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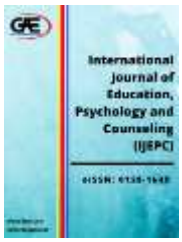

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SYSTEMATIC LITERATURE REVIEW: M-GOVERNANCE FRAMEWORK IN HIGHER EDUCATION ASSISTING AUTISTIC STUDENTS

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Abstract:

Mobile government (M-Governance) platforms in higher education offer significant potential to strengthen accessibility and inclusion. Yet, autistic students frequently face sensory, communication, and predictability barriers that current systems fail to address. This systematic literature review synthesises evidence from 50 peer-reviewed studies published between 2019 and 2025 to examine how m-governance and mobile or assistive technologies support autistic learners in higher education institutions (HEIs). Following PRISMA 2020 guidelines, searches were conducted across Scopus, Web of Science, IEEE Xplore, ERIC, PsycINFO, and MEDLINE, with dual-reviewer screening and quality appraisal using the Mixed Methods Appraisal Tool (MMAT) (Makabe et al., 2022). Five themes emerged: (1) M-Governance in HEIs; (2) assistive mobile technologies for autism; (3) inclusive education frameworks; (4) accessibility and usability; and (5) policy, security, and governance. Across these themes, the findings reveal progress in mobile-based educational support but highlight persistent gaps, particularly limited participatory co-design, insufficient alignment with neurodiversity principles, and inadequate accommodation of autistic students' sensory and cognitive needs. Mapping evidence to Universal Design for Learning (UDL) guidelines and Web Content Accessibility Guidelines 2.2 (WCAG 2.2) success criteria produced actionable requirements for inclusive M-Governance, including predictable information architecture, customisable interfaces, multimodal communication supports, and integrated academic and

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wellbeing pathways. Overall, the review underscores the absence of M-Governance models explicitly designed for neurodiverse learners and proposes an initial framework grounded in universal design, co-creation, predictability, customisation, and cross-service integration. Further research should validate this framework across diverse HEI contexts to support scalable, sustainable inclusion for autistic students.

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Keyword:

M-Governance, Autistic Students, Higher Education, Inclusive Education, Assistive Technologies, Universal Design for Learning, Accessibility, WCAG 2.2, PRISMA 2020

Introduction

Background of Study

The introduction of m-governance technologies to higher education can potentially mitigate accessibility and inclusion issues to some extent for students with disabilities (specifically students with autism spectrum disorder, ASD) who experience immense hurdles in a myriad of ways. Communication challenges, a lack of social interaction, and sensory overload are a few of the challenges students with ASD experience in the classroom that are exacerbated by educational inequity and a societal lack of tailored individualised learning. ASD, among other socio-communicative skills, also includes incorporating broad and varied developmental disorders with educational systems that typically lack the requisite nuanced mechanisms for support. ASD also requires specialised support systems that are often lacking in educational systems.

M-governance, incapacitated by these technologies, offers assistance in incorporating mobile technologies to augment autistic students' abilities to navigate classroom environments. M-governance also impacts students' social integration and accessibility to the supplied teaching materials within the context of their individualised cognitive and sensory concerns. However, the promise of these technologies remains unfulfilled, as current systems are inadequate and fail to meet the needs of neurodiverse students. In the particular design of m-governance systems, the emphasis seems to be on the unresponsive system; the lack of responsive design is more pronounced (Bernard Clayton, 2022).

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Problem Statement

HEIs' are accelerating M-Governance to improve student services, but autistic learners face ongoing barriers in navigation, sensory processing, communication, and service access and inconsistent progress. While accessibility standards like WCAG 2.2 introduce new criteria for mobile education covering focus, size, and authentication, and UDL advocates for multiple engagement methods, guidance remains fragmented across technical, educational, and policy domains. This results in compliance in theory but exclusion in practice. A comprehensive review of higher education evidence from 2019-2025 is needed to develop a framework that aligns UDL with WCAG 2.2, helping universities implement inclusive, scalable M-Governance.

Research Questions

To provide clarity and focus for this review, and in keeping with the principles outlined in PRISMA 2020, this study explores the following research questions:

1. What empirical evidence (2019–2025) exists on m-governance, mobile systems, and assistive/mobile technologies in higher-education institutions that support autistic students?
2. What accessibility, usability, learning, engagement, wellbeing, and governance outcomes are reported for autistic learners using HEI mobile or m-governance systems?
3. What design features, barriers, and facilitators relevant to autistic students emerge across the included studies (e.g., predictability, sensory load, customisability, multimodal communication, integrated supports)?

