

## Are Facilities Enough? Quality access and Quality of Life for disabled users in academic libraries

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### Abstract

Academic libraries document accessibility through facilities, digital tools, assistive support, and staff assistance. For disabled users, these provisions support quality of life by enabling meaningful academic participation. This qualitative policy and document analysis compares accessibility benchmarks with public documentation from Perpustakaan Sultanah Bahiyah, Universiti Utara Malaysia (PSB/UUM), using a SERVQUAL-informed quality-access lens. Findings identify strong tangible provision alongside under-specified referral routes, response procedures, staff responsibility, digital usability, privacy, feedback, and dignity-centred interaction. The resulting Provision-to-Participation Quality Access Framework positions service-route translation as a means of connecting documented provision with autonomy, confidence, dignity, academic continuity, and institutional belonging.

**Keywords:** Academic library accessibility; Quality access; Quality of life; Service-route translation.

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### 1.0 Introduction

Disabled users access academic libraries through spaces, information resources, digital systems, assistive tools, and staff-mediated services. The library entry marks the visible point of access. Academic participation depends on the service route that follows. Quality access arises when documented accessibility provision enables information access, digital usability, staff assistance, dignity, confidence, and institutional belonging. Malaysian higher education studies document barriers involving facilities, institutional support, digital materials, and reliance on others for academic tasks (Bodaghi et al., 2014; Yusof et al., 2020). In academic libraries, these barriers restrict learning, access to information, digital engagement, service interactions, confidence, and quality of life. The United Nations Convention on the Rights of Persons with Disabilities links accessibility with dignity, equality, and participation. Malaysia's Persons with Disabilities Act 2008 and the Ministry of Higher Education Malaysia's (MOHE) inclusive guideline for persons with disabilities, locally termed Orang Kurang Upaya (OKU), position access within educational obligations (Government of Malaysia, 2008; Ministry of Higher Education Malaysia, 2019; United Nations, 2006). These obligations require coordinated library routines, staff assistance, assistive tools, digital systems, and links between disability-support structures and library services. Service-route translation determines whether documented provision functions as usable academic access. Inclusive practice requires planned procedures, disability-support collaboration, assistive-technology guidance, staff capability, and direct service pathways (Potnis & Mallary, 2022; Sanchez-Rodriguez & LoGiudice, 2018). A ramp has limited value when users struggle to identify contact points, secure timely assistance, navigate digital

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systems, or connect university-level disability support with library-level services. Perpustakaan Sultanah Bahiyah (PSB), Universiti Utara Malaysia (UUM), provides the Malaysian documentary anchor. PSB documents physical and online accessibility, service desk assistance, dedicated staff, advance notice assistance, ramps, lifts, adapted seating, accessible toilets, tactile paving, special study spaces, accessible parking, shelf spacing, and World Wide Web Consortium (W3C) accessibility tools (Perpustakaan Sultanah Bahiyah, n.d.-a). Its floor plan presents a multi-level learning environment comprising main and annex buildings, floor-based services, collections, study spaces, and circulation routes (Perpustakaan Sultanah Bahiyah, n.d.-b). This study evaluates how documented accessibility provision translates into quality access through qualitative policy and document analysis. By comparing accessibility benchmarks with PSB/UUM documentation, the paper positions service-route translation as the operational mechanism that connects documented provision to academic participation, autonomy, confidence, dignity, academic continuity, and institutional belonging.

## 2.0 Literature Review

Studies of academic library accessibility connect service encounters with participation outcomes beyond facility provision. Malaysian higher education studies document barriers involving facilities, digital materials, institutional assistance, and reliance on others for academic tasks (Bodaghi et al., 2014; Yusof et al., 2020). Library-focused studies address student perceptions, assistive technologies, website accessibility, staff readiness, adaptive equipment, and service coordination (Çakmak & Uğurlu, 2025; Hunt, 2024; Liu et al., 2024). Across this evidence, facility provision establishes entry conditions, while service routines govern task completion. Parasuraman et al. (1988) organise service performance through tangibles, reliability, responsiveness, assurance, and empathy. In library settings, these domains structure analysis of facilities, procedures, staff response, competence, and respectful interaction (Cook & Heath, 2001; Thompson et al., 2000). Quality access, therefore, frames accessibility as a translation problem in which provision establishes the visible layer, service performance determines usability, and participation shapes autonomy, dignity, confidence, and belonging.

