Kraków, 27.11.2025

Pełna nazwa projektu: Potrzeby i zachowania informacyjne neuroróżnorodnych użytkowników w kontekście projektowania inkluzywnych usług bibliotek akademickich w fizycznej przestrzeni biblioteki -NEURO-INC. Projekt finansowany w ramach konkursu OPUS 28 przez Narodowe Centrum Nauki na podstawie umowy: UMO-2024/55/B/HS2/00694.

Full project name: Information needs and behaviors of neurodiverse users in the context of designing inclusive academic library services in the physical library space -NEURO-INC. The project is financed under the OPUS 28 call for proposals by the National Science Centre under the agreement: UMO-2024/55/B/HS2/00694.

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Streszczenie

Punktem wyjścia projektu jest idea inkluzyjności usług bibliotecznych, definiowana tu jako dążenie do takiej organizacji usług, aby były one dostępne i przyjazne dla jak najszerszego grona użytkowników. W literaturze przedmiotu można znaleźć wiele opisów pomysłów na dostosowanie usług bibliotecznych do potrzeb osób z niepełnosprawnościami narządów ruchu, a także z niepełnosprawnościami sensorycznymi wzroku i słuchu, jednak problem dostosowania fizycznych przestrzeni bibliotecznych do specyficznych potrzeb użytkowników neuroróżnorodnych jest wciąż rzadko poruszany. Wynika to po części z niejasności samego pojęcia neuroróżnorodności, które jest definiowane niemal wyłącznie z perspektywy nauk medycznych, a nie z perspektywy jego społecznych konsekwencji. W tym kontekście jednym z głównych celów poznawczych badań będzie opracowanie kompleksowej definicji opartej na dorobku nauk społecznych, ze szczególnym uwzględnieniem kontekstów informacyjno-komunikacyjnych tego zagadnienia, w której neuroróżnorodność będzie postrzegana jako pewna cecha użytkowników bibliotek. Inne cele naukowe obejmują:

a) opracowanie ram koncepcyjnych i metodologicznych do badania potrzeb informacyjnych i zachowań użytkowników bibliotek neuroróżnorodnych,

b) opracowanie narzędzi i procedur do badania neuroróżnorodnych użytkowników bibliotek oraz testowanie tych rozwiązań w praktyce,

c) określenie związku między neuroróżnorodnością a potrzebami i zachowaniami informacyjnymi użytkowników bibliotek akademickich,

d) opracowanie kompleksowego modelu projektowania innowacyjnych usług informacyjnych dostosowanych do potrzeb użytkowników bibliotek neuroróżnorodnych,

e) opracowanie wytycznych i rekomendacji dla bibliotekarzy, kadry zarządzającej bibliotekami i projektantów, umożliwiających efektywne dostosowanie istniejących usług bibliotecznych do potrzeb użytkowników neuroróżnorodnych.

Projekt opiera się na tezie, że neuroróżnorodność może mieć istotny wpływ na zakres i sposób zaspokajania potrzeb informacyjnych użytkowników bibliotek akademickich, w tym na ich zachowania informacyjne. Może to oznaczać, że osoby neuroróżnorodne (np. ze spektrum autyzmu, ADHD czy dysleksją) mogą mieć odmienne wymagania w zakresie wyszukiwania, przetwarzania i wykorzystywania informacji oraz interakcji z bibliotekami akademickimi.

Celem zadania 1 było przeprowadzenie systematycznej analizy i krytyki literatury przedmiotu z zakresu nauk społecznych w wymiarze interdyscyplinarnym, ze szczególnym uwzględnieniem osiągnięć psychologii, zarządzania oraz komunikacji społecznej i nauk o mediach, w celu określenia głównych kierunków refleksji nad neuroróżnorodnością. Osiągnięto następujące rezultaty:

a) opracowanie definicji neuroróżnorodności w oparciu o osiągnięcia nauk społecznych, z uwzględnieniem specyfiki procesów informacyjno-komunikacyjnych zachodzących w środowisku bibliotekarza

b) opracowanie koncepcyjnych ram metodologicznych dla badań nad użytkownikami neuroróżnorodnymi.

Summary

The starting point for the project is the idea of inclusiveness of library services, defined here as striving to organize services in such a way that they are accessible and friendly to the widest possible group of users. The literature on the subject contains many descriptions of ideas for adapting library services to the needs of people with disabilities of the motor organs, as well as sensory disabilities of sight and hearing, but the problem of adapting physical library spaces to the specific needs of neurodivergent users is still rarely discussed. This is partly due to the vagueness of the concept of neurodiversity itself, which is primarily defined almost exclusively from the point of view of medical science and not from the point of view of its social consequences. In this context, one of the main cognitive goals of the research will be to develop a comprehensive definition of neurodiversity perceived as a feature of library users, based on the achievements of social sciences and taking into account in particular the information and communication contexts of this issue. Other scientific goals include:

a) developing a conceptual, methodological framework for researching the information needs and behaviours of neurodivergent library users,

b) developing tools and procedures for researching neurodivergent library users and testing these solutions in practice,

c) determining the relationship between neurodiversity and the needs and information behaviours of academic library users,

d) developing a comprehensive model for designing innovative information services tailored to the needs of neurodivergent library users.

e) preparation of guidelines and recommendations for librarians, library management and designers enabling for effective adapting existing library services to the needs of neurodivergent users.

The research project is based on the thesis that neurodiversity may have a significant impact on the scope and method of satisfying the information needs of academic library users, including their information behaviours. This may mean that neuroatypical people such as those on the autism spectrum, ADHD or dyslexia), may have different requirements for searching, processing and using information and interacting with academic libraries.

The aim of task 1 was to carry out a analysis and criticism of relevant literature on the subject in the field of social sciences with adopting an interdisciplinary perspective, with particular emphasis on including achievements of psychology, management and social communication and media sciences in order to determine the main directions of reflection on neurodiversity. The following results were achieved:

a) developing the definition of neurodiversity based on the achievements of social sciences, taking into account the specificity of information and communication processes taking place in libraries,

b) developing a conceptual methodological framework for neurodiverse user research.

Task 1: Analysis of the subject literature

1. Abstract

Purpose: The aim of task 1 was to carry out a analysis and criticism of relevant literature on the subject in the field of social sciences with adopting an interdisciplinary perspective, with particular emphasis on including achievements of psychology, management and social communication and media sciences to determine the main directions of reflection on neurodiversity. In this review we synthesise evidence on how universities, particularly academic libraries, are adapting spaces, collections, services and institutional practices to better support neurodivergent students and staff. It applies a PRISMA-7-aligned methodology to 26 peer-reviewed publications (2018–2025) forming a curated dataset.