Significance of the Study

This review matters because it turns scattered research on university mobile systems and autism into a design-ready playbook that higher education can actually use. Pull in together findings from 2019–2025 and map them to UDL and the new WCAG 2.2 accessibility standard, whose updates for mobile (e.g., visible keyboard focus, minimum touch target sizes, "no redundant form entry," and accessible authentication) directly reduce cognitive and motor load for students, including autistic learners. Assists HEIs in turning inclusion goals into measurable criteria for M-Governance. It also fosters planning of predictable workflows, customizable sensory setups, consistent support from a central platform, and seamless transitions to wellbeing services. This paper employs systematic review rigor (PRISMA 2020) and a mixed-evidence appraisal (MMAT 2018) to ensure that the guidance provided is transparent and dependable. It serves as a practical resource for leaders, product teams, and policymakers to develop inclusive and accessible mobile services that foster engagement, well-being, and academic achievement among autistic students. Furthermore, it addresses barriers identified in campus reviews related to navigation, communication, and access to support.

Literature Review

Implementation Of M-Governance In Higher Education

Pritam Das et al. (2022) noted that from ancient civilizations to modern technology, higher education has played a key role in transforming society by aligning learners to contribute to national development. The integration of E-Governance with educational administration is

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especially significant here, representing notable growth. Ridhwan et al. (2025) observed that the government provides citizens with mobile devices and wireless services to speed up the ICT revolution. Mobile government, or M-Governance, has emerged as a method for governments to enable users to access services anytime on their devices. It aims to enhance participation among citizens, government departments, and businesses through mobile technology and applications. Nevertheless, M-Governance involves the government using mobile tech to deliver services and share information. It is crucial to consider students' needs carefully, ensuring that these technologies are not inconvenient or disruptive to their learning.

Definition of Autism Spectrum Disorder

ASD is a lifelong condition that affects communication, social interaction, and the world experience. It involves challenges in social communication and repetitive behaviors, aligning with DSM-5 and ICD-11 definitions (Bertelli et al., 2025). Leo Kanner defined 'autism' in 1943, and Hans Asperger described similar children in 1944, calling it Asperger's syndrome. Reviewing prior works on ASD, responses to whether it constitutes a disability vary based on perspective and paradigm. DSM-5 labels it as ASD, while ICD uses different terms, and 'Asperger's Syndrome' was removed in the latest manual. Despite controversies, both ICD and DSM recognize autism as a mental disorder. Holly et al. (2020) notes it's seen as such clinically. However, diagnostic frameworks often view individuals with Autism as disabled or ill, driven by objectivist, positivist, and realist views. Tensions exist, especially considering alternative models like the social and political models, which challenge traditional views and emphasize social constructionism in understanding autism.

Challenges of Higher Education Autism Students

According to Stefania et al. (2021), autistic students frequently experience feelings of isolation due to their difficulties forming and sustaining connections, reading social cues, and communicating nonverbally. Group projects are complex because it is hard to grasp dynamics and negotiate positions, which makes people uncomfortable and anxious. Integration is made more difficult by social anxiety and problems picking up on subtleties in discourse. At the same time, Elinor et al. (2023) identified more difficulties in students with autism as opposed to students without autism upon entering university, where they are liable to both academic and social demands. Systematic analysis of studies exploring the experience of autistic students in universities reveals high levels of social isolation, and many students reported experiencing stress, anxiety, and depression. Among the aspects highlighted by the participants as caring was the information gap regarding non-academic adjustment.

Research Methodology

Due to the popularity and accessibility of M-Governance, and the applications and support it offers autistic students in the higher education system, the M-Governance system and the higher education system have been evaluated. This research assessed the literature on M-Governance and its support for autistic children and students in higher education. This review followed PRISMA procedures, a methodology that promotes transparency and consistency in efforts to enhance support and acceptance of M-Governance, particularly for autistic children and students (Benjamin et al., 2025). PRISMA is one of many methodologies developed to support and promote M-Governance for autistic children and students. It is transparent, offers support and acceptance, and provides literature on M-Governance for autistic children and

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students in higher education. This systematic literature review on M-Governance, conducted in accordance with PRISMA, is of significant value to research and higher education in the field of autistic children and students. This is supported by extensive published literature reviews aimed at enhancing the education of autistic children and disseminating knowledge within the M-Governance system for these children. General reviews of the literature were researched, documented, and published to be available within M-Governance for the use of these developed children. General reviews of the literature were researched, documented, and published to ensure availability in M-Governance for the utilization by developed children.

