRMR ≤ 0.08 (Hu & Bentler, 1999; Kline, 2016). Reliability was evaluated via Cronbach's α and Composite Reliability (CR ≥ 0.70). Convergent validity used Average Variance Extracted (AVE ≥ 0.50). Qualitative data were analysed through reflexive thematic analysis in Atlas.ti version 7.

Results and Findings

Demographic Profile of Respondents

The final sample comprised 362 respondents where 60% were male and 38.0% female. The largest age group was 36–45 years (36.5%), and 71.3% lived in urban areas. Among those reporting a disability, physical/mobility impairment was most common (24.6%), followed by visual (4.7%), hearing (2.5%), and cognitive/learning (2.2%). The sizeable 'other/not specified' category (66.0%) reflects respondents who either did not disclose a disability or had no disability but worked with the e-justice system professionally.

Measurement Model: Validity and Reliability

Exploratory factor analysis (EFA) supported a three-factor structure for the User Characteristics construct. Principal Component Analysis with Varimax rotation and Kaiser normalization was used and rotation converged in four iterations. The Kaiser-Meyer-Olkin (KMO) measure was 0.822, exceeding the 0.70 benchmark, and Bartlett's test of sphericity was significant ($\chi^2 = 2193.835$, $df = 153$, $p < 0.001$). The three factors explained 51.71% of total variance, and all factor loadings exceeded 0.70, indicating robust construct validity (see Table 1). Composite reliability (CR) ranged from 0.853 (PS) to 0.907 (PT), and AVE ranged from 0.615 (DL) to 0.646 (PS), all above recommended cutoffs.

Table 1

Convergent Validity for User Characteristics

Sub-Construct	Cronbach's α	Composite Reliability (CR)	AVE	Status
Digital Literacy	0.665	0.905	0.615	borderline acceptable
Perceived Trust	0.780	0.907	0.620	Acceptable
Perceived Security	0.865	0.853	0.646	Acceptable

Descriptive Findings

The respondents' average responses indicated moderate-to-positive views across the three user characteristics. Perceived Trust had the highest composite mean ($M = 3.637$), followed by Digital Literacy ($M = 3.583$) and Perceived Security ($M = 3.499$). The overall User Characteristics mean was 3.573 (interpreted as 'Agree'). Standard deviations ranged between 0.970 and 1.086, reflecting moderate dispersion. The ordering, Trust highest, Security lowest, suggests that participants valued institutional fairness and reliability more than data protection, perhaps reflecting the trust-sensitive nature of legal proceedings.

Hypothesis Testing: Structural Model (Isolated)

The structural model testing the direct impact of User Characteristics on Digital Inclusivity showed acceptable fit: $\chi^2/df = 1.8$, CFI = 0.902, TLI = 0.900, RMSEA = 0.03, SRMR = 0.072. The path from User Characteristics to Digital Inclusivity was positive and highly significant ($\beta = 0.638$, $t = 15.703$, $p < 0.001$) as shown in Table 2.

Table 2

Regression Coefficients

Model	Unstd. β (B)	Std. Error	Std. β	t	Sig.
(Constant)	2.198	0.088	--	24.989	0.000
User Characteristics	0.383	0.024	0.638	15.703	0.000

Dependent Variable: Digital Inclusivity in E-Justice Systems. $R^2 = 0.407$.

Thus, the null hypothesis (H1) asserting no significant influence of user characteristics on digital inclusivity was rejected. User characteristics accounted for 40.7% of the variance in digital inclusivity ($R^2 = 0.407$). Within the construct, Perceived Trust had the highest loading ($\beta = 0.652$), followed by Digital Literacy ($\beta = 0.620$) and Perceived Security ($\beta = 0.556$).

Qualitative Triangulation

Interview data reinforced the quantitative result that perceived trust was the strongest sub-dimension (loading 0.652). For example, a participant with total blindness (INT3) said: "*I trust it fully ... my digital signature has been customised, nobody can use it.*" Yet she also recounted

a security irregularity: *"Even when I have not logged in, you find somebody on my phone ... OTP is coming from the system."* This suggests that while trust is generally high, occasional anomalies sustain doubts.

On digital literacy, INT3 noted that trainings are not adapted for people with visual impairments: *"When the ICT people come to train us, they are not trained to train somebody with visual impairment. ... The training itself is not disability-oriented, there is an assumption that you can see."* Consequently, she depended on a court assistant for learning and practice. A participant with mobility impairment (INT2) observed that training is largely informal: *"They have not done a lot of trainings ... we are learning on the job. So as at now, I take longer to finish a task than I used to."* These accounts support the view that digital literacy is socially constructed via accessible training availability and quality.

Regarding perceived security, INT2 raised concerns about enterprise resource planning visibility: *"If you have that 365 PC, you can view all my details. ... I would have said that should have been left to the salaries people."* This points to role-based access gaps that can erode security perceptions, even where general privacy assurances exist. By contrast, a participant with partial deafness (INT5) reported *"no concerns as we are trained on handling data privacy regularly,"* demonstrating that systematic training can reduce security anxiety.