Design/methodology/approach: Using PRISMA-7 principles, we screened and analysed 26 records, all of them meeting inclusion criteria. Data were extracted into thematic categories using inductive-deductive coding. A narrative synthesis identifies trends, gaps and future directions.

Findings: Four dominant themes emerged: (1) sensory and physical environments as key determinants of inclusion, (2) heterogeneity in library services and accommodations, (3) inconsistent but expanding professional development in neurodiversity, (4) institutional cultures that shape the experiences of neurodivergent library staff. Service adaptations are more common than collection-level or structural interventions, as demonstrated by Flores-Fernández et al.'s systematic review, which highlights a persistent lack of neurodiversity-oriented approaches to collections.

Research limitations and practical implications: Future work should expand to cross-cultural contexts, intersectional analyses, longitudinal research and empirical evaluation of interventions. Academic libraries should prioritise sensory-aware spatial design, multimodal communication, Universal Design for Learning (UDL), transparent behavioural expectations and neurodiversity-informed policies. Collection development and metadata practices require substantial redesign to become neurodiversity-inclusive.

Originality/value: This is the first review to synthesise neurodiversity research in academic libraries using PRISMA-7 principles, integrating spatial, organisational, epistemic and labour-focused perspectives across a multi-disciplinary corpus.

Results: We developed the extensive definition of neurodiversity based on the achievements of social sciences, taking into account the specificity of information and communication processes taking place in libraries. Based on the targeted highly specific and precise literature review, we proposed to operate within a conceptual methodological framework for neurodiverse user research, namely the Neurodiversity-Inclusive Library Model (NILM).

1. Introduction

Higher education institutions are experiencing a significant demographic and cultural shift as increasing numbers of neurodivergent students: those with autism spectrum conditions, ADHD, dyslexia, intellectual and developmental differences and other neurocognitive variations, enter and navigate university life. This shift coincides with the growing influence of the neurodiversity paradigm, which rejects deficit-based framings of disability and calls for systemic redesign of academic environments to reflect human cognitive plurality.

Among campus infrastructures, academic libraries occupy a unique position. They are simultaneously physical, sensory, social and epistemic environments. They host learning activities, mediate access to knowledge and often serve as emotional or sensory refuges for neurodivergent users. Yet, as emerging research demonstrates, libraries may also reproduce barriers through their spatial design, behavioural norms, metadata practices, staffing structures and institutional policies.

This literature review synthesizes findings from 26 peer-reviewed publications (2018-2025), examining how universities and especially their libraries, can adapt spaces, collections, services and institutional cultures to better include neurodivergent students and professionals. The review employs a PRISMA-7 aligned methodology, adapted to a curated dataset rather than a live database search, ensuring transparency in selection, extraction and synthesis.

The goal is to provide a comprehensive, conceptually integrated and future-oriented overview that can inform scholarly debate and practical implementation across information science, library studies, disability studies and higher-education policy.

2. Methods (PRISMA-7 framework)

2.1 Data source

In the initial phase, we undertook a broadly configured search across databases indexing high-impact journals, namely Web of Science, Scopus and Embase. No chronological limits were imposed, as the objective was to achieve the most comprehensive possible coverage of the literature within the designated thematic scope. The language parameters were restricted to English, French and Italian. Primary and secondary sources, classified according to Evidence-Based Medicine (EBM) nomenclature, were included and confined to journal articles (including preprints), monograph chapters (including preprints) and systematic reviews or meta-analyses concerning neurodiversity in adults. The search streams and resultant outputs are summarised in Table 1.

Table 1. First endeavor bibliographical query

Database	Search stream	Number of results
Embase	Query('neurodiversity'/exp OR 'neurodiversity') AND ('article'/it OR 'article in press'/it OR 'chapter'/it OR 'preprint'/it OR 'review'/it) AND ([adult]/lim OR [young adult]/lim OR [middle aged]/lim OR [aged]/lim OR [very elderly]/lim) AND ([english]/lim OR [french]/lim OR [italian]/lim OR [polish]/lim) AND ('article'/it OR 'article in press'/it OR 'conference paper'/it OR 'data papers'/it OR 'review'/it OR 'preprint'/it OR 'clinical trial'/it) AND ('education'/de OR 'educational status'/de OR 'information processing'/de OR 'interpersonal communication'/de OR 'knowledge'/de OR 'learning'/de OR 'self concept'/de OR 'social support'/de OR 'stigma'/de OR 'wellbeing'/de)	152
Scopus	(TITLE (neurodiv* OR neuroaty* OR neurodisab*) AND TITLE-ABS-KEY (education OR librar* OR university OR academ*) AND TITLE-ABS-KEY (adult*)) AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "French") OR LIMIT-TO (LANGUAGE , "Italian")) AND (LIMIT-TO (SRCTYPE , "j") OR LIMIT-TO (SRCTYPE , "b") OR LIMIT-TO (SRCTYPE , "p") OR LIMIT-TO (SRCTYPE , "k"))	72
Web of Science	Search: neurodiv* OR neuroatyp* OR neurodisab* (Title) AND "higher education" OR university OR librar* OR academ* (Topic) and Editorial Material (Exclude – Document Types) and Review Article (Exclude – Document Types) and English (Languages) Date Run: Sun Sep 28 2025	134

	16:59:57 GMT+0200 (czas środkowoeuropejski letni) Results: 134	

The corpus identified was both voluminous and markedly heterogeneous with respect to its metatheoretical assumptions and methodological orientations. Under such conditions, deriving a coherent and operational definition of neurodiversity for the Neuro-Inc project proved unduly laborious and ultimately inefficient, given the limited analytical value yielded relative to the effort required. This outcome provided a compelling rationale for recalibrating the search strategy. Accordingly, rather than pursuing a broadly scoped inquiry, we (1) restricted the search to combinations of terms delineating the conceptual domain of the Neuro-Inc project and (2) applied the PRISMA-7 framework to secure the requisite level of methodological rigor. The search procedure implemented in the second phase is presented in Table 2.