### 2.1 Disabled users and academic library accessibility

Disabled users engage with academic libraries through spaces, information formats, digital systems, assistive technologies, and staff-mediated services. Access covers building entry, internal routes, shelf reach, catalogue searching, database retrieval, reading formats, study spaces, service counters, and assistance requests. United Nations disability principles and International Federation of Library Associations and Institutions (IFLA) guidance position accessibility within equal participation across built environments, information resources, technologies, communication, and staff-mediated services (IFLA, 2022; United Nations, 2006). Hunt (2024) centres disability-related library experiences among students; Liu et al. (2024) identify persistent accessibility errors on academic library websites; and Potnis and Mallary (2021) establish a service divide in assistive technology provision. Across these studies, access barriers operate through physical, digital, informational, and interpersonal points. Continuity across the library journey determines whether entry leads to task completion. Users must still navigate material locations, online public access catalogue (OPAC) functions, databases, digital files, assistive tools, and assistance channels. Facility presence secures entry, whereas service continuity sustains academic work. Fragmented continuity increases the frequency of repeated requests, informal assistance, dependence, and delays.

### 2.2 Service quality and quality of access

Facilities acquire service value when library routines make them usable during academic work. Disabled users navigate ramps, lifts, assistive tools, databases, service desks, and procedures as one learning route. Each element influences whether users reach materials, secure assistance, and complete tasks without unnecessary delay or dependence. SERVQUAL domains translate into practical service meanings within disability access. Tangibles cover facilities, assistive tools, accessible workstations, and digital entry points. Reliability concerns procedures, referral routes, maintenance, continuity, and predictable assistance. Responsiveness requires timely staff action during navigation, searching, borrowing, database access, and assistive-technology use. Assurance centres on competence, role clarity, communication, coordination, and trust. Empathy protects privacy, choice, respectful assistance, and dignity-centred interaction. These domains form the service-route translation mechanism that connects documented provision to quality access in use. Assistive technologies expose the distinction between provision and performance. A tool supports participation when users know it is available, staff understand how to operate it, and its functions align with the information tasks at hand. Investment remains insufficient without service guidance, user awareness, and task-level fit (Potnis & Mallary, 2021). Quality access links facilities, staff roles, routines, digital usability, referral clarity, and respectful interaction with academic participation.

### 2.3 Quality of life in academic library spaces

Quality of life in academic library spaces concerns learning conditions that sustain autonomy, dignity, confidence, academic continuity, and institutional belonging. Usable spaces, reachable information, accessible digital systems, appropriate assistance, and respectful interaction establish the service conditions through which access acquires quality-of-life value. Rights-based disability frameworks connect accessibility with dignity, equality, and participation, while inclusive education principles position learning environments within the context of equitable academic access (UNESCO, 2015; United Nations, 2006). Library environments translate these principles through encounters with entrances, floor layouts, shelves, study seating, catalogue functions, databases, assistive technologies, staff response, privacy, and coordination. Inaccessible materials, fragmented assistance, and reliance on others reduce independence, disrupt continuity of learning, constrain confidence, and limit institutional belonging. SERVQUAL specifies how service performance shapes these outcomes. Tangibles support movement and autonomy; reliability secures confidence; responsiveness protects academic continuity; assurance builds trust; and empathy safeguards dignity through privacy, choice, and respectful interaction (Cook & Heath,

2001; Parasuraman et al., 1988; Thompson et al., 2000). Quality access in use, therefore, assesses whether facilities, digital systems, assistive tools, staff roles, and procedures translate provision into meaningful academic participation.

### 3.0 Methodology

A qualitative policy and document analysis compared accessibility benchmarks with PSB/UUM public documentation concerning disabled academic library users. Document analysis supports systematic evaluation of institutional commitments, service expectations, and documented service representations (Bowen, 2009). The corpus comprised four source layers. The first included the Persons with Disabilities Act 2008, MOHE Inclusive OKU Guideline, United Nations Convention on the Rights of Persons with Disabilities, revised IFLA accessibility guidance, and Web Content Accessibility Guidelines (WCAG) 2.2 (IFLA, 2024, 2025; MOHE, 2019; United Nations, 2006; W3C, 2023). The second included PSB Disabilities Services, PSB Library Floor Plan, and PSB Homepage. The third covered the UUM disability support context through ILC PERMAI materials and student support information. The fourth used the People with Disabilities Library Guide of Perpustakaan Tun Abdul Razak (PTAR), Universiti Teknologi MARA (UiTM), as a comparator for documented OKU service practices among Malaysian academic libraries. Sources were selected when they addressed disability, accessibility, inclusive higher education, library services, digital access, assistive tools, staff assistance, or academic participation. Promotional material lacking direct relevance to accessibility or library service practice was excluded.