Studied Criteria

Review question: How do m-governance and related mobile/assistive technologies in higher-education institutions (HEIs) support autistic learners, and what design requirements are identified when aligned with Universal Design for Learning (UDL) and WCAG 2.2? Eligibility criteria included: (i) peer-reviewed publications from 2019 to 2025; (ii) focus on m-governance, assistive mobile tools, or inclusive educational practices for autistic students; (iii) research conducted at the post-secondary level; and (iv) studies using quantitative, qualitative, or mixed methods. Only peer-reviewed empirical studies in English were included if they examined outcomes relevant to autistic HEI students, such as accessibility, usability, engagement, academic success, well-being, or mobile policy/security/governance, and applied to post-secondary contexts. Excluded were works unrelated to autism in post-secondary education (e.g., K-12 without transferability), conference abstracts, non-reviewed materials (e.g., theses, opinion articles, blogs), and studies lacking empirical analysis of m-governance or related mobile platforms. Pre-2019 studies were excluded unless they established standards or foundational theory. These criteria follow PRISMA 2020 guidelines for specifying sources, eligibility, and outcomes. Our information sources included Scopus, Web of Science, IEEE Xplore, ERIC, PsycINFO, and MEDLINE, and the final search was conducted on 31 December 2025. Reference tracking was conducted through backward and forward citation chasing from relevant reviews. Database-specific search strings, limits, and filters are detailed in Appendix A, in line with PRISMA 2020 standards. Two (2) reviewers independently screened titles and abstracts and assessed full texts, resolving disagreements through consensus. The selection process is summarized in the PRISMA 2020 flow diagram (Identification → Screening → Eligibility → Inclusion); see Figure 1.

Post-selection organization and rationale involved categorizing and tabulating reports after search and screening. The final set of 50 reports was grouped into five thematic categories: (1) M-Governance in higher education, (2) assistive/supportive mobile technologies, (3) inclusive education frameworks, (4) accessibility and usability, and (5) policy and governance, which guide the subsequent analysis. This eligibility framework allows for a synthesis that links empirical findings to UDL checkpoints engagement, representation, action/expression, and WCAG 2.2 success criteria, such as Focus Not Obscured, Target Size (Minimum), Redundant Entry, and Accessible Authentication. It translates inclusion-stage decisions into testable m-governance requirements for autistic learners.

Data were extracted based on the study's aim, methodology, sample characteristics, key findings, and relevance to the needs of autistic students. Thematic analysis was used to categorise the articles into common research themes.

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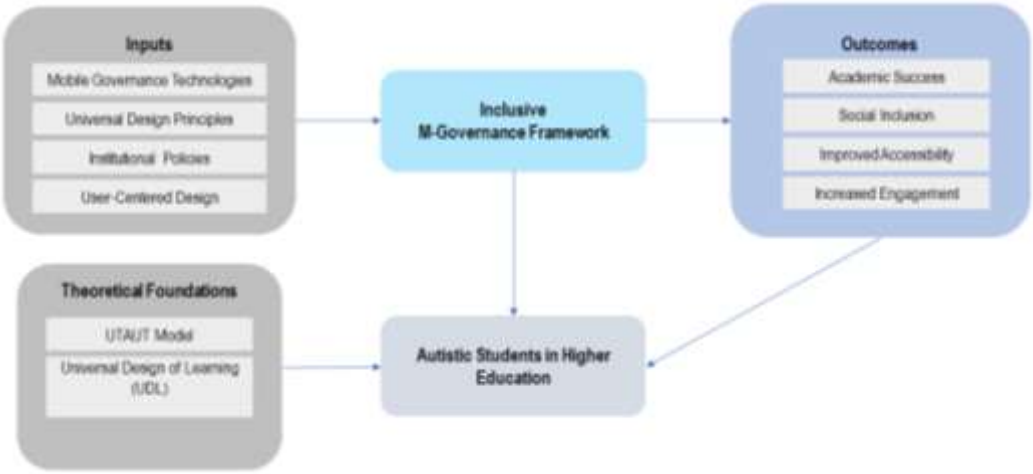

Figure 1. Conceptual Framework of Inclusive M-Governance for Autistic Students
Source: Developed for this Paper

Figure 1 illustrates a conceptual framework for integrating Mobile Governance Technologies (M-Governance) in higher education to support students with autism. This framework is based on a user-centred design approach, grounded in Universal Design Principles and informed by theoretical foundations such as the UTAUT Model and UDL.