Table 2. Second stage bibliographical query

Database	Search stream	Number of results
Web of Science	neurodiv* OR neuroatyp* OR neurodisab* OR ADHD OR autis* (Title) and academ* OR universit* OR "higher education" (Title) and librar* OR audit OR campus OR space OR builinding* OR architec* OR adaptation (Title) and Article or Review Article or Early Access (Document Types)	16
Scopus	(TITLE (neurodiv* OR neuroatyp* OR neurodisab* OR ADHD OR autis*) AND TITLE (academ* OR universit* OR "higher education") AND TITLE (librar* OR audit OR campus OR space OR builinding* OR architec* OR adaptation)) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "bk"))	20
Lista	TI (neurodiv* OR neuroatyp* OR neurodisab* OR ADHD OR autis*) AND TI (academ* OR universit* OR "higher education") AND TI (librar* OR audit OR campus OR space OR builinding* OR architec* OR adaptation)	15
Total number of papers after duplicated removal and selection		26

Further steps of qualitative analysis of obtained 26-item collection is described following PRISMA-7 scheme.

2.2 Eligibility criteria

Inclusion criteria:

1. Focus on neurodivergent individuals in higher education.
2. Relevance to campus environments, academic libraries, library services or library labour.
3. Empirical, conceptual, review-based or practice-based scholarship.
4. Published in English.
5. Peer-reviewed or academically reputable.

Exclusion criteria:

6. Irrelevance to neurodiversity or higher education.
7. Content unrelated to spatial, service-oriented, cultural or institutional adaptations.
8. Abstract mismatches that rendered the article outside scope.

One record (misaligned abstract) was excluded after screening.

2.3 Screening and selection

Identification: 51 records in the dataset.

Screening: All abstracts evaluated for relevance.

Eligibility: 26 papers met criteria.

Included: 26 studies synthesised in full.

2.4 Data extraction and synthesis

Data were coded inductively and deductively, resulting in four major thematic clusters:

1. Sensory and physical environments of campus and library spaces
2. Library services, accommodations and user experience
3. Professional development and neurodiversity-informed librarianship
4. Neurodivergent library staff and inclusive workplaces

These themes structure the results of the review.

Table 3. Characteristics of included studies

Authors, year	Type of study	Population / focus	Key contribution
Araujo & Monteiro 2025	Systematic literature review	University students with ASD	Reveals lack of instruments; institutional barriers

Flores-Fernández et al. 2022	Systematic literature review	Neurodivergent users	Services widely adapted; collections least addressed
Ochsner & Dinneen 2025	Scoping review	Neurodivergent staff & users	Synthesises 47 publications; service & instructional gaps
Nelson et al. 2023	Scoping review	Postsecondary supports	Mapping of support categories; PASS taxonomy
Magnuson et al. 2024	Literature review	Students with ADHD	Identifies ADHD challenges; library-specific recommendations
Shea & Derry 2019	Literature review	Libraries & ASD users	Highlights research gaps & training deficits
Dwyer et al. 2023	Perspective / recommendations	Autistic & ADHD students	Institution-wide reforms; sensory accommodations; DEI framing
Blaskowitz et al. 2025	Perspective	Autistic students	Call for coordinated campus support, UDL
Everhart & Anderson 2020	Quasi-experimental	Librarians & patrons	Coaching improves knowledge & environment
Haire 2025	Qualitative	Autistic librarians	IL as socially embedded labour
O'Connor et al. 2024	Qualitative	Autistic university students	Sensory & spatial barriers and enablers
Osifo & Terashima 2024	Qualitative	Neurodivergent students	Complex sensory barriers; need for transparent wayfinding
Anderson 2021	Qualitative	Autism support programs	Cross-campus collaboration opportunities
Anderson 2018	Qualitative	Autistic students	Ambiguity & procedural uncertainty in libraries
Anderson 2025	Qualitative content analysis	Librarians	Lack of conference training; improving trends
DuBroy & DuBroy 2019	Qualitative content analysis	Autistic users	Sensory tensions; need for clear rules
Camp & Finlay 2025	Qualitative case study	Neurodivergent librarians	Workplace challenges, recruitment issues
Seelmeyer 2024	Case report	Students with disabilities	Orientation and support programming
Napp & Obertacz 2022	Case study	Autistic students	Practical sensory-space renovation issues
Giles-Smith & Popowich 2020	Conceptual / case	Librarians with ASD	Need for HR reform; critique of managerialism
Cohen 2025	Survey-based	Autistic librarians	Barriers in recruitment and HR norms
Hinson-Williams 2024	Conceptual	Autistic students	Advocacy for neurodiversity-informed approcach in LIS research
Redmore 2023	Conceptual	Complex-needs populations	Proposes inclusive epistemic space
Rosqvist et al. 2019	Conceptual	Neurodiverse scholars	Co-production, epistemic justice
Bertilsdotter Rosqvist et al. 2019	Conceptual	Autistic scholars	Co-production & neurodiversity in knowledge-making
McMullin & Walton 2019	Book	Autistic students	Practical guidance on service, spaces, collaboration

Table 4. Thematic synthesis across included studies

Theme	Subthemes	Key evidence	Implications
1. Sensory & Physical Environment	Noise, light, crowding; sensory overwhelm; safe retreat spaces	O'Connor 2024; Osifo & Terashima 2024; DuBroy & DuBroy 2019	Create low-stimulus zones, sensory rooms, predictable sensory information
2. Library Services & Accommodations	Communication challenges; procedural	Anderson 2018; Magnuson 2024;	Explicit rules, multimodal communication, UDL integration

	ambiguity; flexible instruction	Everhart & Anderson 2020	
3. Collections & Knowledge Infrastructures	Minimal adaptation; limited representation	Flores-Fernández 2022	Audit metadata & classification; diversify formats; redesign acquisition policies
4. Professional Development	Gaps in autism education; growing awareness	Anderson 2025; Shea & Derry 2019	Sustained training, lived-experience-led workshops
5. Institutional Culture & HR	Hiring bias; invisible labour; managerial norms	Cohen 2025; Giles-Smith 2020; Haire 2025	Reform interviews, disclosure policies, performance expectations
6. Epistemic & Conceptual Shifts	Neurodiversity paradigm; co-production	Hinson-Williams 2024; Rosqvist 2019; Redmore 2023	Recognise neurodivergent knowledge as valuable; inclusive research cultures

3. Results of the PRISMA-7-aligned review

3.1 Overview of included studies

The corpus reflects a rapidly expanding field bridging library science, disability studies, psychology and higher-education research. It encompasses:

- Qualitative studies (e.g., O'Connor et al. 2024; Camp & Finlay 2025)
- Mixed-methods and quasi-experimental research (Everhart & Anderson 2020)
- Scoping and systematic reviews (Nelson et al. 2023; Ochsner & Dinneen 2025; Flores-Fernández et al. 2022; Araujo & Monteiro 2025)
- Conceptual essays (Redmore 2023; Blaskowitz et al. 2025; Hinson-Williams 2024)
- Case studies (Napp & Obertacz 2022; Seelmeyer 2024)
- Studies of library employment and professional identity (Cohen 2025; Giles-Smith & Popowich 2020; Haire 2025)

3.2 Theme 1: Sensory and physical environments of campuses and libraries

3.2.1 Sensory features as determinants of inclusion

Research consistently identifies noise, lighting, crowding, spatial unpredictability and sensory overload as central barriers for autistic and otherwise neurodivergent students. O'Connor et al. (2024) document the dual nature of campus space: enabling when quiet and low-stimulus, disabling when bright, noisy or crowded. Similar concerns appear in Osifo & Terashima (2024), where students with sensory processing differences report significant anxiety arising not only from sensory intensity but from the *lack of advance information* about environmental characteristics.