Coding followed a SERVQUAL-informed analytical structure. Tangibles, reliability, responsiveness, assurance, and empathy organised accessibility as a service-quality issue beyond facility presence (Parasuraman et al., 1988). In library settings, these domains structured coding of facilities, procedures, staff response, competence, coordination, privacy, choice, and respectful interaction (Cook & Heath, 2001; Thompson et al., 2000). Academic library studies supported the focus on service experience, digital accessibility, assistive technologies, staff readiness, and service coordination (Çakmak & Uğurlu, 2025; Hunt, 2024; Liu et al., 2024). Each domain was mapped to the quality of access in use and quality-of-life outcomes.

Table 1. Quality access comparison between accessibility benchmarks and PSB/UUM documentation

| SERVQUAL-informed domain | Benchmark expectation                                                                      | PSB/UUM documented evidence                                                                                                                   | Under-specified area                                                                                               | Quality-access and quality-of-life implication                                   |
|--------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Tangibles</b>         | Accessible buildings, routes, seating, toilets, assistive tools, and digital entry points. | Ramps, lifts, adapted seating, accessible toilets, tactile paving, parking, shelf spacing, online accessibility, and W3C accessibility tools. | Maintenance, usability monitoring, and assistive-tool guidance remain under-specified.                             | Navigation and autonomy.                                                         |
| <b>Reliability</b>       | Defined procedures, referral routes, continuity, response time, and follow-up.             | Service desk, dedicated staff, and advance-notice assistance.                                                                                 | Referral routes, continuity, response time, and follow-up remain under-specified.                                  | Predictable assistance and confidence.                                           |
| <b>Responsiveness</b>    | Planned and immediate assistance across physical, digital, and service barriers.           | Advance-notice assistance and staff assistance.                                                                                               | Immediate support for barriers in databases, shelves, printing, scanning, and e-resources remains under-specified. | Information retrieval, assistance use, task completion, and academic continuity. |
| <b>Assurance</b>         | Trained staff, role clarity, accountability, and coordination authority.                   | Staff assistance is documented in PSB.                                                                                                        | Competence, training, responsibility, and coordination indicators remain under-specified.                          | Reduced dependence and confidence.                                               |
| <b>Empathy</b>           | Privacy, choice, respectful assistance, user preference, and feedback.                     | Inclusion is expressed through access and assistance statements.                                                                              | Privacy, user choice, dignity protection, and feedback remain under-specified.                                     | Dignity and institutional belonging.                                             |

The analysis proceeded in three stages. First, relevant statements were extracted from the corpus. Second, the evidence was coded under the SERVQUAL-informed domains. Third, patterns were compared across benchmark expectations and PSB/UUM documentation to identify documented strengths, under-specified service routes, and quality-access and quality-of-life implications. The synthesis traced the pathway from documented accessibility provision through service-route translation and quality access in use to quality-of-life outcomes.

### 4.0 Findings

Table 1 anchors the comparison between accessibility benchmarks and PSB/UUM documentation. The analysis generated three interconnected findings. First, tangible access dominates the documented provision. Second, service routes require stronger coordination across library and institutional support layers. Third, quality-of-life outcomes require operational indicators that connect accessibility provision to everyday academic use. Sections 4.1 to 4.3 explain these documentary patterns, while Section 4.4 integrates them into the Provision-to-Participation Quality Access Framework.

#### 4.1 Tangible access dominates PSB/UUM documentation

PSB provides the strongest documentary evidence under tangibles. Its Disabilities Services page records physical and online accessibility, staff assistance, advance-notice support, accessible routes and facilities, special study spaces, parking, shelf spacing, and W3C accessibility tools (Perpustakaan Sultanah Bahiyah, n.d.-a). These provisions align with benchmarks for accessible buildings, assistive support, and digital entry points. The floor plan maps main and annex buildings, floor-based services, collections, study areas, and circulation routes (Perpustakaan Sultanah Bahiyah, n.d.-b). The documents establish a visible-access base, while operational documentation of maintenance, assistive-tool guidance, usability monitoring, emergency support, and follow-up remains limited.