Data Components Extraction and Synthesis

The framework is divided into several key components as follows:

Input

The M-Governance Technologies that comprise the framework's primary input are depicted in Figure 1. These technologies can offer adaptable solutions for autistic students through responsive features that offer varying visual, audio, and text customisations to meet their sensory needs. According to Briganti et al. (2022), Autistic students would benefit more from currently available M-Governance Technologies if their Predictability, Customisability, User Participation, and Institutional Commitment were recognised. As they are designed for structured assistance, autistic students benefit from the reduced sensory overstimulation offered by clear designs, which increases their concentration on the tasks at hand. Predictability and structure minimise relaxation and increase the concentration of autistic students. Predictability, structure, and reduced overstimulation improve relaxation and concentration for autistic students. Carrington et al. (2021) state that all these features are easy to implement and align with UDL, which encourages varied pedagogical approaches and the easy accessibility of learning content. UDL practices enable autistic students to access learning materials in different formats, which address the learning needs of diverse students at different levels of higher education. Another key element in the system design is the institution's policies. M-Governance tools can be very inclusive, but without policies that provide direction, guidelines, and boundaries to support M-Governance initiatives, these tools will be inclusive only within their limited capabilities. Baran et al. (2021) aim to promote participatory design practices in which the autistic student population is active in the design and building processes to ensure that technologies serve actual needs, not presumptive ones. In sum, the success of M-Governance

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is determined not only by the technical operation of systems but also by the policies, procedures, and design scaffolds that integrate neurodiversity as a foundational principle.

Theoretical Foundations

The construction of this framework relies on two key theories, the UTAUT, and UDL. These theories explain how to effectively create and implement M-Governance tools to best suit the needs of autistic learners. UTAUT examines how individuals accept and use technology, while UDL offers actionable guidelines for creating inclusive teaching environments for all students. These theories explain how the M-Governance teaching tools and platforms designed for learners on the autism spectrum can effectively engage and support their neurodiversity (Baran et al., 2021).

Autistic Students in Higher Education

At the centre of the framework, the diagram positions autistic students as the focal point, recognising that the ultimate goal is to support their academic success, social inclusion, and increased engagement. The literature review and findings confirm that when M-Governance tools are tailored to address sensory, cognitive, and communication challenges, autistic students are more likely to engage successfully with their academic and social environments (Moraiti et al., 2023).

Outcomes

Figure 1 shows the positive impact the framework can have, including academic success, social inclusion, improved accessibility, and enhanced engagement. All of the above are critical areas of impact of M-Governance systems. Through M-Governance systems, flexible and inclusive tools can be provided to help autistic students experience fewer barriers to engagement and learning in higher education, thereby improving their academic success. The framework complements the findings of the systematic literature review by highlighting the relevance of inclusion and accessibility, and the need for personalised support within M-Governance systems for autistic students. The outcomes of social inclusion, academic success, and engagement described in the figure were core themes in the literature, which highlighted the need for participatory and co-design in the development of M-Governance systems. Also, the integration of institutional/user design proposed in the framework addresses the gaps identified by the current research, supporting the demand for improved policy and practice in the use of these technologies in higher education. The combination of UDL and the UTAUT model allows the framework to address the complex needs of autistic students and ensure that the M-Governance tools are not only accessible but are also easily and effectively adopted in higher education systems.

Results

In this paper, 50 articles were selected and categorised into five main thematic areas: (i) M-Governance in Higher Education, (ii) Assistive Technologies for Autism, (iii) Inclusive Education Frameworks, (iv) Accessibility and Usability in Mobile Apps, and (v) Policy and Governance Studies. The results of the categorisations are shown in Table 1, and the full table of reviewed articles is presented in Table 2 below.

