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Bridging the Digital Divide as a Brand Strategy: Strengthening Library Brand Equity

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Abstract
Digital inequalities still exist in the digital era, and these inequalities impede the fair and equal access to education, job opportunities, civic services, and health-related information. Libraries have increasingly been taking a leading role in addressing these disparities, by facilitating access to digital infrastructure, digital skill development, and the mediating support that align with community needs. In addition to the informational role, libraries are also public service institutions whose value is determined by the perception, trust, and subsequent interaction of the users. This paper offers a descriptive and analytical synthesis that reframes digital inclusion as a strategic framework for enhancing library brand equity. This study is theoretically grounded in Aaker Brand Equity Model which conceptualizes brand equity through key dimensions such as brand awareness, perceived quality, brand associations, and brand loyalty. The paper will present the impact of digital divide bridging initiatives on these dimensions in the library context based on interdisciplinary literature on the topic, including library and information science, communication studies, and branding research. The paper suggests that digital inclusion strategies help to develop enhanced perception of service quality, positive institutional association linked with social responsibility and trust, increased visibility among diverse user groups, and promote consistent, long-term term library usage behaviours. It also emphasizes managerial and policy application of digital inclusion for strengthening libraries as credible, inclusive and socially responsive institutions in an ever more digital society.
Keywords: *Digital divide; Digital inclusion; Libraries; Brand equity; Public institutions.*

Introduction
Digital inequalities remain a persistent challenge in the modern information era, limiting equitable access to education, employment opportunities, civic services, and health information (Grimes & Porter, 2024; Real, 2021). Although the concept of the digital divide has been widely discussed since the mid-1990s, disparities based on socioeconomic, educational, geographic, and demographic factors continue to shape patterns of digital access and participation (Jaeger et al., 2012; Kinney, 2010; Plumb, 2007). These inequalities became particularly visible during the COVID-19 pandemic, when the rapid shift of social, educational, and governmental services to online platforms exposed the vulnerabilities of digitally excluded populations. Lockdowns highlighted how limited connectivity restricts individuals' ability to access essential resources and services (Real, 2021). In the early 2020s, nearly 30 percent of households in the United States lacked home broadband access, with digital exclusion disproportionately

affecting low-income households, Black and Hispanic communities, and rural populations (Grimes & Porter, 2024). Similar challenges are evident globally, where developing countries and marginalized communities continue to face infrastructural constraints, affordability barriers, and limited digital literacy (Khanchandani, 2022; Lediga & Fombad, 2018; Mojapelo, 2020). Within this context, public libraries have long served as institutions promoting equitable access to information and digital resources. Since the 1990s, libraries have increasingly assumed responsibility for addressing digital inequalities by providing technological infrastructure, supporting digital skill development, and offering mediated assistance tailored to community needs (Bertot et al., 2015; Kinney, 2010; Strover, 2019). In many rural and economically disadvantaged communities, libraries remain the primary source of free public internet access (Real et al., 2014). Beyond connectivity, libraries support digital participation through services such as digital literacy training, access to e-government platforms, job search assistance, and technology-enabled learning opportunities. Many libraries also provide access to emerging technologies including 3D printers, makerspaces, and mobile hotspot lending programs (Bell & Goulding, 2023; Plumb, 2007; Woodson et al., 2020;). Their adaptability was particularly evident during the COVID-19 pandemic, when libraries expanded online services, extended Wi-Fi access beyond library premises, and distributed devices and hotspots to underserved communities (Real, 2021). However, libraries are not merely providers of information or technological services. As public service institutions, their value is strongly shaped by user perceptions, trust, and the quality of interactions with communities (Grimes & Porter, 2024; Liu & Wnuk, 2009). In an increasingly competitive information environment where search engines, digital platforms, and commercial providers compete for users' attention, libraries must clearly communicate their value and strengthen relationships with their communities (Grant, 2015). In this regard, the concept of brand equity provides a useful analytical perspective. Introduced by Aaker (1991, 1996), brand equity refers to the value generated by a brand through consumer perceptions and experiences. Aaker conceptualizes brand equity as a multidimensional construct consisting of brand awareness, perceived quality, brand associations, and brand loyalty. These dimensions collectively influence user behaviour and institutional sustainability. While brand equity has been widely examined in commercial sectors and service contexts such as higher education (Khoshtaria et al., 2020; Mourad et al., 2020; Waqas, 2022), its application to public libraries remains relatively underexplored. As public institutions, libraries must balance their traditional mission of universal access with the strategic need to communicate their relevance and value in a digital society (Grant, 2015; Rhinesmith, 2026).

Against this backdrop, this study addresses an important gap by reconceptualizing digital inclusion not only as a social equity initiative but also as a strategic mechanism for strengthening library brand equity. Drawing on Aaker's multidimensional brand equity framework (1991, 1996), the paper proposes that digital divide bridging initiatives implemented by libraries including technological infrastructure provision, digital literacy training, technology lending, and community engagement function as brand-building mechanisms that shape user perceptions and strengthen institutional positioning. Specifically, digital inclusion initiatives may enhance brand awareness by increasing the visibility of library services, improve perceived quality through reliable and accessible digital services, strengthen brand associations related to trust, social responsibility, and community engagement, and foster brand loyalty through sustained usage and advocacy. The significance of this study lies in its contribution to both academic research and professional practice. By framing digital inclusion as a brand strategy, the study provides a rationale for library administrators and policymakers to invest in digital equity initiatives beyond their immediate social benefits. This perspective positions libraries not only as institutions responding to technological change but also as proactive creators of institutional value and community trust. For researchers, the study extends brand equity theory to the relatively underexplored context of public libraries and offers a conceptual foundation for future empirical research. By integrating insights from library and information science, communication studies, and branding research, the paper contributes to a broader understanding of how public institutions can leverage their core missions to strengthen their relevance and impact in an increasingly digital society.