3.2.2 Libraries as ambivalent sensory environments

Libraries appear in several studies as both **retreats** and **stressors**.

- Autistic individuals report using libraries to escape overstimulation yet simultaneously struggle with unpredictable noise and ambiguous norms (DuBroy & DuBroy 2019; Anderson 2018).
- Efforts to create sensory-friendly rooms (Napp & Obertacz 2022) demonstrate growing institutional awareness but also reveal the fragility of implementation, often contingent upon funding, advocacy or administrative will.
- Across studies, sensory inclusion emerges as a structural, not peripheral, dimension of campus equity.

3.3 Theme 2: Library services, accommodations and user experiences

3.3.1 Navigating library systems and expectations

Students frequently struggle with implicit expectations, including unspoken behavioural rules, complex information-seeking procedures and ambiguous communication norms (Anderson 2018; DuBroy & DuBroy 2019). ADHD-related difficulties in executive function, sustained attention and information organisation further complicate interactions with library systems (Magnuson et al. 2024).

3.3.2 Accommodations and institutional barriers

Dwyer et al. (2023) highlight fragmented and bureaucratically burdensome accommodations systems. Nelson et al. (2023) identify wide institutional variability and inconsistent recognition of sensory distress, mental-health needs and communication preferences.

For libraries, key implications include:

- need for multiple communication modes,
- explicit guidance and rule transparency,
- flexible instructional formats,
- predictable sensory environments.

3.3.3 Adaptation of collections and services

A major contribution to understanding institutional responses comes from the systematic review by Flores-Fernández et al. (2022). Drawing on a bibliographic search through major databases and narrowing 799 initial results to 36 relevant studies, they conclude:

- Services are the most adapted element, including instruction, liaison structures, communication formats and support programs.
- Collections remain the least adapted, indicating that classification schemes, metadata structures, accessibility of materials and acquisition policies rarely reflect neurodivergent needs.
- Adaptations are heterogeneous and uneven, varying significantly by institutional culture, resources and local priorities.
- This finding reframes neurodiversity work in libraries: while service-level interventions are expanding, deeper epistemic infrastructures: collections, catalogues and representational practices remain largely untouched.

Moreover, Everhart & Anderson (2020) demonstrate that librarian coaching and targeted professional development improve service quality, suggesting that the gap between service adaptation and collection adaptation stems partly from limited awareness and structural inertia.

3.4 Theme 3: Professional development and neurodiversity-informed librarianship

3.4.1 Training gaps

Despite increasing awareness, training on autism and neurodiversity remains limited.

- Anderson (2025) shows that conference sessions addressing autism have grown but remain scarce.
- Shea & Derry (2019) previously identified widespread deficits in ASD-related knowledge among library staff.
- Ochsner & Dinneen (2025) confirm through a scoping review that neurodiversity-related professional knowledge is inconsistent and often siloed.

3.4.2 Toward systemic professional development

Blaskowitz et al. (2025) advocate for campus-wide, coordinated, student-cantered approaches that include librarians as key actors. UDL-based instruction, sensory awareness, neurodiversity-affirming communication and lived-experience-led training emerge as critical components of a neurodiversity-informed librarianship.

3.5 Theme 4: Neurodivergent library staff and inclusive workplaces

3.5.1 Workplace culture and invisible labour

Autistic and other neurodivergent library workers face challenges related to sensory environments, implicit social rules and organisational expectations (Camp & Finlay 2025; Haire 2025). These studies reveal the **micro-labour** required to interpret norms, self-regulate and navigate institutions structured around neurotypical assumptions.

3.5.2 Recruitment and advancement barriers

Cohen (2025) identifies persistent structural barriers in hiring practices, including reliance on interpersonal performance during interviews and inconsistent communication expectations. Giles-Smith & Popowich (2020) highlight the tension between new managerialism and inclusivity in Canadian academic libraries, calling for HR reforms grounded in neurodiversity.

3.5.3 Epistemic and conceptual reframings

Rosqvist et al. (2019) and Redmore (2023) argue that neurodivergent scholarship can transform academic epistemologies themselves, challenging norms of authorship, representation and methodological legitimacy. These conceptual contributions reposition neurodiversity not merely as an accessibility issue but as a catalyst for epistemic justice within academia.

4. Discussion

4.1 Synthesis of empirical and conceptual insights

The reviewed literature demonstrates a clear narrative arc:

1. Campus and library environments often fail to meet sensory and cognitive needs.

2. Libraries show commitment to supporting neurodivergent users but tend to focus on services rather than systemic redesign.
3. Professional development is developing but uneven.
4. Neurodivergent staff perspectives expose deep institutional cultures that shape academic labour.
5. Conceptual scholarship pushes the field beyond accessibility toward co-production, participatory design and neurodiversity as epistemological value.

4.2 Accessibility beyond compliance

Analysis across the corpus highlights a key pattern: academic libraries prioritise service modifications over structural ones. The systematic review by Flores-Fernández et al. (2022) demonstrates decisively that collections, as core knowledge infrastructures, remain largely unadapted, underscoring a systemic gap between front-line service efforts and the deeper epistemic dimensions of library practice. Thus, genuine neurodiversity inclusion requires shifting from an accommodation paradigm ("fixing the user's experience of the existing system") to a transformative paradigm ("fixing the system to reflect human cognitive diversity").

4.3 Implications for academic library practice

Spatial strategies:

- Establish sensory-friendly rooms and structured quiet zones.
- Provide sensory transparency (noise maps, lighting indicators, occupancy predictions).
- Use modular, customisable furniture and adaptable lighting.

Service strategies:

- Offer multimodal communication (chat, text, asynchronous options).
- Make behavioural norms explicit.
- Integrate UDL into instruction and reference services.

Collection and metadata strategies:

- Review acquisitions policies for neurodiversity representation.
- Audit classification and subject headings for bias.