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Table 1. Reviewed Paper Categorisation

Categorisation of the reviewed papers	Number of Articles
M-Governance in Higher Education	12
Assistive Technologies for Autism	11
Inclusive Education Frameworks	8
Accessibility and Usability in Mobile Apps	12
Policy and Governance Studies	7
Total	**50**

Table 2. Table of Reviewed Articles and Papers

Category	Author	Year	Title
M-Governance in Higher Education	Nordin, N., et al.	2023	M-Governance Frameworks for University Students
	Fahmi, S., et al.	2023	Assessing Mobile Governance Applications in HEIs
	Yusof, S., et al.	2023	m-Governance Adoption in Malaysian Universities
	Chen, L., Huang, Y., & Wang, S.	2023	Mobile Governance in Education: Accessibility Considerations for Neurodiverse Students
	Ahmed, R., & Arif, M.	2023	Integration of E-Governance and Mobile Learning
	Al-Shboul, M., et al.	2022	Mobile Governance Systems in Universities: A Review
	Rashid, A., et al.	2022	Mobile Services for Higher Education Management
	Martin, G., & Zhao, L.	2021	Bridging the Mobile Governance Gap in Universities
	Karim, M., et al.	2021	m-Governance for Student Support Services
	Sharma, R., & Sharma, A.	2021	M-Governance Adoption in Higher Education Institutions
	Abu-Shanab, E.	2021	Mobile Applications for University Services: An Evaluation
	Yu, Z.	2020	Mobile Apps and Higher Education Services: Opportunities and Barriers

Inclusive Education Frameworks	Doyle, N., et al.	2022	Universal Design and Mobile Learning Technologies
	Roberts, P., et al.	2022	Neurodiversity and Mobile Technology in Learning
	Zakaria, N., et al.	2022	Inclusive Mobile Learning Environments
	Collins, B., et al.	2021	Universal Design, Accessibility, and Mobile Learning
	Black, R., et al.	2021	Inclusive Practices in Higher Education: Challenges and Opportunities
	Abuya, J., & Mwangi, E.	2020	Inclusive Access Through Mobile Learning Platforms
	Al-Khasawneh, R., & Hammad, B.	2020	M-Learning Integration for Inclusive Education
	Al-Azawei, A., et al.	2020	Universal Design for Learning (UDL) in Higher Education: A Review
Accessibility and Usability	Alwabil, A., et al.	2023	Accessibility Evaluation of Mobile Apps for Students with Disabilities
	Sutherland, D., et al.	2022	Usability of Mobile Learning Applications for Students with Disabilities
	Gonzalez, M., & Martin, R.	2023	Designing Sensory-Friendly Mobile Applications
	Qureshi, M., & Rehman, S.	2023	Mobile Accessibility Features: A Disability Perspective
	Winston, S., & Lee, P.	2022	Inclusive Mobile Design: Strategies for Autism
	Barak, M.	2022	Accessibility and Mobile Learning: Challenges for Students with Disabilities
	Ong, A., & Tan, S.	2022	Inclusive Design in University Mobile Apps
	Simpson, A., et al.	2021	Mobile Platform Accessibility for Neurodiverse Students
	Thomas, L., et al.	2021	Inclusive Mobile Design for Students with Autism
	Jones, K., et al.	2021	Building Accessible Mobile Apps for Students with Autism

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	Dizon, G.	2020	Mobile Learning and Accessibility for Diverse Learners
	McLeod, J., & Thomson, R.	2020	Mobile App Usability for Inclusive Higher Education
Assistive Technologies for Autism	Lee, A., & Smith, J.	2024	Enhancing Communication Through Mobile Platforms for Autistic Students
	Murphy, H., & Johnson, C.	2023	Addressing Autism in Higher Education through Mobile Technologies
	Khowaja, K., et al.	2022	Mobile Interventions for Autism Spectrum Disorder: A Systematic Review
	Shahid, M., & Arshad, M.	2022	Mobile Technologies Enhancing Access for Students with Autism
	Hughes, L., et al.	2022	Assistive Communication Tools for Students with ASD
	Hassan, S., et al.	2021	Personalised Mobile Learning for Special Education
	Williams, D., & Tan, J.	2021	Mobile App Solutions for Autism Spectrum Disorders
	Vasquez, E., et al.	2021	Mobile Technology for Teaching Students with ASD
	Sánchez, A., et al.	2021	Assistive Mobile Apps for Students with Autism: A Review
	Horowitz, S., & Schoech, D.	2021	Technology and Special Education: Mobile Applications for ASD
	Chang, C.	2020	Mobile Devices as Learning Aids for Students with Autism
Policy and Governance Studies	Patel, N., Wang, C., & Rosario, M.	2023	Privacy Challenges in Mobile Governance for Special Needs Students
	Alhazmi, A. K., & Rahman, A. A.	2022	E-Governance Frameworks for University Management
	Baker, J., & Perez, M.	2022	Privacy in M-Governance Systems: A User-Centred Review
	AlZain, M., et al.	2021	Security and Privacy in Educational Mobile Apps