Research Questions and Conceptual Framework

While digital inclusion has traditionally been examined as a social equity initiative, its potential role as a strategic mechanism for strengthening institutional reputation and brand value remains underexplored. To address this gap, the present study investigates how digital inclusion initiatives influence the key dimensions of library brand equity.

The study addresses the following research questions:

RQ1: How do digital inclusion initiatives implemented by libraries contribute to the development of overall library brand equity?

RQ2: How do digital inclusion initiatives influence brand awareness of libraries within their communities?

RQ3: How do digital inclusion services affect users' perceptions of service quality in libraries?

RQ4: In what ways do digital inclusion initiatives shape brand associations related to trust, social responsibility, and technological relevance in libraries?

RQ5: How do digital inclusion initiatives contribute to the development of brand loyalty among library users?

To address these questions, this study adopts Aaker's (1991, 1996) brand equity model as the conceptual foundation. The proposed framework positions digital inclusion initiatives as strategic drivers influencing the four key dimensions of brand equity: brand awareness, perceived quality, brand associations, and brand loyalty. These dimensions collectively contribute to the development of stronger institutional brand equity for libraries. The conceptual framework guiding this study is presented in Fig. 1.

Fig. 1: Conceptual Framework

Literature Review

(a) The Digital Divide

The concept of the digital divide gained prominence in the mid-1990s through a series of reports by the National Telecommunications and Information Administration titled *"Falling Through the Net"*, which documented systematic disparities in access to computers and the Internet across socioeconomic, educational, racial, and geographic groups (Jaeger et al., 2012; Kinney, 2010; Plumb, 2007). Subsequent research has demonstrated that digital inequality is multidimensional, reflecting structural differences in access, skills, and meaningful use of digital technologies. Income remains one of the strongest predictors of digital exclusion, as lower-income households are significantly less likely to have reliable home broadband access (Grimes & Porter, 2024). Disparities also persist across racial and ethnic groups, with Black, Hispanic, and Native American populations reporting lower levels of Internet access even after controlling for income (Plumb, 2007). Geographic factors further intensify these inequalities, as rural communities frequently face infrastructural limitations and limited broadband availability (Real et al., 2014). Additional dimensions such as age, disability, and language barriers also shape individuals' ability to participate effectively in digital environments. These structural inequalities became particularly visible during the COVID-19 pandemic, when the rapid shift of education, employment, and public services to online platforms exposed the vulnerabilities of digitally excluded populations. Individuals without stable

Internet connectivity experienced significant disadvantages in accessing education, employment opportunities, health services, and civic participation (Grimes and Porter, 2024; Real, 2021).

(b) Role of Libraries in Addressing the Digital Divide

Within this context, public libraries have emerged as key institutional actors in addressing digital exclusion. Over the past two decades, libraries have significantly expanded their technological infrastructure, and nearly all public library outlets in the United States now provide free public Internet access (Kinney, 2010). In many communities, particularly rural and economically disadvantaged areas, libraries remain the primary source of free computer and Internet access (Real et al., 2014). Beyond connectivity, libraries play an important role in supporting digital participation by offering digital literacy training, technical assistance, and guidance in completing online activities such as job applications, accessing e-government services, and participating in telehealth consultations (Grimes & Porter, 2024; Plumb, 2007; Strover, 2019). Through these services, libraries function as community-based institutions that facilitate equitable access to digital resources and skills.

(c) Digital Inclusion Initiatives in Libraries

The broader concept of digital inclusion extends beyond access to technology and encompasses several interconnected components, including affordable broadband connectivity, Internet-enabled devices, digital literacy training, technical support, and applications that enable meaningful participation and self-sufficiency (Grimes & Porter, 2024; Rhinesmith, 2026). Public libraries contribute to these dimensions by offering free Wi-Fi, public access computers, hotspot lending programs, technology training sessions, and individualized technical assistance (Bell & Goulding, 2023; Bertot et al., 2015). Empirical evidence shows that users of library computer services are disproportionately drawn from digitally marginalized populations, and for many individuals the library represents their primary point of Internet connectivity (Kinney, 2010). In recent years, library-based digital inclusion initiatives have expanded beyond traditional public access computing. Mobile library services provide connectivity and digital training to remote communities (Bell & Goulding, 2023), while hotspot lending programs allow users to access the Internet from their homes, addressing affordability and infrastructure barriers (Real, 2021; Strover, 2019). During the COVID-19 pandemic, libraries further expanded these initiatives by extending Wi-Fi access beyond library premises, increasing digital collections, and providing devices and connectivity solutions to underserved populations (Real, 2021). Although rural libraries often operate under constraints such as limited staffing, restricted budgets, and inadequate broadband infrastructure, they continue to address community digital needs through partnerships, grants, and volunteer networks (Potnis &

McDonald, 2025; Real et al., 2014). Similar initiatives can also be observed internationally, where libraries in countries such as South Africa, India, and Aotearoa New Zealand contribute to digital equity despite facing infrastructural and policy challenges (Bell & Goulding, 2023; Khanchandani, 2022; Lediga & Fombad, 2018; Mojapelo, 2020).