- Enhance multimodal formats, including audio, simplified text and visual materials.
- Incorporate neurodivergent perspectives into collection evaluation.

Organisational strategies:

- Provide ongoing neurodiversity-informed training.
- Establish participatory decision-making structures involving neurodivergent students and staff.
- Reform hiring and performance processes to reduce neurotypical bias.

4.4 Gaps and future directions

Persistent gaps include:

- limited research beyond autism and ADHD;
- insufficient intersectional analysis;
- lack of non-Western perspectives;
- few longitudinal or intervention-evaluation studies;
- minimal integration of neurodiversity frameworks into collection development.

Thus, future research should explore epistemic, infrastructural and labour dimensions of neurodiversity in libraries.

5. Conclusion

This PRISMA-7 aligned review demonstrates that universities and their libraries are at a pivotal moment. While the literature reveals increasing awareness and a proliferation of service-based initiatives, transformational change remains uneven. Academic libraries must evolve from sites of episodic accommodation to neurodiversity-affirming ecosystems, where sensory, cognitive and epistemic diversity are embedded into spatial design, collections, metadata, services and organisational culture.

Neurodivergent students and staff bring unique insights, skills and modes of knowing. Recognising these contributions requires moving beyond compliance and embracing a holistic, structural and participatory re-imagining of what a library is and whom it is designed for.

6. Definition of neurodiversity (derived strictly from the 26 reviewed items)

Neurodiversity refers to the natural variability of human neurocognitive functioning, encompassing autism, ADHD, dyslexia, intellectual and developmental specificities and diverse sensory processing profiles (Dwyer et al., 2023; Magnuson et al., 2024; Flores-Fernández et al., 2022; O'Connor et al., 2024).

It frames these differences not as deficits but as legitimate and valuable forms of human variation, aligned with the neurodiversity paradigm and neurodivergent culture, which recognise diverse ways of thinking, learning, communicating and experiencing the world (Dwyer et al., 2023; Rosqvist et al., 2019; Bertilsdotter Rosqvist et al., 2019).

Neurodiversity includes variations in sensory and environmental needs, such as heightened sensitivity to noise, light, crowdedness or other spatial features, which may function either as barriers or as enabling conditions within university and library environments (O'Connor et al., 2024; Osifo & Terashima, 2024; DuBroy & DuBroy, 2019).

It also encompasses differences in communication and social participation, including preferences for explicit rules, predictable interactional norms and the option to communicate in whichever mode is most comfortable to the individual (Dwyer et al., 2023; Anderson, 2018).

Neurodiversity involves diverse cognitive, attentional and learning profiles, with variations in executive functioning, information-processing strategies, task management and self-regulation that shape how individuals engage with academic work (Magnuson et al., 2024; Araujo & Monteiro, 2025; Everhart & Anderson, 2020).

It also includes the experiences of neurodivergent staff, whose work is shaped by sensory environments, hiring practices, organisational cultures and the invisible labour required to navigate neurotypical expectations (Camp & Finlay, 2025; Cohen, 2025; Giles-Smith & Popowich, 2020; Haire, 2025).

In epistemic terms, neurodiversity recognises the right of neurodivergent people to participate in knowledge production and to shape academic discourse, as highlighted in emancipatory autism studies and neurodiverse research collaborations (Rosqvist et al., 2019; Redmore, 2023; Bertilsdotter Rosqvist et al., 2019).

Finally, neurodiversity implies the need for structural, institutional change, since diverse neurocognitive profiles cannot be adequately supported through isolated accommodations but require systemic transformation of policies, spaces, services and cultures in higher education

and academic libraries (Dwyer et al., 2023; Blaskowitz et al., 2025; Flores-Fernández et al., 2022; Nelson et al., 2023).

6.1. Concise synthetic definition

Neurodiversity denotes the natural variation in neurocognitive functioning (including autism, ADHD, dyslexia, developmental specificities and diverse sensory profiles), which manifests in distinct environmental, communicative, educational and occupational needs and whose full inclusion requires structural rather than individual-level adjustments within academic institutions (Dwyer et al., 2023; O'Connor et al., 2024; Flores-Fernández et al., 2022; Camp & Finlay, 2025).

6.2. Definition: Neurodiversity-Inclusive Library

A neurodiversity-inclusive academic library is an information environment designed to recognise, accommodate and affirm the full range of neurocognitive differences among its users (Flores-Fernández et al., 2022; Magnuson et al., 2024; O'Connor et al., 2024).

Such a library provides sensory-considerate physical spaces, including quiet zones, low-stimulation rooms, predictable environmental conditions and clear behavioural expectations, acknowledging that noise, bright lighting and crowding may serve as barriers or enablers depending on the individual (O'Connor et al., 2024; Osifo & Terashima, 2024; DuBroy & DuBroy, 2019).

It offers flexible, multimodal services, allowing users to communicate and learn in the ways they find most accessible, including varied instructional formats, explicit procedural guidance and multiple channels for interaction with librarians (Dwyer et al., 2023; Anderson, 2018; Everhart & Anderson, 2020).

It also implements evidence-informed policy and professional development, ensuring that staff possess the knowledge, training and cultural competence necessary to support neurodivergent users (Anderson, 2025; Shea & Derry, 2019).

Crucially, a neurodiversity-inclusive library seeks not only to modify services but to transform its collections, metadata practices and epistemic infrastructures, which current research identifies as the least-adapted components of academic libraries (Flores-Fernández et al., 2022).

6.3. Definition: Neurodiversity-Affirming Campus

A neurodiversity-affirming campus is a higher-education environment that recognises neurocognitive variation as a valued dimension of human diversity and implements institution-wide practices that enable equitable participation for neurodivergent students, staff and faculty (Dwyer et al., 2023; Blaskowitz et al., 2025).

Such a campus provides integrated, coordinated and student-centred support systems, reducing administrative burdens around accommodations, ensuring accessible mental health services and simplifying eligibility processes (Dwyer et al., 2023; Nelson et al., 2023).

It systematically addresses sensory and physical barriers, including noise, light, crowding and unpredictability of space, which significantly affect the wellbeing and academic engagement of autistic and otherwise neurodivergent students (O'Connor et al., 2024; Osifo & Terashima, 2024).

A neurodiversity-affirming campus also fosters a culture of inclusion and equity, investing in neurodiversity training for faculty, staff and administrators, establishing disability cultural centres and enabling neurodivergent leadership in institutional decision-making (Dwyer et al., 2023).

It recognises that neurodivergent individuals are not homogeneous and that inclusion requires flexibility, transparency and structural transformation, not merely isolated or episodic accommodations (Blaskowitz et al., 2025; Nelson et al., 2023).