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Pimmer, C., et al.	2021	Digital Governance in Higher Education: Trends and Challenges
Lee, C., et al.	2020	Governance Challenges in Mobile Learning for Special Needs
Lawson, H., et al.	2020	Inclusive E-Governance Models for Higher Education

Key Components of M-Governance for Supporting Autistic Students

Numerous peer-reviewed studies within the digital learning system for autistic students, the autistic students, the peer-reviewed studies, flexible environments, the multi-modal communication systems, the adapted user interfaces. Simplified design and flexible approaches, cites, ease the strain of both cognitive and sensory overload and improve accessibility. The same principle also applies to the design of M-Governance (Hussein et al., 2021). Syed et al. (2023) illustrate how multipronged communication, particularly in live online classrooms, is effective. The voice-to-text systems, visual cues, and captions in the systems round give satisfaction while enhancing the learning experience and engagement. Though more practically oriented, Tan et al. (2023) align with the deeply neurodiverse-friendly design of the structure of a task and the streamlining of a sequence of actions, inasmuch as it is focused on clarity and the reduction of strain on the executive functions. A clear synthesis of the evolution of M-Governance to cater to autistic learners in higher education is the contribution on inclusive education, assistive technology, and digital governance, and, more particularly, the themes, in more detail, in Table 2.

M-Governance in Higher Education

This category includes research on M-Governance technologies in higher education, which improve the accessibility of educational services. According to Bhattacharya et al. (2020), the study covers mobile governance frameworks and applications, focusing on increasing student participation and improving institutional management. These studies also discuss the issues of incorporating mobile governance within education. M-Governance is noted to be critical in addressing the accessibility gap of autistic students by providing mobile device-appropriate and educationally aligned accessible platforms. These studies recognise the increasing demand for inclusive M-Governance frameworks in addressing the needs of neurodiverse students (Baran et al., 2021).

Inclusive Education Frameworks

Research examining the integration of UDL and mobile technologies, such as exploring the creation of inclusive learning environments. This aims to make learning more flexible, accessible, and personalised for all students, including those on the autism spectrum. Research shows and concludes that mobile learning technologies facilitate inclusive education. This is due to the multimodal approach to learning that students on the autism spectrum require, as

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they flourish in environments with clear structure and sensory-sensitive modifications (Priyadarshini et al., 2020).

Accessibility and Usability

Research in this grouping of work emphasizes the accessibility and user-friendliness of student mobile learning applications, including those for autistic users. These works examine the development of mobile applications in configurable ways to meet the specific sensory and cognitive requirements of neurodiverse pupils, offering visually, audibly, and textually accessible versions. The challenge remains to ensure usability of the modifications and the adaptability of the applications to varying user sensory profiles in the design. The emphasis on user-centric design and inclusive mobile design in this grouping highlights the need for systems that promote educational achievement and social integration for autistic individuals (Kureerung et al., 2022).

Assistive Technologies for Autism

The current research under study focuses on the impact of specific assistive technologies on students with ASD. Communication and mobile learning technologies aim to enhance the learning and academic achievement of students with ASD. The research results and conclusions highlight the potential of mobile technologies for learning to support students with ASD. Communication aids and assistive technologies tailored to individual learning needs improve academic engagement among students with ASD. These students experience difficulties with social communication and interactions and often exhibit sensory hypersensitivity. Hence, the augmentative communication technologies are crucial (Moraiti et al., 2023).