(d) Challenges in Library-Based Digital Inclusion

Despite these efforts, challenges remain in the implementation of digital inclusion initiatives. Regulatory frameworks such as the Children's Internet Protection Act require content filtering, while time limits on public computers may constrain users attempting to complete complex online tasks. In addition, library staff often face increasing technological demands without adequate training or resources. Nevertheless, libraries remain uniquely positioned to promote digital equity because of their institutional legitimacy, strong community presence, and longstanding commitment to free and equitable access to information (Strover, 2019). Through these roles, libraries continue to function as critical intermediaries in bridging digital divides and enabling broader participation in an increasingly digital society.

(e) Brand Equity in Service and Public Sector Contexts

The marketing literature on brand equity originated in late 1980s. Aaker (1991) refers to brand equity as a set of assets such as brand awareness, loyal customers, perceived quality and brand associations that are linked with the brand and contribute value to the product or service being sold. This framework by Aaker identifies four major dimensions including brand awareness, perceived quality, brand associations as well as brand loyalty (Aaker 1991, 1996). This multidimensional conceptualization proposed by Aaker has been proven correct in different contexts by research. Gill and Dawra (2010) empirically studied the sources of brand equity provided by Aaker, and established that brand awareness and brand image are independent variables with brand image being an intermediate between brand awareness and the overall brand equity.

Brand equity plays a special role in services specifically because of their intangible nature and the impact of customer experience in creating perceptions. Higher education studies have applied brand equity frameworks to nonprofit and public institutions, which has shown that brand awareness, perceived quality, and brand association have a role in student choice, satisfaction, and loyalty (Khoshtaria et al., 2020; Mourad et al., 2020; Waqas, 2022). Research demonstrates that reputation of the institution, faculty qualification, campus infrastructure, and student services serve as brand building processes that influence stakeholder perceptions and behavioural responses, including enrollment, donations by alumni, and positive word of mouth. Ahmmed et al. (2025) also show that academic programs and campus facilities play a very crucial role in institutional brand image and student satisfaction.

Goi et al. (2014) found that visual identity (facilities, staff, systems) and verbal identity (promotion, public relations) were the principal brand dimensions in the higher education sector, where the private institutions developed a stronger identity by means of deliberate marketing. The same case applies to the libraries where both dimensions need to be managed coherently. In higher education, Chen and Hiew (2025) discovered eight dimensions of online brand equity such as institutional reputation, e-campus performance, and competence of the faculty. Presence on the internet and quality of digital services are becoming more influential in how the brand is perceived, and this applies to digital service delivery by libraries.

(f) Libraries and Brand Equity

Despite a vast body of literature on brand equity in both commercial and educational setting, there is limited application of brand equity to a public library setting. Grant (2015) believes that libraries should redefine their brand by moving past the conventional perception of being repositories for books, a narrow view which persists in the minds of the people despite the broader role of libraries. According to the reports offered by OCLC, three-quarters of Americans identify books as the first thing that comes to mind when thinking about libraries, and this image has been reinforced over the years (Grant, 2015). This brand identity restricts the capacity of libraries to articulate their modern value proposition, especially their value in digital inclusion, lifelong learning, and community involvement. Research on internal branding in universities provides valuable insights that can be applied in libraries. Judson et al. (2006), show that clear communication of the brand values to the employees leads to a better understanding and implementation of the brand promise. Duh and Wara (2024) discover that the information generation and dissemination to employees have a positive effect on role clarity, brand knowledge, and brand commitment, which subsequently leads to brand citizenship behaviour and positive word-of-mouth. This indicates that the digital inclusion effort in libraries can enhance the organizational commitment and organizational identity provided these initiatives are well communicated both internally and externally. Although libraries have undergone a progressive enhancement in their technological infrastructure, Buono and Fortezza (2017) emphasize that the establishment of a modern brand image needs to be addressed by strategic design management. They state that the visual identity and the concept of integrated communications is the key for creating an experience that transcends traditional institutional boundaries. Despite these developments, existing research has not systematically examined how libraries' digital divide bridging initiatives contribute to the formation of brand equity. This gap in the literature highlights the need to explore how digital inclusion initiatives undertaken by libraries influence the development of institutional brand equity. To address this gap, the present study adopts Aaker's brand equity model as the conceptual framework for analyzing the relationship between digital inclusion initiatives and library brand equity.

(g) Aaker's Brand Equity Model

Brand equity is one of the most powerful marketing concepts conceptualized by Aaker (1991, 1996). According to Aaker (1991), brand equity is defined as a set of assets such as brand awareness, perceived quality, brand associations and loyal customers that are associated with the brand and enhance value to the product or service being offered. This conceptualization is multidimensional, and brand equity is viewed as a composite construct with four major dimensions, namely: brand awareness, perceived quality, brand associations, and brand loyalty (Aaker 1991, 1996).

Brand awareness: This concept refers to the strength of the brand presence in the mind of the consumer encompassing both brand recognition and brand recall. The brand awareness in the library setting takes the form of community knowledge about library services, recognition of library branding and communications, and the extent to which libraries are top-of-mind when information is required (Grant, 2015). A greater level of awareness leads to an increased library usage and reduces the perceived risk of using new services (Mourad et al., 2020).

