

Obstacles Faced by People with Disabilities (PWD) in Higher Education Institutions on the East Coast of Malaysia

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Abstract

People with disabilities (PWD) are a part of society and have the right to equality in terms of rights and opportunities to live their lives like other members of society. Therefore, a rights-based and protective approach must be implemented to ensure the interests and well-being of PWD are safeguarded. One of the main aspects of special education is the provision of adequate facilities. The lack of facilities for PWD in higher education institutions has prevented them from enjoying a comfortable and fulfilling life like other students. The objective of this study is to examine the facility obstacles faced by PWD students in higher education institutions (HEIs). Accessibility is an important aspect of the building design because emphasizing accessibility can reduce the problems faced by PWD both inside and outside of buildings, whether they are government or private-owned, and so on. Although there are several related acts, they are still insufficient to address the various problems of facility shortages experienced by this group. This study aims to identify the obstacles faced by PWD. This study was conducted at a higher education institution in the East Coast of Malaysia using a qualitative method, specifically in-depth interviews. The results of the study indicate that facilities for PWD in every building are still inadequate and require immediate improvement to enhance the quality of the facilities and ensure the comfort of PWD in receiving quality education.

1. Introduction

In the current era of globalization, education plays a crucial role in building human capital that can contribute to the nation's development. This is in line with the National Education Philosophy, which aims to produce individuals who are balanced intellectually, spiritually, physically, emotionally, and socially. Therefore, all students in Malaysia, whether at the school level or in higher education institutions, should be given equal

opportunities to receive education, regardless of their background or physical abilities. However, students group in higher education institutions often face different challenges.

According to the Persons with Disabilities Act 2008 (Act 685), People with Disabilities (PWD) are defined as individuals who experience long-term impairments in physical, mental, intellectual, or sensory aspects, which, when combined with various obstacles, can hinder their full and effective participation in society (Laws of Malaysia, 2008). According to the World Health Organization (WHO, 2011), these disabilities can also reduce their opportunities for career advancement. Statistics 2015 from the Department of Social Welfare indicate that there are many registered PWDs in Malaysia, with learning disabilities being the largest category. However, there are still many who are not registered, indicating a need for more support and understanding of their needs. According to statistics from the Department of Social Welfare, as of January 31, 2015 there were 508,487 registered PWDs in Malaysia by state, with many more unregistered. Of this number, 182,664 are PWDs with learning disabilities, 167,002 are physically disabled, 60,061 are hearing impaired, 47,999 are visually impaired, 21,474 have mental disabilities, and 25,477 fall into various other categories.

PWDs in Malaysia, although a minority group, should be given the same rights and opportunities as other individuals to enjoy a quality life. They are part of society and deserve equality in education, employment, and social life. According to Falina et al. (2015), education is one of the main ways to improve their quality of life, and therefore, appropriate attention must be given to the development and education of PWDs, from the primary level to higher levels, so that they can compete and obtain equitable employment opportunities after graduation.

Nowadays, people with disabilities (PWD) have achieved various successes in education, on par with other students. These achievements open up opportunities for them to pursue higher education. However, PWD-friendly facilities in higher education institutions are crucial to ensure they can learn comfortably. The higher education institute's campus environment needs to be designed to allow PWDs to move freely without assistance, enabling them to be independent and enjoy the same amenities as other students. This environment must comply with the guidelines set by the Standards & Industrial Research Institute of Malaysia (SIRIM) and the Ministry of Housing and Local Government (Samsuri, 2012). Safety and accessibility are key aspects of student welfare management in Malaysian higher education institutions. With the increasing number of PWDs, there is an urgent need to provide facilities for PWDs inside and outside buildings, especially in government institutions, to ensure they can live a life equivalent to others (Sanmargaraja & Ta Wee, 2011).

However, awareness among management regarding the provision of accessible and PWD-friendly facilities remains very low. Many higher education institutions, whether public or private, in Malaysia still show weaknesses in providing access and facilities for PWD students. This situation forces PWD students to face challenges and obstacles throughout their study period. The obstacles they face include a physically inaccessible campus environment, inadequate admission processes, limited learning access, and a low level of awareness among management about the need for PWD-friendly facilities (Tinki & Hall, 1999).

The level of awareness regarding equality for PWD in higher education institutions is still low. A study by Konur (2000) showed that PWD students face discrimination at every level of their education. Therefore, this study was conducted to assess the facility obstacles faced by PWD students at a higher education institution on the East Coast of Malaysia with the aim of understanding and overcoming these challenges so that PWD students can earn higher education and achieve success in their future.