Policy and Governance Studies

The focus of this category is on institutions, policies, and governance of M-Governance within higher education, as well as its implementation related to the accessibility of autistic students. According to Dong et al. (2023), there is a growing emphasis on the intricacy of governance in innovation and AI systems, and on data privacy, transparency, and inclusivity in digital design. This applies to higher education institutions that require defined policies to ensure M-Governance puts in place systems that are readily accessible to all, while accommodating both privacy and limited functionality across all systems. Also, Alhazmi et al. (2020) reviewed the implementation of ERP systems in universities and identified privacy, accessibility, and institutional willingness as significant long-term challenges. These are significant to M-Governance systems, which integrate teaching, support, and administrative services within a single platform. Without good governance policies, the digital exclusion of autistic students is inevitable. Building on this perspective, Adams et al. (2020) argue that co-designing effective digital platforms with autistic people, along with specific guidelines governing privacy and consent, is essential to this work. Emphasizing that trust, inclusivity, and transparency are key to incorporating these digital technologies and retaining them among diverse users. In these studies, on policy and governance, as in the systematic literature review, we identify the same key issues. M-Governance systems, as described in the literature, are the same as in our M-Governance systems, assistive technologies, principles of UDL, and participatory design frameworks underpin systems most likely to foster autonomy, academic success, and social inclusion of autistic students. Gaps still remain in the literature regarding these frameworks, as

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well as in their implementation within institutions and policies. This is a strong indicator of the need for research on these flexible, inclusive M-Governance systems in real-world scenarios.

Discussion

The analysis presented in this review highlights the essential features of M-Governance systems that can make a real difference in supporting autistic students in higher education. Based on the identified gaps in current M-Governance systems for autism in higher education, the proposed framework aims to address these deficiencies.

Proposed Comprehensive M-Governance Framework

The M-Governance Framework to support Autistic Students, as seen in Figure 2, integrates foundational autonomy support, communication, structure and predictability, customizability, and integrated support services. The goal of this framework is to help students with autism in higher education achieve academic goals, improve social participation, and develop independent participation. By offering sensory-adaptive settings and clear consent procedures, the framework focuses on providing tailored support to neurodiverse learners to help foster a supportive, integrated learning environment.

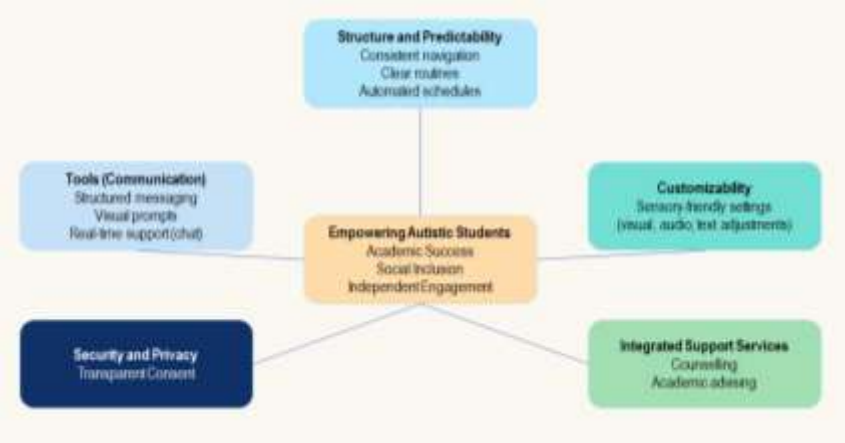

Figure 2. Proposed Comprehensive M-Governance Framework for Autistic Students: Structure, Tools, and Support

Source: Developed for this Paper

Components And Elements of The Proposed Comprehensive M-Governance Framework

As illustrated in the diagram (Figure 2), several crucial elements must come together in harmony to create an environment that promotes academic success, social inclusion, and independent engagement for neurodiverse learners. The details of components and elements for the proposed framework are:

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Structure And Predictability

The literature increasingly recognizes the importance of predictability in helping autistic students engage emotionally in educational settings. As of the last five years' worth of documentation, the literature claims that autistic students cope better with anxiety and sustain attention when classroom activities are planned with structured routines, are displayed on visual schedules, and transitions are planned predictably. A recent systematic review by Lee et al. (2024) reported that visual schedules help students understand expectations, sustain attention, and become change-blind during transitions. Moreover, the provision of previews of activities has been reported in the literature to increase student engagement and reduce stress, presumably by providing control and clarity. Continuing, broader research in inclusive education has reported on the importance of predictable, visually and structurally supported environments in helping autistic students build confidence and engagement in their learning (Linda Petersson Bloom & Mona Holmqvist, 2020). These findings suggest that predictability is not merely a best practice to be followed; rather, it provides a primary prism through which inclusive and supportive education can be viewed.