Perceived quality: This concept refers to the perception consumers have about the brand's overall excellence or superiority (Aaker, 1991). It is different from objective quality; it is the subjective assessment, which is based on consumer experiences, expectations, and information available (Aaker, 1996). In case of libraries, perceived quality involves judgement about service reliability, expertise of the staff, resource relevance, facility adequacy and technological competence (Khoshtaria et al., 2020). Users who feel that they have received high-quality services in the library have a higher chance of revisiting the library and referring others to the library.

Brand associations: This concept refer to "anything linked in memory to a brand" (Aaker, 1991). Which include product attributes, customer benefits, usage situation, organizational association, and brand personality. Brand associations create meaning and differentiation, which give consumers a reason to choose one brand over other. Strong, favourable and unique associations contribute positively to brand equity (Gill & Dawra, 2010). Libraries are associated with the ideas of trust, community, learning, free access, and social responsibility (Grimes & Porter, 2024; Rhinesmith, 2026). Digital inclusion programs have the potential to create the associations of innovation, relevancy, and social equity that might rebrand the conventional understanding of libraries as book-based institutions, which remain focused on books (Grant, 2015).

In addition, organizations can also enhance their brand by utilizing the secondary brand associations, effectively linking their brand with positive attributes like people, locations, and contemporary cultural elements, etc.

(Juusola et al., 2023). Through digital inclusion efforts libraries can create the secondary associations with innovation and social responsibility by collaborating with technology providers and positioning within smart city contexts. Two key concepts in branding are visual identity and verbal identity; Visual identity is anything that is tangible such as facilities and technology infrastructure, while verbal identity involves communication through promotion and word of mouth. Libraries digital inclusion work contributes to both: visible technology strengthens the visual identity, whereas community narratives shape verbal identity (Goi et al., 2014). Online brand equity depends on e-campus performance (use of web sites, availability of information), and e-campus information (forums and rankings online) (Chen & Hiew, 2025). Libraries should make sure their digital platforms effectively communicate and demonstrate impact so that remote users will also be able to access their services. Brand experience appeals to the users from both cognitive and affective dimensions and creates a memorable experience and attachment (Buono & Fortezza, 2017). The digital inclusion programs in libraries, which are perceived as supportive and empowering, create experiential value, which enhances the attachment of users to the institution.
Brand loyalty: It represents "the attachment that a customer has to a brand" (Aaker, 1991). It occurs in the form of repeated customers, unwillingness to change, and word of mouth (Aaker, 1996). Brand loyalty in libraries manifests itself in the form of continued use over time, engagement in programs and events, promotion in social networks, and intergenerational transmission of library behaviour (Waqas, 2022). Studies indicate that good experiences in the university result in a long-term loyalty in terms of donations, recommendations and continued participation. The applicability of this model by Aaker to the public institutions is supported by research in higher education context. Research indicates that brand recognition, quality perceptions, associations, and loyalty influence student choice, satisfaction, alumni giving, and reputation of the institution (Khoshtaria et al., 2020; Mourad et al., 2020). Waqas (2022) discovered that brand experience leads to student engagement that consequently increases brand equity. Carvalho et al. (2021) established that eWOM affects the university brand equity, and positive eWOM reinforces brand images. Ahmmed et al. (2025) also confirm that the relationship between the dimensions of service quality and student satisfaction is mediated by institutional brand image. These results indicate that the framework proposed by Aaker can be productively applied to libraries which share with universities such features as service intensity, long-term relationships with users and community embeddedness.

For this paper, Aaker's four-dimensional model provides the theoretical lens through which libraries' digital inclusion initiatives are examined. Each dimension offers a distinct pathway through which digital divide bridging efforts may contribute to brand equity formation.

Digital Inclusion as Brand Strategy

Brand Awareness

Brand awareness is the level of brand presence in the mind of the consumer encompassing recognition and recall (Aaker, 1991). The digital inclusion programs in libraries create awareness, which directly builds brand awareness. Through the expansion of Wi-Fi ranges, lending hotspots, or deploy mobile library services, libraries achieve greater visibility in new places and contexts (Bell & Goulding, 2023; Real, 2021). Users who were previously disengaged from the library may now connect with its services through digital access points located in their neighbourhood, schools and community canters. Studies show that computers and internet services that can be accessed publicly is one of the ways of drawing new users to libraries. Research on Gates Foundation grants discovered that libraries participating in public access computing initiatives witnessed an average growth of 36 percent in user traffic, and many users reported computers were the primary reason for their visit to the library. The swift adaptation of libraries to online programming and digital collections during the COVID-19 pandemic attracted a lot of media attention and community awareness, demonstrating institutional agility and the desire to provide continued service (Real, 2021).