#### 4.2 Service routes require clearer coordination across support layers

Reliability, responsiveness, and assurance define the second finding. PSB documents library-level disability services, while UUM documents institutional support through ILC PERMAI and student support information (ILC PERMAI UUM, n.d.; Perpustakaan Sultanah Bahiyah, n.d.-a; Universiti Utara Malaysia, n.d.). The documents confirm institutional recognition, while the connecting service route remains underspecified. Disabled users require direct information on contact points, scope of assistance, operating hours, staff responsibilities, and routes for physical and digital access, information retrieval, assistive technologies, and counter services. Advance-notice arrangements support planned visits, while routine library tasks generate immediate needs across shelf access, OPAC searching, borrowing, printing, scanning, e-resources, and space navigation. Explicit referral routes, response expectations, role boundaries, and coordination authority strengthen continuity, confidence, trust, and safety.

#### 4.3 Quality-of-life outcomes require operational service indicators

The third finding concerns the limited operationalisation of quality-of-life outcomes within accessibility documentation. Rights-based, higher-education, and professional library sources connect accessibility with dignity, equality, participation, inclusion, and educational responsibility (IFLA, 2022; MOHE, 2019; United Nations, 2006). PSB/UUM documentation associates these outcomes with accessible routes, facilities, digital tools, staff support, and advance-notice assistance (Perpustakaan Sultanah Bahiyah, n.d.-a). The documents specify the provision more fully than the outcome performance. Privacy, user preferences, dignity protection, staff training, service recovery, accountability, and feedback from disabled users require stronger operational specifications. Quality access translates into use: tangibles enable navigation and autonomy; reliability sustains task completion and confidence; responsiveness supports the use of assistance and academic continuity; assurance reduces dependence and strengthens confidence; and empathy safeguards dignity and belonging.

#### 4.4 Provision-to-Participation Quality Access Framework

The three findings establish a connected accessibility pathway. Documented provision creates the initial conditions for access, while service-route translation determines whether physical spaces, digital systems, assistive tools, and staff support function during academic library use. Figure 1 integrates documented accessibility provision, SERVQUAL-informed service translation, quality access in use, and quality-of-life outcomes.

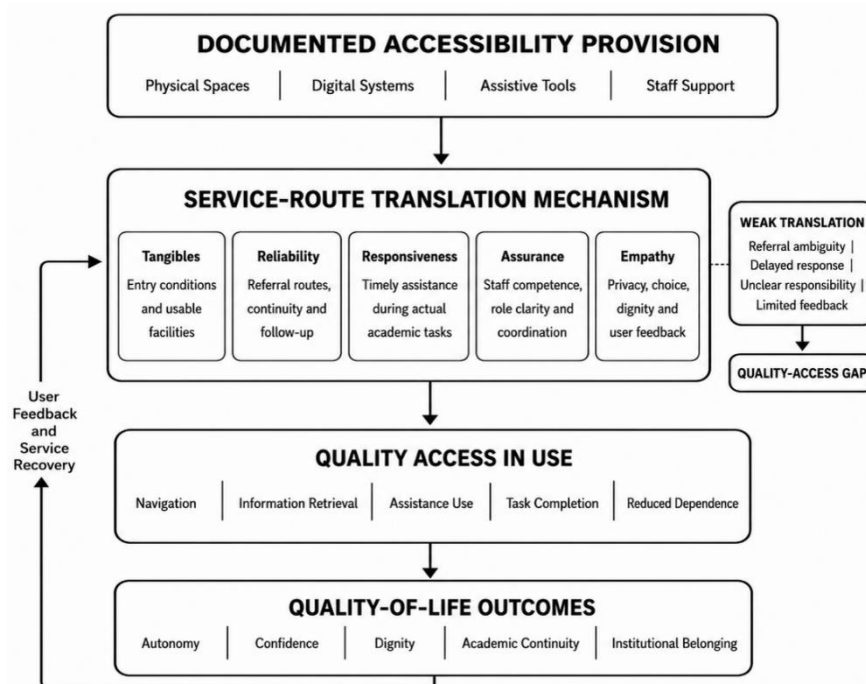


Fig. 1: Provision-to-Participation Quality Access Framework

Within the framework, tangibles establish the visible access base, while reliability, responsiveness, assurance, and empathy govern

whether disabled users can activate that provision during academic tasks. Effective service-route translation supports navigation, information retrieval, assistance use, task completion, and reduced dependence. Weak translation produces a quality-access gap through referral ambiguity, delayed response, unclear responsibility, and limited feedback. The framework interprets these weaknesses as barriers between documented provision and autonomy, confidence, dignity, academic continuity, and institutional belonging. User feedback and service recovery return practice-level evidence to the translation mechanism, allowing libraries to refine procedures, staff roles, coordination arrangements, and service continuity. Quality access, therefore, functions as the operational connection between documented accessibility provision and disabled users' quality of life.