Communication Tools

Visual accessibility goes beyond technical functions of ICT in M-Governance in the domain of education as it concerns systems-building for the inclusion of students with ASD. Students are offered multiple inputs through various forms of engagement, including real-time assistance, straightforward instructions, and visual prompts. Visual supports provide a structured and consistent means of communication. As such, the supports provide the students with the means to interact autonomously and foster a positive communication experience by alleviating anxiety and bolstering confidence (RisingAboveABA Portal, 2024). Students with ASD also benefit from communication devices in individualized and user-friendly ways (Steven, 2024). Students also benefit from increased predictability (Research Autism Portal, 2024). Priming and visual pathways are tools designed to increase engagement and reduce barriers to participation. These principles of communication design encourage systems thinking around the inclusion of students in education systems.

Customizability

Customisation of the M-Governance Platforms is more than a technical aspect of the system; it is about how these platforms can make digital environments feel safer and more welcoming. Autistic people, due to their sensory sensitivities, can experience an online interface in an overwhelmingly negative way. Adjusting contrast, enabling or disabling sound, or altering the amount of information presented on a screen can make a huge difference. (National Council for Education Portal, 2025), providing these tools helps students gain control over their participation and, in turn, helps them concentrate more and feel more at ease. An environment organised to assist students in a progressive manner, with distinct visuals and choices. Shaped around the students, this approach has been reported to increase student confidence when engaging in learning activities more purposefully (MacLennon et al., 2023). Furthermore, the sensory scenarios that make people feel overwhelmed can create real obstacles, and this is not limited to the classroom. Tasks in the public domain can be equally affected. Customisation of a platform is no longer a privilege. It has become a necessity. It is necessary to create inclusive learning opportunities.

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Integrated Support Services

One of the most impactful features of M-Governance platforms is their ability to bring academic advising and emotional well-being services together in a single location. For autistic students, having both types of support accessible through a single digital system can ease stress, reduce the burden of navigating separate platforms, and promote a stronger sense of inclusion. White et al. (2023) emphasize that combining academic coaching with counselling and mentoring helps students manage transitions and feel more confident in their higher education pursuits. Likewise, Choi et al. (2024) show that when academic and behavioural supports are integrated into a coordinated system, autistic students are more likely to stay engaged and succeed. Together, these findings reinforce that integrated support within M-Governance is not just efficient, it is essential for building inclusive, student-centred environments.

Security and Privacy

One of the most important foundations of any educational technology is trust. For autistic students, feeling safe and respected when using digital systems is essential not just for participation, but for genuine engagement. M-Governance platforms that prioritise security, privacy, and transparent consent help build that trust by protecting personal data and giving students control over how their information is used. According to Adam et al. (2023), creating trustworthy systems requires more than just technical safeguards; it involves co-designing platforms with autistic individuals, ensuring that their lived experiences shape how privacy and accessibility are handled. These elements are essential for neurodiverse students, who may be more vulnerable to digital exclusion if systems are not designed with their needs in mind. When trust is built into the foundation of M-Governance, it becomes a powerful tool for inclusion, autonomy, and long-term success.

A Comprehensive Examination of the Literature Reviews

Finally, the framework emphasises the importance of security and privacy, particularly through transparent consent. Autistic students, like all users, need to feel secure when using M-Governance platforms. The protection of personal data, especially when handling sensitive information, is crucial for establishing trust in these systems. Trustworthy digital environments must be co-designed with autistic individuals and include transparent consent processes, robust data safeguards, and inclusive design principles that reflect the lived experiences of neurodiverse users. These considerations are crucial in higher education, where digital engagement is integral to both academic and social participation. When students feel confident that their data is protected, they are more likely to engage meaningfully with M-Governance systems, fostering a stronger sense of autonomy and connection with their institution.

Conclusion

As noted in this review, there is potential to use M-Governance to improve the educational experience of autistic students in higher education. The literature review highlights that purposefully designed M-Governance systems enhance recognition of the various levels of accessibility to educational services. This framework emphasizes the importance of having a structured approach, communication tools, flexible integrated systems, administrative support, and high levels of safety. While these technologies have the potential to improve educational services for students with neurodiverse perspectives, a gap persists in tailoring these services

to the distinct needs of this population. There must be a focus on participatory design and co-creation for M-Governance systems to reflect the reality of autistic students. The embedding of universal design principles and the digital accessibility of support services will be key elements in providing focus. Evaluating the effectiveness of the M-Governance framework in stimulating engagement, improving learning outcomes, and increasing social inclusion for autistic learners will be critical to research on its implementation in other educational institutions, providing a diverse sample. To meet the needs of higher education students, additional partnerships with neurodivergent communities to modify existing platforms will be essential.

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