Perceived Quality

Perceived quality refers to the consumers judgement about the overall quality or excellence of a brand (Aaker, 1991). Perceived quality in libraries encompasses judgement about service reliability, expertise of staff members, technology functionality, and relevance of resources (Khoshtaria et al., 2020). Digital inclusion initiatives shape perceived quality in a variety of ways. Reliable internet access, well serviced public access computers, and functional hotspot lending services are the indicators of competence on the institutional level, as well as service excellence (Bertot et al., 2015; Strover, 2019). Users find such a library valuable when they successfully complete job applications, access e-government services, or participate in telehealth appointments with the help of library-provided technologies (Grimes & Porter, 2024; Plumb, 2007). Employee assistance is an important aspect of perceived quality in digital service delivery. The user's perception about service quality and institutional care is enhanced when librarians provide patient, knowledgeable technology support (Liu & Wnuk, 2009; Potnis & McDonald, 2025). Studies indicate that two-thirds of computer users in the library seek staff assistance, and those who are assisted report greater satisfaction and increased confidence in technology use. Digital infrastructure quality is also important; libraries with sufficient bandwidth, adequate workstations, and up to date software indicate that the institution invests in the user experience (Real et al., 2014). On the other hand, slow networks, malfunctioning devices, and restricted time of access have an adverse effect on perceived quality (Kinney, 2010; Lediga & Fombad, 2018).

Brand Associations

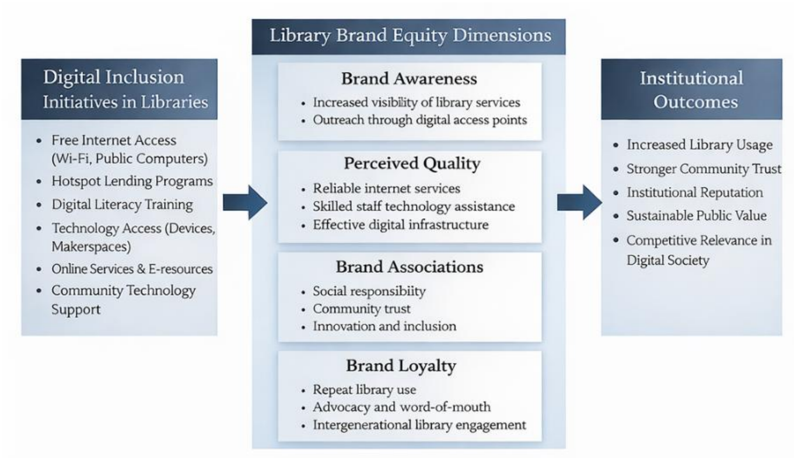
Anything that is linked in the memory with a brand is referred to as brand associations and these include attributes, benefits, attitudes, and organizational associations (Aaker, 1991). The digital inclusion efforts of libraries create powerful associations with social responsibility, equity, trust, and commitment to the community. By providing free internet access and technological training to disadvantaged groups, libraries reflect values of inclusion and equal opportunity (Grimes & Porter, 2024; Rhinesmith, 2026). These associations make libraries differentiate themselves from commercial internet providers and other access points available to the public, which positions them as trusted community institutions rather than market actors (Strover, 2019). Studies in the field of higher education demonstrates that institutional associations with quality, care, and social responsibility influence the perception of stakeholders and their behavioural intentions (Ahmmed et al., 2025). Libraries can enhance brand associations by leveraging secondary associations through collaboration with technology companies and government agencies (Juusola et al., 2023). In digital inclusion contexts, trust is found to be a significant association. Research has shown that users trust libraries with sensitive online activities like job applications, enrolling benefits and personal communication because libraries are considered to be neutral, private, and reliable places (Plumb, 2007; Real et al., 2015). This trust extends to technology and staff support provided in libraries, with users expressing confidence in the accuracy and privacy of the support they receive (Liu & Wnuk, 2009; Potnis & McDonald, 2025). Digital inclusion initiatives also create associations with innovation and relevance. Libraries that provide access to emerging technologies like 3D printers, makerspaces, or virtual reality equipment, are positioned as forward-thinking institutions that respond to community needs (Grant, 2015; Woodson et al., 2020). These associations challenge traditional perception of libraries highlighting their institutional evolution and vitality.

Brand Loyalty

Brand loyalty represents the attachment a customer has to a brand, reflected in repeat purchases, low switching tendency and positive word of mouth (Aaker, 1991). Digital inclusion initiatives contribute to library loyalty in various ways. Users who address critical needs through library technology like finding jobs, completing education, receiving medical care, and connecting with family members, etc., establish strong affective relationships with the institution (Grimes & Porter, 2024). Positive experiences create emotional attachment that goes beyond transactional services use, encouraging users to acknowledge the library as an important part of their life (Waqas, 2022). Word-of-mouth advocacy represents one of the prime manifestations of brand loyalty. Research has proven that users who are satisfied with library technologies recommend library services to family members, friends, and other community members (Carvalho et al., 2021; Kinney, 2010). Digital inclusion work also results in intergenerational loyalty. Parents who use library computers to support their children with homework or those who attend family technology programs transmit library usage practices to the next generation. Multigenerational relationships are especially useful in rural libraries, where employees tend to work with several generations of families, developing deep connections with the community (Potnis & McDonald, 2025). The relationship between digital inclusion and brand loyalty is a two-way process that takes place both in terms of cognitive and affective mechanisms. Users have a cognitive understanding of the instrumental value of library technology services and continue using them depending on the perceived utility. Emotionally, positive experiences, gratitude for free access and identification with the values of the library creates emotional attachments that keep loyalty alive even when alternative access options are available. With proper communication of their digital equity work and engage users as partners in inclusion efforts, libraries can strengthen these emotional connections and turn technology users into library advocates and ambassadors.