Qualitative narratives also explained why the explanatory power of user characteristics diminishes in combined models. INT3's experience shows the mechanism: her digital literacy derived from institutional training; her trust was high because the system functioned reliably with assistive technologies; and her security worries were tempered by responsive ICT support. When environmental factors (e.g., accessibility, interoperability, institutional support) are strong, user characteristics become outcomes of the system rather than independent predictors.

Discussion

The study provided empirical evidence that user characteristics, digital literacy, perceived trust, and perceived security positively and significantly influence digital inclusivity in e-justice systems serving persons with disabilities. The isolated model's R^2 of 0.407 aligned with UTAUT-based findings in other public service settings (Blut et al., 2022; Marikyan & Papagiannidis, 2025) and extends them to the procedurally rigid, high-stakes context of judicial digitalisation. The most theoretically notable result was the attenuation of the User Characteristics coefficient from $\beta = 0.638$ (isolated) to $\beta = 0.387$ (combined).

This pattern suggests that user characteristics are not wholly independent predictors but are partly influenced by environmental conditions, accessible design, assistive technology interoperability, and institutional support that the Social Model highlights. Removing environmental barriers reduces the marginal contribution of individual attributes. That said, user characteristics remain relevant as mediators of inclusivity outcomes. The ordering of sub-dimensions of perceived trust (0.652), digital literacy (0.620), and perceived security (0.556) had practical implications. In the Kenyan e-justice setting, users appeared to prioritise institutional fairness and reliability above technical proficiency or data protection. This might reflect the gravity of legal matters: users may tolerate some inefficiency or security ambiguity if they believe the institution will treat them fairly.

Conversely, a technically efficient system perceived as untrustworthy would struggle to deliver inclusivity. The prominence of perceived trust echoed findings by Carter and Bélanger (2008) and Hooda et al. (2022). Still, this study shows that trust retained importance even when controlling for technical and institutional variables, implying that trust is not fully reducible to system quality and must be cultivated through transparent communication, reliability, and demonstrable fairness.

The attenuation observed here differs from some prior work that treats user characteristics as independent drivers. For instance, Gupta et al. (2025) reported that trust and risk perceptions directly predicted e-government use, with no strong attenuation. The discrepancy likely reflects methodological and contextual differences: Gupta et al. (2025) used meta-analytic modelling across diverse settings, while the current study relies on primary data from e-justice systems with correlated environmental factors. In unevenly accessible systems, user characteristics may proxy for unmeasured environmental barriers and thus appear dominant.

The finding that digital literacy loaded at 0.620, lower than trust, matches meta-analytic patterns where trust constructs often outperform competence variables in predicting e-government adoption (Gupta et al., 2025). Yet in high-literacy, high-trust contexts (e.g., Nordic countries), digital literacy sometimes emerges as the stronger predictor (Kaarakainen & Saikkonen, 2023), underscoring context-specific dynamics. Qualitative evidence cautions against reading user characteristics as intrinsic deficits. INT3's digital literacy was acquired only after delayed, often inaccessible training; INT2's slower task completion reflects the lack of disability-inclusive training, not inherent incapacity; and security concerns arose from real role-based access control gaps.

Together, these findings suggested that strong UC→DIS ($\beta = 0.638$), effects in isolated models do not prove that user characteristics independently generate inclusivity. Instead, they indicate that the distribution of those characteristics across the population correlates with inclusivity outcomes. When environmental factors are introduced into the model, the UC coefficient declines because those environmental elements are the mechanisms producing user characteristics. A person who receives accessible training becomes more digitally literate. A person treated reliably by institutions grows more trusting. A person protected by clear role-based access controls perceives greater security. The policy implication is straightforward: improving environmental conditions will, over time, improve user characteristics. Conversely, focusing solely on user-targeted training without systemic reforms is likely to be ineffective because the system itself will continue to reproduce limiting conditions.

The study contributed theoretically in three ways. It demonstrated how UTAUT2 and the Social Model of Disability can be integrated, where UTAUT2 supplied measurement constructs for user characteristics, while the Social Model reframed those characteristics as products of environmental contexts rather than fixed deficits. This integrated approach advanced beyond both the individual-deficit orientation still present in some technology acceptance literature and the tendency in parts of disability scholarship to underplay user-side factors.

The research also extended UTAUT2 by showing that effort expectancy (operationalised here as a component of digital inclusivity, loading at $\beta = 0.255$) is not the sole channel through which user characteristics act. Perceived trust (0.652) and digital literacy (0.620) independently influenced outcomes, suggesting that disability-inclusivity research should augment UTAUT2 with trust- and literacy-specific constructs rather than subsuming them under effort expectancy.