6.4. Definition: Sensory accessibility

Sensory accessibility refers to the degree to which a physical or digital environment supports individuals with diverse sensory processing profiles by minimising environmental barriers and enabling comfort, regulation and participation (O'Connor et al., 2024; Osifo & Terashima, 2024).

It encompasses the intentional design and management of sound, lighting, spatial flow, temperature and crowd density, acknowledging that these environmental variables can significantly impact neurodivergent students' navigation, concentration, social interaction, emotional regulation and academic success (O'Connor et al., 2024; Osifo & Terashima, 2024).

Sensory accessibility includes the provision of quiet spaces, low-stimulation rooms, predictable sensory information and opportunities for retreat, as well as the reduction of disruptive sensory inputs such as piped music, harsh lighting or uncontrolled noise (O'Connor et al., 2024).

It also involves transparent communication about the sensory characteristics of campus and library spaces, enabling students to plan their movements and interactions in advance (Osifo & Terashima, 2024).

6.5. Synthetic definition (encompassing all three concepts)

A neurodiversity-inclusive academic environment, including campuses and libraries, is an institutional ecosystem that recognises the natural variability of neurocognitive functioning (Dwyer et al., 2023; Magnuson et al., 2024), designs its physical and sensory spaces to reduce barriers and support self-regulation (O'Connor et al., 2024; Osifo & Terashima, 2024), provides flexible and multimodal services that respect diverse communicative and learning preferences (Anderson, 2018; Everhart & Anderson, 2020) and transforms its organisational, epistemic and cultural structures to ensure that neurodivergent individuals can participate, contribute and lead on equal terms (Flores-Fernández et al., 2022; Rosqvist et al., 2019; Camp & Finlay, 2025).

7. Conceptual diagram

NEURODIVERSITY (core concept)
Natural variability in neurocognitive functioning (Dwyer 2023; Magnuson 2024)

informs

NEURODIVERSITY-AFFIRMING CAMPUS

- Structural, institution-wide approach
- Coordinated supports & reduced admin burden (Dwyer 2023; Nelson 2023)
- Sensory & physical accessibility across campus (O'Connor 2024)
- Cultural & leadership inclusion (Blaskowitz 2025)

is enacted in

NEURODIVERSITY-INCLUSIVE LIBRARY

- Sensory-considerate spaces (DuBroy 2019; O'Connor 2024)
- Explicit procedures & flexible communication (Anderson 2018)
- Staff training & competency (Anderson 2025; Shea & Derry 2019)
- Service adaptations > collection reformes (Flores-Fernández 2022)

depends on
SENSORY ACCESSIBILITY • Noise, light, crowding, space predictability (O'Connor 2024) • Clear sensory information and wayfinding (Osifo & Terashima 2024) • Retreat spaces, low-stimulation rooms

8. Key statements

1. **Neurodiversity is a natural form of human difference**, encompassing diverse neurocognitive profiles such as autism, ADHD, dyslexia and sensory processing variation (Dwyer et al., 2023; Magnuson et al., 2024).
2. **Sensory environments critically shape inclusion**: noise, lighting and crowding can either support or hinder autistic and neurodivergent students (O'Connor et al., 2024; Osifo & Terashima, 2024).
3. **Academic libraries function simultaneously as safe havens and sources of stress**, depending on sensory conditions and clarity of social norms (DuBroy & DuBroy, 2019; Anderson, 2018).
4. **Service adaptations are widespread, while collection-level adaptations remain limited**, marking a significant structural gap in academic-library inclusion (Flores-Fernández et al., 2022).
5. **Professional development in neurodiversity is increasing but uneven**, with librarians desiring more training on autism and sensory accessibility (Anderson, 2025; Shea & Derry, 2019).
6. **Campuses that affirm neurodiversity require coordinated, institution-wide support systems**, transparent accommodations processes and inclusive cultural practices (Dwyer et al., 2023; Nelson et al., 2023).
7. **Neurodivergent staff encounter barriers in recruitment and workplace culture**, revealing the need for organisational reform (Camp & Finlay, 2025; Cohen, 2025; Giles-Smith & Popowich, 2020).
8. **Neurodiversity carries epistemic significance**, emphasizing that neurodivergent individuals contribute unique perspectives that enrich academic knowledge production (Rosqvist et al., 2019; Redmore, 2023).

9. Glossary

Collection adaptation: modification of library collections to enhance accessibility, currently the least developed area of inclusion (Flores-Fernández et al., 2022).

Epistemic inclusion: recognition of neurodivergent forms of knowledge and participation in research (Rosqvist et al., 2019; Redmore, 2023).

Explicit communication: clear procedural instructions and behavioural expectations that reduce social ambiguity (Anderson, 2018; Dwyer et al., 2023).

Managerial Barriers: HR and cultural practices that disadvantage neurodivergent employees through normative expectations of "fit" (Giles-Smith & Popowich, 2020).

Multimodal services: reference, instruction and communication via multiple channels to support diverse learning preferences (Everhart & Anderson, 2020).

Neurodivergent students: learners whose cognitive profiles diverge from dominant norms; may experience sensory, social and procedural barriers in higher education (O'Connor et al., 2024; Dwyer et al., 2023).

Neurodiversity-Affirming Campus: campus environment implementing coordinated supports, sensory-accessible spaces and inclusive policies (Dwyer et al., 2023).

Neurodiversity-Inclusive Library: library designed to affirm neurocognitive diversity through spatial, service and cultural adaptations (DuBroy & DuBroy, 2019; Anderson, 2025).

Sensory accessibility: design and communication practices that minimise sensory barriers and enhance predictability (Osifo & Terashima, 2024).

Sensory overload: state resulting from excessive noise, light or crowding, affecting navigation, concentration and wellbeing (O'Connor et al., 2024; Osifo & Terashima, 2024).

Sensory retreat space: low-stimulation environment enabling regulation and recovery, preferred by autistic students (O'Connor et al., 2024; Napp & Obertacz, 2022).

Universal Design for Learning (UDL): instructional approach promoting flexible, inclusive teaching practices (Blaskowitz et al., 2025).

Workplace accessibility: adaptation of sensory, social and organisational practices to support neurodivergent library staff (Camp & Finlay, 2025; Cohen, 2025).

10. Theoretical Model: *The Neurodiversity-Inclusive Library Model (NILM)*

The NILM model was derived inductively from 26 examined papers through systematic thematic extraction, defines the scope of neurodiversity inclusion in academic libraries across four empirically grounded dimensions (sensory, interactional, organisational, epistemic) and provides a conceptually coherent, evidence-bounded framework situated within but distinct from broader campus inclusion systems.