2. Literature Study

Students with disabilities (PWD) in higher education institutions often face various challenges, such as physical and sensory impairments, which can negatively affect their academic performance. Reindal (1995) and Riddell et al. (2002) found that the experiences of PWD students in higher education institutions are often filled with obstacles that complicate the learning process. According to Muhammad et al. (2017), although they have academic qualifications equivalent to other students at the time of enrollment, these obstacles can lead to a decline in their academic performance and result in lower grades at the end of their studies.

A study by Abdul Munir et al. (2015) showed that the facilities for PWD in mosques are still unsatisfactory, with findings obtained through observations, interviews, and records. The study found a significant relationship between the provision of facilities for PWD and the level of satisfaction of PWD in performing religious activities in mosques. Therefore, the physical environment is an important element to ensure good accessibility for PWD, including in higher education institutions. Incomplete facilities and amenities can lower the motivation and spirit of PWD students, which in turn can affect their academic performance.

According to a study by Egilson and Troustadottir (2009) conducted in Iceland, although the admission of students with disabilities in schools has been in place for a long time, the design of many school buildings still focuses on typical students. Common physical obstacles include long distances, unsuitable doors, floor finishes, textured paths, and incomplete ramps. These problems limit the movement and participation of students in school activities due to difficulties with movement, speed, distance, and visual limitations. Therefore, providing a comfortable environment and disability-friendly infrastructure is crucial to enhancing the motivation of PWD students and supporting their academic achievement.

The emphasis on the provision of facilities in higher education institutions (HEIs) is crucial to ensure that people with disabilities (PWD) can learn and function in a friendly and supportive environment. The provision of appropriate facilities involves:

- i. **Physical Accessibility:** Ensuring that facilities such as parking spaces, pathways, rooms, and restrooms are accessible to all students, including those who use wheelchairs or other mobility aids. (Lombardi et al., 2011)
- ii. **Learning Facilities:** Providing appropriate learning materials and equipment, such as large-print texts, screen reader software, and hearing aids, to meet the needs of PWD students (Burgstahler, 2009).
- iii. **Campus Environment:** Designing the campus to facilitate the free movement of PWD students, including clear directional signs and sufficient space for movement (Roberts et al., 2011).
- iv. **Accessibility in Teaching:** Providing training for instructors on the needs of PWD and how to offer appropriate support in the learning process (Seale, 2014).
- v. **Awareness and Sensitivity:** Raising awareness among management and the campus community about the importance of providing PWD-friendly facilities and overcoming discriminatory attitudes (Matthews, 2009).

Physical access to buildings is one of the main challenges, but broader issues such as access to curriculum, teaching, and assessment also need to be addressed. Institutions must provide accessible and safe facilities for all students, including those with disabilities. A study by Zaharah et al. (2003) shows that although PWD students possess skills comparable to those of regular students, existing constraints often cause them to fall behind and be overlooked. This can affect the motivation of PWD students and ultimately impact their academic performance. The emphasis is to ensure that PWD students have equal opportunities to succeed in higher education and to support their integration into campus life.

A study by Tinkin and Hall (1999) identified four main sources of obstacles faced by students with disabilities (PWD) in higher education institutions, namely: 1) the physical environment, 2) the admission process to higher education institutions, 3) access to information during their studies, and 4) the low level of awareness among academic and support staff.

The physical environment is a major factor that hinders students with disabilities (PWD), as the lack of appropriate facilities can restrict their movement and activities. Facilities such as ramps for the visually impaired, elevators, wheelchairs, accessible toilets, and designated parking spaces are essential to facilitate the mobility of PWD students. Without disability-friendly infrastructure, such as inclined pathways for wheelchair users and tactile guiding blocks as wayfinders for the visually impaired, the movement of PWDs becomes more difficult (Sam, 2010).

Overall, there is a lack of disability-friendly facilities in higher education institutions, resulting in decreased motivation among students with disabilities. Institutions often lack awareness of the specific needs of this group. According to Mohd Arif (2002), providing facilities for people with disabilities is not a waste because they also contribute to the country's economy. Although this group is a minority, it is important for the involved parties to show concern and fulfill their responsibilities in providing appropriate facilities for this special group.