The study also questioned the adequacy of adoption-centred technology acceptance models for e-justice contexts. The very high R^2 in the combined model (0.959) indicated that digital inclusivity is largely explained by the interplay of technological, interoperability, institutional, and user factors, and approaches that isolated user characteristics miss most explanatory power.

Practical recommendations emerged for system designers, policymakers, judicial administrators, and disability advocates. Judicial ICT leaders should prioritise building institutional trust via transparent communication, while courts must provide clear, accessible information about data protection, encryption, privacy safeguards, and complaint mechanisms. Trust is not automatic with digitalisation and it must be cultivated through consistent, transparent institutional behaviour.

The digital literacy initiatives must be disability-inclusive, not merely disability-aware. The qualitative finding that training assumed sight (INT3) showed that generic programmes exclude people with disabilities. Training should be co-designed with disability organisations, delivered through multiple modes (audio, plain language, sign language), and offered continuously rather than as one-off sessions.

The security perceptions should be addressed by system-level controls rather than solely through user advisories. The role-based access control gap identified by INT2 reveals that perceived security primarily depends on system design. Judicial ICT directorates should perform regular security audits, implement fine-grained access controls, and communicate those protections to users.

The user characteristics ought to be monitored as outcome indicators, not only as predictors. The attenuation effect implies that improvements to environmental conditions should produce measurable gains in user characteristics. Courts should therefore track digital literacy, perceived trust, and perceived security as key performance indicators in parallel with technical accessibility metrics.

Several limitations should be noted. The cross-sectional design constrained causal claims. While SEM permitted testing of hypothesised associations, causality cannot be definitively established and future longitudinal research is needed to observe how changes unfold over time. Also, the reliance on self-reported data from persons with disabilities introduced risks of common method bias and social desirability. Future studies should include objective metrics including task completion rates, time-on-task, and standardised accessibility audits.

The sampling from Kenyan e-justice users may limit generalisability. The absence of a significant moderating effect for Individual Attributes (disability type, severity, location, prior experience, socio-economic status) should be interpreted cautiously, as it might reflect sample-specific patterns. For future research, replication in diverse Global South and Global North settings with larger stratified samples is recommended.

Finally, the study focused on four core determinants and one moderator, leaving out other relevant variables such as social support networks, legal aid availability, and societal attitudes toward disability, which calls for further inquiry. Despite these caveats, the research delivers robust evidence about the multidimensional nature of digital inclusivity in e-justice systems

and offers a validated framework for future studies and interventions in Kenya and similar contexts.

Conclusion

This research explored how digital literacy, perceived trust, and perceived security affect digital inclusivity in e-justice systems for persons with disabilities. The results showed that user characteristics have a positive, statistically significant effect when considered in isolation ($\beta = 0.638$), but this influence weakens substantially ($\beta = 0.387$) once environmental factors, technology design, assistive technology interoperability, and institutional support are taken into account. Perceived trust was the most influential sub-dimension, underscoring the importance of institutional fairness in high-stakes legal settings.

The primary conclusion was that user characteristics matter but are secondary determinants and they are not innate deficits correctable by training alone but socially constructed capacities shaped by prior institutional experiences. Hence, improving digital inclusivity requires directly addressing environmental barriers and user-focused initiatives would be effective only as complements to comprehensive systemic accessibility reforms.

Recommendations

Based on the findings of this study, several recommendations emerge. Institutions should prioritise trust-building through transparent communication, recognising the primacy of perceived trust in shaping user engagement. Courts must therefore provide clear and accessible information about data protection, encryption, privacy safeguards, and redress options, while consistently demonstrating transparency in their practices. Equally important is the design of disability-inclusive digital literacy programmes. Evidence from this study revealed that generic training often assumes sighted users, thereby excluding persons with disabilities. To counter this, training should be co-designed with disability organisations, delivered through multiple modalities such as audio, plain language, and sign language, and offered regularly rather than as one-off sessions.

Security perceptions must also be addressed through systemic controls rather than user warnings. The findings highlighted that perceived security depends primarily on system architecture. Judicial ICT teams should therefore conduct routine security audits, implement granular role-based access controls, and communicate these protections clearly to users. Finally, user characteristics should be treated as outcome metrics rather than merely predictor variables. The attenuation results demonstrated that environmental improvements can yield observable enhancements in digital literacy, perceived trust, and perceived security over time. Courts should thus monitor these characteristics as key performance indicators alongside technical accessibility measures, ensuring that institutional reforms translate into measurable user benefits.

Future Research Directions

Future studies should pursue three avenues. First, experimental research that manipulates environmental conditions could establish causal impacts on user characteristics. Second, comparative research across multiple Global South jurisdictions could reveal how differing institutional histories influence the relative importance of trust versus literacy. Third, qualitative longitudinal work following persons with disabilities from their first encounters

with e-justice systems could trace how digital literacy and trust evolve through interactions with accessible or inaccessible platforms.

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Declaration of Competing interests

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Ethical Approval

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Author Contributions

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