Taken together, the preceding discussion illustrates how digital inclusion initiatives function as strategic mechanisms for strengthening the brand equity of public libraries. As illustrated in Fig. 2, initiatives such as free internet access, hotspot lending programs, digital literacy training, and technology-enabled services enhance brand awareness by increasing the visibility of library services within communities. These initiatives also strengthen perceived quality by demonstrating service reliability, technological competence, and staff support. At the same time, they foster positive brand associations related to trust, social responsibility, and technological relevance, positioning libraries as inclusive and community-oriented institutions. Ultimately, positive user experiences generated through digital inclusion initiatives contribute to brand loyalty, reflected in sustained library usage, community advocacy, and intergenerational engagement. By reinforcing these interconnected dimensions, digital inclusion initiatives not only address digital inequalities but also enhance the overall institutional value and reputation of libraries in an increasingly digital society.

Fig. 2. Conceptual framework linking digital inclusion initiatives and library brand equity. Adapted from Aaker (1991, 1996).



Discussion

This paper has argued that the digital divide bridging initiatives by libraries are brand-building mechanisms that increase the institutional awareness, perceived quality, associations and loyalty. It reframes digital inclusion not merely as a social service but as a strategic investment in institutional value and community relationships. A number of implications can be drawn out of this analysis. First, libraries need to identify and communicate the brand dimensions of their digital equity work. By expanding Wi-Fi coverage, loan hotspots, or offering technological training, libraries create visibility, demonstrate quality, build trust and create conditions that lead to loyalty. These results should be measured, celebrated, and embedded in institutional discourse on library value. Grant (2015) argues that libraries must redefine their brand beyond books, and digital inclusion offers a solid foundation for this rebranding, framing libraries as crucial community infrastructure for digital participation. Second, the framework indicates that the digital inclusion initiatives may generate brand returns, which extends beyond the direct impact of services. Users who successfully access employment, education, or healthcare services through library technology develop positive associations and loyalty that can be generalized to other library services. This is a spillover effect, which means that investment in digital infrastructure and training has compound benefits on the institutional portfolio. Libraries that serve disadvantaged communities can potentially achieve substantial brand value, as their digital equity efforts embodies core values of inclusiveness and social responsibility (Grimes & Porter, 2024; Rhinesmith, 2026). Third, the analysis also highlights importance of staff in mediating brand outcomes. Technology support provided by librarians determines the perceived quality, and their interactions with the users create trust and attachment. This is a clear indication that the investments in staff training, adequate staffing level, and supportive working environment are not only necessary in service delivery but also in building brand equity (Potnis & McDonald, 2025). Libraries that face resource constraints may need to prioritize staffing alongside technology investment in order to achieve brand benefits. Fourth, the framework has significant implications for library advocacy and funding. The framing of digital inclusion as brand strategy offers a strong justification for investment that appeals to stakeholders who are concerned about institutional relevance and community impact. Libraries do not need to be positioned as cost centers that need to be subsidized but as value-making institutions whose digital equity activities can generate a measurable brand equity (Strover, 2019). Such reframing can empower libraries in their budgetary negotiations and community planning processes.

Limitations

While this study offers a conceptual framework linking digital inclusion initiatives with library brand equity, it is primarily based on the synthesis of interdisciplinary literature rather than empirical data. As such, the relationships proposed between digital inclusion efforts and the dimensions of brand equity should be viewed as theoretically grounded propositions that warrant further empirical validation. Future research may employ quantitative surveys, qualitative interviews, or case studies to examine how users perceive libraries' digital inclusion initiatives and how these perceptions influence institutional brand outcomes. The interdisciplinary synthesis is based on library and information science, communication studies and branding research literature. Although this approach enables theoretical integration, it also introduces issues of construct equivalence and context applicability. Additionally, the framework draws upon Aaker's brand equity model, which was originally developed in commercial marketing contexts. Although this model has been widely applied in service and nonprofit settings, its application to public libraries may benefit from further contextual refinement to capture the distinctive characteristics of library services and community engagement (Grant, 2015; Rhinesmith, 2026). Finally, variations in institutional resources, community contexts, and policy environments may influence how digital inclusion initiatives shape brand perceptions across different library systems. Future studies can explore these contextual factors to further strengthen and refine the proposed framework.

Future Research Directions

The proposed relationships between the library brand equity dimensions and digital inclusion initiatives need to be tested through empirical research. Building on the conceptual framework presented in this study, future quantitative research could adapt existing brand equity measurement scales to the library context in order to assess user perceptions of brand awareness, perceived quality, brand associations, and brand loyalty in relation to digital services. Such studies may explore whether users who actively engage with library technology services exhibit different brand perceptions compared to those who do not use these services, and whether the intensity of service usage is associated with stronger brand outcomes. At the same time, complementary qualitative research could provide deeper insights into how users interpret libraries' digital inclusion initiatives and how these experiences shape the narratives and associations that contribute to institutional trust and attachment (Waqas, 2022). In addition to user-level perceptions, future research could also examine how contextual factors influence the brand impacts of digital inclusion initiatives. Comparative studies among library types, geographic contexts, and community characteristics would highlight contextual factors influencing the brand impacts of digital inclusion. Research might compare brand outcomes in rural and urban libraries, in communities with different levels of broadband access, or among institutions with different resources bases and service models (Real et al., 2014). Furthermore, longitudinal research would allow scholars to track how user perceptions evolve over time as libraries adopt new digital initiatives, thereby capturing the dynamic processes through which brand equity gradually develops. Finally, examining the mediating role of library staff in shaping user experiences could extend insights from internal branding research to the library sector, highlighting how staff interactions contribute to the development of institutional brand performance (Duh & Wara, 2024; Judson et al., 2006).