Dimension 1: Sensory-environmental accessibility (foundational layer)

Definition: The extent to which the library reduces sensory barriers and supports regulation through its physical settings.

Key components:

- noise, light, crowding, spatial predictability (O'Connor, 2024; Osifo & Terashima, 2024)
- sensory-friendly rooms, quiet spaces (DuBroy & DuBroy, 2019; Napp & Obertacz, 2022)
- predictable environmental information, wayfinding (Osifo & Terashima, 2024)

Function in NILM: creates baseline conditions for neurodivergent users to inhabit, navigate and remain in library spaces.

Dimension 2: Interactional inclusivity (service and communication layer)

Definition: the clarity, flexibility and multimodality of interactions between users and staff.

Key components:

- explicit expectations, reduced ambiguity (Anderson, 2018; Dwyer et al., 2023)
- multimodal communication channels (Everhart & Anderson, 2020)
- UDL-informed instructional design (Blaskowitz et al., 2025; Magnuson et al., 2024)

Function in NILM: ensures that neurodivergent users can access information and services without reliance on implicit norms or socially ambiguous cues.

Dimension 3: Organisational and infrastructural responsiveness (institutional layer)

Definition: library structures, policies and systems that shape staff capacity and institutional consistency.

Key components:

- staff training and professional development (Anderson, 2025; Shea & Derry, 2019)
- accommodation systems and cross-campus coordination (Dwyer et al., 2023; Nelson et al., 2023)
- employment and HR practices affecting neurodivergent staff (Camp & Finlay, 2025; Cohen, 2025; Giles-Smith & Popowich, 2020)

Function in NILM: creates durable institutional mechanisms that sustain inclusive practice beyond individual librarians' efforts.

Dimension 4: Epistemic and collection-level inclusion (knowledge infrastructure layer)

Definition: the degree to which collections, metadata structures and scholarly practices reflect and legitimise neurodivergent perspectives.

Key components:

- collection adaptations rare but needed (Flores-Fernández et al., 2022)
- neurodiverse scholarship and epistemic justice (Rosqvist et al., 2019; Redmore, 2023)
- participatory research and inclusion of neurodivergent staff (Camp & Finlay, 2025)

Function in NILM: positions neurodiversity as an epistemic category, not merely a support need.

Table 5. NILM vs UDL (Universal Design for Learning)

Dimension	NILM	UDL
Primary level	Institutional subsystem: academic library as socio-material and organisational environment (DuBroy & DuBroy, 2019; Ochsner & Dinneen, 2025).	Pedagogical / instructional design practice used by faculty to make teaching more inclusive (Blaskowitz et al., 2025; Dwyer et al., 2023).

Main focus	Sensory environment, services, organisational structures, collections, workplace for staff.	Teaching and learning processes in courses and curricular support for students.
Target groups	Neurodivergent students and staff (users + workers) (Camp & Finlay, 2025; Cohen, 2025).	Primarily students (autistic and other neurodivergent learners) accessing instruction.
Key levers	Space design; communication practices; library policies; staff development; HR; collection strategy (O'Connor et al., 2024; Flores-Fernández et al., 2022).	Course design, faculty practices, teaching strategies to improve accessibility (Blaskowitz et al., 2025).
Typical location in organisation	Library and its intersections with campus-wide disability and support systems.	Academic programmes, classrooms, teaching units, sometimes referenced in campus-wide initiatives.
Role in inclusion	Provides a library-centred framework for neuroinclusion that complements campus-wide supports.	Provides a teaching-centred framework within which instruction can be made more accessible for neurodivergent students.

Table 6. NILM logic model (inputs => processes => outputs => outcomes)

Component	NILM Element	Evidence base
Inputs	Neurodivergent students & staff; existing library spaces; current services; institutional policies; professional development opportunities.	Dwyer et al., 2023; Camp & Finlay, 2025; Anderson, 2025.
	Evidence on sensory barriers and facilitators in campus and library spaces.	O'Connor et al., 2024; Osifo & Terashima, 2024; DuBroy & DuBroy, 2019.
	Evidence on gaps in supports, collections and services for neurodivergent users.	Nelson et al., 2023; Flores-Fernández et al., 2022; Shea & Derry, 2019.
Core Processes	Redesign of sensory environment (noise, lighting, layout; retreat spaces).	O'Connor et al., 2024; Napp & Obertacz, 2022.
	Clarifying rules, procedures and communication channels; offering multimodal services.	Anderson, 2018; Everhart & Anderson, 2020.
	Providing sustained training and professional development for librarians.	Anderson, 2025; Shea & Derry, 2019.
	Reviewing HR processes to reduce barriers for neurodivergent staff.	Camp & Finlay, 2025; Cohen, 2025; Giles-Smith & Popowich, 2020.
	Gradual adaptation of collections and metadata for neurodivergent users.	Flores-Fernández et al., 2022.

Immediate Outputs	Sensory-responsive library spaces; clearer signage and behavioural guidelines; diversified communication channels; trained staff.	O'Connor et al., 2024; DuBroy & DuBroy, 2019; Anderson, 2025.
	Pilot changes to services and, to a lesser extent, collections.	Everhart & Anderson, 2020; Flores-Fernández et al., 2022.
Intermediate Outcomes	Improved comfort, navigation and use of the library by autistic and other neurodivergent students.	O'Connor et al., 2024; Anderson, 2018.
	Increased confidence and competence among librarians in supporting neurodivergent patrons.	Everhart & Anderson, 2020; Anderson, 2025.
	More inclusive recruitment and working conditions for neurodivergent staff.	Camp & Finlay, 2025; Cohen, 2025.
Long-term Outcomes	Library recognised as a neurodiversity-inclusive hub within a neurodiversity-affirming campus; greater equity in access, participation and success for neurodivergent students and staff.	Dwyer et al., 2023; Blaskowitz et al., 2025; Ochsner & Dinneen, 2025.

11. General definition of neurodiversity retained for further refinement

Neurodiversity: natural variation in the structure and functioning of the brain and nervous system, manifesting itself in persistent cognitive, sensory and behavioural variations that are not necessarily deficits in themselves, but may cause difficulties in an environment tailored to the needs of the majority of the population. For many neuroatypical individuals, these differences are an integral part of their identity and shape their experience of the world.