## 5.0 Discussion

The findings establish academic library accessibility as an institutional translation process that links physical, digital, assistive, and staff-support provision to academic participation. Previous studies document facilities, assistive technologies, digital accessibility, staff readiness, and disability-related barriers (Hunt, 2024; Liu et al., 2024; Potnis & Mallary, 2021). Their evidence identifies essential access components, whereas cross-task integration lacks analytical specification. The Provision-to-Participation Quality Access Framework defines service-route translation as the mechanism that links documented provision to navigation, information retrieval, assistance use, task completion, and reduced dependence.

PSB/UUM documentation records a substantial tangible base through accessible facilities, spatial arrangements, online tools, and staff-assistance statements (Perpustakaan Sultanah Bahiyah, n.d.-a, n.d.-b). The central quality issue concerns the specification of contact points, scope of assistance, operating hours, staff responsibilities, urgent support routes, and coordination across library and institutional support layers (ILC PERMAI UUM, n.d.; Perpustakaan Sultanah Bahiyah, n.d.-a; Universiti Utara Malaysia, n.d.). Referral ambiguity, delayed response, unclear responsibility, and limited feedback constitute weak-translation conditions. These conditions produce a quality-access gap when documentation fails to connect visible provision with consistent academic use. The analysis evaluates documentary visibility and specification without inferring actual service failure.

The study contributes an integrated framework connecting accessibility provision, service translation, behaviour during library use, and quality-of-life outcomes. The weak-translation pathway explains the coexistence of extensive tangible provision and constrained usability. The feedback and service-recovery loop positions user experience as operational evidence for refining procedures, staff roles, coordination arrangements, and service continuity. The framework strengthens environment-behaviour analysis by linking library conditions with user action and participation. It operationalises quality of life through autonomy, confidence, dignity, academic continuity, and institutional belonging.

## 6.0 Conclusion and Recommendations

Academic library accessibility requires evaluation beyond visible provision. Policy, professional, institutional, and PSB/UUM documents establish a strong tangible layer through facilities, spatial arrangements, online accessibility tools, and staff-assistance statements. The decisive quality issue concerns the service route that translates these assets into reliable routines, digital usability, assistive support, responsible staff action, referral precision, service recovery, and dignity-centred interaction. The Provision-to-Participation Quality Access Framework connects documented accessibility provision, service-route translation, quality access in use, and quality-of-life outcomes. Its contribution centres on the weak-translation pathway and the feedback and service-recovery loop. The first explains how a substantial tangible provision can coexist with restricted usability. The second treats user experience as operational evidence for refining procedures, staff roles, coordination arrangements, and service continuity. At PSB/UUM, public documentation needs a stronger specification of contact points, scope of assistance, operating hours, staff responsibilities, urgent support routes, coordination arrangements, assistive technology guidance, and feedback procedures. Such specification converts accessibility from an institutional declaration into an accountable service standard. Across global higher education, academic libraries are expanding AI-mediated discovery, automated enquiry, self-service systems, and personalised digital interfaces. Large training corpora expand processing scale without guaranteeing inclusive representation. Stereotyped, outdated, or incomplete representations of disability, combined with weak recurring human review, reproduce exclusion under the appearance of efficiency. Quality-access risks increasingly arise from inaccessible authentication, opaque automated decisions, ambiguous human oversight, fragmented referral routes, and weak recovery mechanisms. Future library quality depends on coordinated translation across physical, digital, AI-mediated, assistive, and human-support layers, supported by recurring accessibility audits, disabled-user feedback, and accountable human review. The documentary design captures institutional representation. Future interviews, observation, and task-based accessibility testing must verify lived service performance and assess the framework across library settings. Quality access sets the decisive standard. Disabled users must navigate systems, retrieve information, secure assistance, complete academic work, and participate with autonomy, confidence, dignity, academic continuity, and a sense of institutional belonging.

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## Paper Contribution to the Related Field of Study

This paper contributes to quality-of-life, environment-behaviour, higher education, disability access, and Information Management

studies through the Provision-to-Participation Quality Access Framework. The framework identifies service-route translation as the mechanism that connects documented accessibility provision to navigation, information retrieval, assistance use, task completion, and reduced dependence. Its weak-translation pathway explains how substantial provision can coexist with a quality-access gap. The feedback and service-recovery loop positions user experience as operational evidence for service refinement. These mechanisms connect library environments and user action with autonomy, confidence, dignity, academic continuity, and institutional belonging as quality-of-life outcomes.

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