Conclusion

Digital inequalities persist even after decades of policy attention and institutional effort, preventing millions from full participation in education, employment, health care, and civic life. Public libraries have emerged as main institutional players addressing these disparities, by offering free internet access, technology training and digital inclusion services to the communities across the nation. This paper argues that digital divide bridging initiatives by libraries are not only social service interventions, but also strategic brand building processes that enhance institutional awareness, quality perceptions, associations, and loyalty. The paper has systematically analysed how digital inclusion influences each brand dimensions by relying on the multidimensional brand equity model proposed by Aaker (1991, 1996). Digital initiatives create visibility that builds brand awareness; demonstrates quality through accessible services that form perceived quality; create positive associations with social responsibility, trust, and innovation; and foster loyalty through meaningful user experiences and community connections. The framework places libraries not as passive responders to technological change, but as proactive creators of institutional value whose digital equity efforts generate cumulative benefits across service domains. To library administrators, the reframing provides a strong reason why it is worth investing in digital inclusion beyond its social utility. For researchers, it applies brand equity theory into the underexplored context of public libraries, offering a conceptual foundation for empirical investigation. For communities, it validates the essential role of libraries in ensuring that every member of the community can participate fully in an increasingly digital society. With the ongoing technological advancements and increasing digital demands, the digital inclusion work of libraries will only grow in significance. By recognizing and leveraging on its brand dimensions, libraries will be able to remain credible, inclusive, and socially responsive institutions for generations to come.

References

Aaker, D. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. The Free Press.

Aaker, D. (1996). Measuring brand equity across products and markets. *California Management Review, 38*(3), 102–120.

Ahmmed, Sk. S., Hassan, Md. S., Amin, M. B., Suanda, J. B., Ahmed, S., & Fenyves, V. (2025). Linking quality perception to satisfaction in private universities: A mediated marketing model. *Cogent Business & Management, 12*(1), 2555607. https://doi.org/10.1080/23311975.2025.2555607

Bell, R., & Goulding, A. (2023). Mobile libraries and digital inclusion: A study from Aotearoa New Zealand. *Public Library Quarterly, 42*(1), 1–20. https://doi.org/10.1080/01616846.2022.2029223

Bertot, J. C., Real, B., & Jaeger, P. T. (2015). Public libraries building digital inclusive communities: Data and findings from the 2013 Digital Inclusion Survey. *The Library Quarterly, 85*(3), 270–289. https://doi.org/10.1086/686674

Buono, V. D., & Fortezza, F. (2017). Universities' experience with brand. The role of design in managing university communication and branding. *The Design Journal, 20*(sup1), S705–S720. https://doi.org/10.1080/14606925.2017.1353016

Carvalho, L., Brandão, A., & Pinto, L. H. (2021). Understanding the importance of eWOM on higher education institutions' brand equity. *Journal of Marketing for Higher Education, 31*(2), 261–279. https://doi.org/10.1080/08841241.2020.1788196

Chen, S. L., & Hiew, C. Z. (2025). Online brand equity for higher education in Taiwan: Conceptualization, scale development, and validation. *Journal of Marketing for Higher Education, 35*(2), 262–279. https://doi.org/10.1080/08841241.2022.2146255

Duh, H. I., & Uzezi Wara, H. (2024). Internal branding of a university business through building and gaining from employee-based brand equity. *Journal of African Business, 25*(3), 427–444. https://doi.org/10.1080/15228916.2023.2239653

Gill, M. S., & Dawra, J. (2010). Evaluating Aaker's sources of brand equity and the mediating role of brand image. *Journal of Targeting, Measurement and Analysis for Marketing, 18*(3–4), 189–198. https://doi.org/10.1057/jt.2010.11

Goi, M. T., Goi, C. L., & Wong, D. (2014). Constructing a brand identity scale for higher education institutions. *Journal of Marketing for Higher Education, 24*(1), 59–74. https://doi.org/10.1080/08841241.2014.906017

Grant, C. (2015). It's time to define a new brand for libraries. Let's make sure it leaves people soaring, not snoring. *Public Library Quarterly, 34*(2), 99–106. https://doi.org/10.1080/01616846.2015.1036703

Grimes, N. D., & Porter, W. (2024). Closing the digital divide through digital equity: The role of libraries and librarians. *Public Library Quarterly, 43*(3), 307–338. https://doi.org/10.1080/01616846.2023.2251348

Jaeger, P. T., Bertot, J. C., Thompson, K. M., Katz, S. M., & DeCoster, E. J. (2012). The intersection of public policy and public access: Digital divides, digital literacy, digital inclusion, and public libraries. *Public Library Quarterly, 31*(1), 1–20. https://doi.org/10.1080/01616846.2012.654728

Judson, K. M., Gorchels, L., & Aurand, T. W. (2006). Building a university brand from within: A comparison of coaches' perspectives of internal branding. *Journal of Marketing for Higher Education, 16*(1), 97–114. https://doi.org/10.1300/J050v16n01_05

Juusola, K., Wilkins, S., & Jamous, S. (2023). Branding discourses in transnational higher education in the era of hypercompetition: Leveraging secondary brand associations. *Compare: A Journal of Comparative and International Education*, 1–18. https://doi.org/10.1080/03057925.2023.2292533