Neurodiversity: the naturally occurring, biologically determined range of optional forms of development and functioning of the brain and nervous system, which includes stable differences in perception, information processing, attention, emotional functioning and behaviour. Neurodiversity treats these forms as part of human biological variability (rather than solely as pathology), while recognising that many of them cause real difficulties in functioning in a society designed for the majority (neurotypical people). For many people, these characteristics are an important part of their personal and social identity and the neurodiversity approach emphasises the need to adapt the environment to make it fully accessible, as well as human rights and respect for self-identification.

11.1. Concise interpretation of the components of the definition

Natural neurological variability: this term refers to the fact that brains and cognitive styles differ between individuals in a manner comparable to biological diversity; however, not every difference constitutes a disease or disorder ‘in itself’.

Difference ≠ lack of value / real needs are recognised: the literature on the subject points to a dual conclusion: both potential strengths (e.g. a different way of thinking) and real deficits/needs for support can be identified; hence, it is recommended to combine biological/biopsychosocial and social perspectives.

Practical and ethical consequences: the neurodiversity approach implies prioritising environmental adaptations, respecting the rights and autonomy of neurodiverse individuals and involving them in policy-making and research, rather than striving to ‘remove’ difference as the sole goal.

12. Final definition of neurodiversity adopted within NILM

Neurodiversity is an interdisciplinary concept describing the diversity of human nervous system functioning as a natural and expected dimension of the biological and psychological diversity of the species. It assumes that there are different – equally authentic and valuable – forms of organisation and processing of information by the brain, which should not be considered pathological by definition. In scientific terms, neurodiversity refers to the neurocognitive spectrum of the population, including autism, ADHD, dyslexia, developmental aphasia and sensory processing disorders, which are treated not as disorders but as alternative neural and behavioural configurations. In this sense, neurodiversity assumes that neurocognitive differences have both genetic-environmental and cultural determinants, resulting from complex neuroplasticity processes that modify an individual's development in relation to their environment. In psychological and existential terms, this concept treats the specific functioning of neurodiverse individuals as an integral component of their identity, inextricably linked to their subjectivity and right to social acceptance and equal participation in social, educational and professional life.

12.1. Elaboration and details

Unlike the traditional biomedical model, in which neurological differences are viewed as deficits requiring correction, the neurodiversity model is based on the paradigm of biological

variability and cognitive pluralism. It assumes that diversity in neural, emotional and cognitive functions is analogous to diversity in physical or temperamental traits – and as such constitutes an adaptive value in the evolutionary perspective of human development.

In light of neuroscience, differences in brain structure and activity between neurotypical and neurodiverse individuals are the result of alternative pathways of neural development, rather than simple dysfunctions. They stem from different mechanisms of neuroplasticity – the brain's ability to create, reorganise and eliminate synaptic connections in response to environmental stimulation. This neuroplastic diversity leads to individualised configurations of cognitive and emotional functioning, which can reveal both limitations and unique potentials.

From the perspective of the philosophy of science and ethics, neurodiversity is an attempt to shift the paradigm of interpreting neurological differences – from the language of ‘disorder’ towards a description of ‘difference’. This means moving away from clinical categorisation based on normative criteria of functioning (DSM-5, ICD-11) towards a more dimensional understanding of development. This concept has two approaches: broad – treating neurodiversity as an affirmation of all neurocognitive differences; and narrow – referring mainly to well-functioning individuals on the autism spectrum, with dyslexia or ADHD, who can lead independent, fulfilling lives in a suitably adapted environment.

In psychological and pedagogical terms, neurodiversity means recognising that the development of the human brain and mind occurs on a continuum – there is no clear boundary between normality and difference. Phenomena such as autism, ADHD and dyslexia can be understood not only as deficit syndromes, but also as expressions of alternative ways of perceiving, learning and participating in the social world. Incorporating this perspective into science opens up space for a more individualised, subjective approach to human beings, respecting their neurobiological identity.

The identity aspect of neurodiversity, emphasised in the latest literature on the subject, concerns the recognition that neuroatypical traits are an integral part of an individual's ‘self’, contributing to their sense of coherence and meaning. Neurodiverse individuals therefore reject terms such as ‘autistic’ because they suggest a ‘person-disorder’ dualism and an implicit assumption of the need for repair. Instead, they propose an ‘identity’ perspective, according to which autism or ADHD are not external labels, but characteristics that constitute an individual's personality and way of being in the world.

The concept of neurodiversity refers primarily to the redefinition of social perceptions of difference – from stigma to diversity. The goal in this regard is not to abolish medical care, but to correct the perspective: from therapy focused on ‘repair’ to supporting adaptation, autonomy and quality of life. It is pointed out that the boundaries between the categories of ‘normality’, ‘difference’ and “disorder” are fluid and culturally constructed and that the process of categorising an individual as ‘disordered’ is largely a consequence of socially accepted standards of competence, communication and behaviour.

The contemporary approach to neurodiversity – rooted in neuroscience, developmental psychology and the ethics of inclusion – therefore requires a balance between affirming difference and the responsibility to provide real support to those in need. In this sense, neurodiversity is not only a social postulate, but also a theoretical concept with the potential to integrate biological, psychological and social knowledge about human beings.

13. Conceptual methodological framework for neurodiverse user studies

Based on the adopted definition, the following conceptual framework for research design was adopted: neurodiversity is not treated as a deficit or anomaly, but as a naturally occurring variation in the ways of receiving and processing information, which in itself does not necessarily cause problems for users, but when combined with solutions designed for individuals perceived as neurotypical, may create unnecessary barriers with accessing information. Therefore, in the recruitment of study participants, the strictly medical perception of neurodiversity was abandoned and instead participants whose social experience corresponds to the adopted definition of neurodiversity were recruited based on their own declarations.

It was assumed that examining the complex phenomenon of experiencing information in the library environment by neurodiverse users requires the use of a compilation of various research methods and techniques, primarily those of a qualitative nature, such as IDI or observation, which will allow for capturing the individual nature of users' experiences. An important part of the research concept is adopting participatory approach, which manifests itself in the involvement of users themselves in creating solutions tailored to their needs. This approach is reflected, for example, in the organization of Design Thinking workshops as a part of the research process.

It is assumed that research tools will be developed in an iterative manner, which means that they will be improved during the research process based on users’ feedback. What’s more, the

process of tools' preparation and testing, as well as the development of methods most suitable to conduct user studies with neurodiverse individuals, is one of the assumed outcomes of the project.

The research is embedded in the framework of autoethnographic meta-analyses, making the personal experiences of the researchers, who also partially represent a group of neurodiverse individuals, an element enriching the research. It was also assumed that due to the strongly institutional nature of library services, it is necessary to examine not only the perspective of users, but also the perspective of librarians providing services and the management staff deciding on their scope and forms.

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