Khanchandani, V. (2022). Role of public libraries in the evolution of digital Bharat into Atmanirbhar Bharat. *Public Library Quarterly, 41*(3), 305–319. https://doi.org/10.1080/01616846.2021.1893115

Khoshtaria, T., Datuashvili, D., & Matin, A. (2020). The impact of brand equity dimensions on university reputation: An empirical study of Georgian higher education. *Journal of Marketing for Higher Education, 30*(2), 239–255. https://doi.org/10.1080/08841241.2020.1725955

Kinney, B. (2010). The Internet, public libraries, and the digital divide. *Public Library Quarterly, 29*(2), 104–161. https://doi.org/10.1080/01616841003779718

Lediga, M. M., & Fombad, M. C. (2018). The use of information and communication technologies in public libraries in South Africa as tools for bridging the digital divide: The case of the Kempton Park public library. *Public Library Quarterly, 37*(3), 296–305. https://doi.org/10.1080/01616846.2018.1471964

Liu, Y. Q., & Wnuk, A. (2009). The impact of digital resource and service use on urban residents in New England public libraries—A survey report. *Public Library Quarterly, 28*(1), 4–23. https://doi.org/10.1080/01616840802675242

Mojapelo, S. M. (2020). The Internet access and use in public libraries in Limpopo Province, South Africa. *Public Library Quarterly, 39*(3), 265–282. https://doi.org/10.1080/01616846.2019.1622980

Mourad, M., Meshreki, H., & Sarofim, S. (2020). Brand equity in higher education: Comparative analysis. *Studies in Higher Education, 45*(1), 209–231. https://doi.org/10.1080/03075079.2019.1582012

Plumb, T. K. (2007). Challenges and opportunities for electronic resources (ER) librarians in facing down the digital divide. *Collection Management, 32*(3–4), 327–349. https://doi.org/10.1300/J105v32n03_06

Potnis, D., & McDonald, L. (2025). Rural libraries and digital inclusion of farming communities: Capabilities, willingness, challenges, and needs. *Public Library Quarterly*, 1–34. https://doi.org/10.1080/01616846.2025.2541520

Real, B. (2021). Bridging digital divides during COVID-19: Findings from the 2020–2021 Connecticut State Library Digital Inclusion Survey. *Public Library Quarterly, 40*(4), 283–309. https://doi.org/10.1080/01616846.2021.1938918

Real, B., Bertot, J. C., & Jaeger, P. T. (2014). Rural public libraries and digital inclusion: Issues and challenges. *Information Technology and Libraries, 33*(1), 6–24. https://doi.org/10.6017/ital.v33i1.5141

Real, B., McDermott, A. J., Bertot, J. C., & Jaeger, P. T. (2015). Digital inclusion and the Affordable Care Act: Public libraries, politics, policy, and enrollment in "Obamacare." *Public Library Quarterly, 34*(1), 1–22. https://doi.org/10.1080/01616846.2015.1000770

Rhinesmith, C. (2026). Public libraries, digital equity coalitions, and the public good. *Public Library Quarterly, 45*(1), 94–118. https://doi.org/10.1080/01616846.2025.2452060

Strover, S. (2019). Public libraries and 21st century digital equity goals. *Communication Research and Practice, 5*(2), 188–205. https://doi.org/10.1080/22041451.2019.1601487

Waqas, M. (2022). The role of brand experience and student engagement in the creation of brand equity in a higher education context. *Journal of Nonprofit & Public Sector Marketing, 34*(4), 451–474. https://doi.org/10.1080/10495142.2021.1902905

Woodson, T., Telendii, N., & Tolliver, R. (2020). Reducing inequality through technology diffusion: The case of 3D printing in public libraries. *Journal of Responsible Innovation, 7*(3), 553–572. https://doi.org/10.1080/23299460.2020.1808152

Bibliographic Note

This study adopts a descriptive and analytical approach based on a systematic review of interdisciplinary literature drawn from library and information science, communication studies, and branding research. The paper relies exclusively on secondary sources, including peer-reviewed journal articles, academic books, and policy reports, to synthesize existing knowledge on the digital divide, digital inclusion initiatives, and brand equity. The literature was identified through major academic databases such as Scopus, Web of Science, and Google Scholar using keywords including *"digital divide," "digital inclusion," "public libraries," "brand equity,"* and *"Aaker brand model."* Priority was given to peer-reviewed and high-impact publications, with an emphasis on both foundational works and recent studies to ensure theoretical depth and contemporary relevance. Sources were selected based on their relevance to the research objectives, conceptual rigor, and contribution to understanding the intersection of digital inclusion and institutional branding.

The theoretical foundation of the study is anchored in Aaker's Brand Equity Model (1991, 1996), which serves as the primary analytical lens for examining how digital inclusion initiatives influence brand awareness, perceived quality, brand associations, and brand loyalty in public libraries. A conceptual synthesis approach is adopted as it allows for the integration of diverse theoretical perspectives and the development of a coherent framework in an underexplored research area where empirical evidence remains fragmented. While this approach enables broad theoretical integration, certain limitations must be acknowledged. The study is dependent on existing literature, which may reflect publication bias and uneven geographic representation, with a concentration of studies from developed contexts. Additionally, the application of a model originally developed for commercial settings may require further contextual refinement for public institutions such as libraries.

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