A study by Hasnah et al. (2009) on the obstacles and support faced by students with disabilities at a local public university showed that while they receive substantial assistance from close friends in terms of transportation and learning, collaboration from classmates in other faculties remains limited, especially in the learning process. Helen Keller (1994) stated that the greatest challenge for people with disabilities is not the disability itself, but society's attitude towards it.

The challenges and shortcomings of facilities for people with disabilities in higher education institutions (HEIs) involve several critical aspects. Firstly, the physical environment in most HEIs is still not disability-friendly, with infrastructure such as elevators, ramps, and special restrooms being insufficient or poorly designed. Secondly, there is a lack of access to suitable information and learning materials for students with disabilities, including reading materials in Braille format or hearing aids. Thirdly, low awareness and understanding among academic and support staff regarding the needs of students with disabilities are also major challenges, often leading to a lack of necessary assistance and support for this group. All these factors contribute to the discomfort and challenges faced by students with disabilities, which in turn can affect their learning experience and academic achievement in higher education institutions (Nur Fizatin, 2021).

3. Research Methodology

This study is a case study conducted at a higher education institution on the East Coast of Malaysia, using a qualitative approach. Data were collected through face-to-face interviews. According to Zainuddin (2010), qualitative research is an unstructured exploration based on a small sample. The questions in this interviews were designed based on previous studies and the context of the research site. These questions refer to Ahmad (2015), Khalid and Rahman (2017), and Tan (2018), which explored similar issues related to accessibility in

higher education institutions. The context of the research site was also considered to ensure that the questions were relevant to the specific challenges faced by people with disabilities (PWD) in this setting.

The interview method is a technique with high validity because data are obtained directly from respondents. This method is also suitable for PWD students as it can address their physical limitations. Interviews were conducted at the research location where respondents felt comfortable interacting and providing information. At the research institution, there are 15 registered PWD students.

4. Findings

Fifteen participants were selected for this study, consisting of two students with physical disabilities. The samples were coded as PWD1, PWD2, PWD3 until PWD15 to protect their identities. The findings from the in-depth interviews revealed several key factors contributing to facility obstacles for PWD students in higher education institutions: (1) infrastructure and (2) access to learning facilities.

All fifteen students who were respondents in the study expressed dissatisfaction with the management of disability facilities at the higher education institution. They felt that the management was not proactive enough in providing disability-friendly facilities such as ramps, handrails, elevators, and appropriate stairs. Additionally, there was a lack of monitoring of existing facilities, which led to difficulties for PWD students in moving around and accessing the necessary amenities.

Table 1 Interview findings

Parameter	Interview Findings
Infrastructure Issues	Reported the absence of elevators in several buildings, making it challenging to access upper floors. They also highlighted that stairs are often too high and that cement floors are slippery, increasing the risk of accidents.
	Expressed dissatisfaction with the lack of disability-friendly facilities, such as proper ramps and handrails. They also mentioned that the existing stairs are too steep and that floors are often made of smooth, slippery materials.
	Reported issues with the accessibility of buildings, noting that there are no elevators in some areas, and the stairs are too high for easy use. Slippery cement floors also pose a risk.
Accessibility Problems	There are designated parking spaces, but the absence of ramps makes it difficult to transition from the parking area to the building. Respondent observed that these parking spaces are occasionally used by non-disabled individuals.
	Although parking spaces are available, there are no ramps leading to these parking areas, which complicates movement for wheelchair users. Respondent also noted that parking spaces are sometimes misused by others.
	While there are parking facilities, the lack of ramps prevents easy access from the parking area to the building. Respondent mentioned that improper use of these parking spaces by others exacerbates the issue.
Facility Design	The design of buildings does not meet the necessary standards, and essential facilities like elevators are lacking. This situation is particularly difficult when no assistance is available, causing feelings of embarrassment and discomfort.
	The buildings' facilities fall short of the required standards. The need to use stairs rather than elevators creates significant challenges, especially in the absence of assistance from others.
	The buildings' design does not align with accessibility standards. The absence of elevators means students must climb stairs, which becomes particularly challenging without support.
Unfriendly Facilities	Inquiry counters are positioned too high, making it difficult for wheelchair users to interact effectively, as they have trouble approaching the counters.
	Facilities like high counters make it hard for wheelchair users to interact. This design

flaw affects their ability to access services comfortably.

High inquiry counters pose a barrier for wheelchair users, making it difficult for them to interact or access services effectively.

All respondents stated that infrastructure factors play a significant role in the challenges faced by PWDs in higher education institutions. The non-disability-friendly infrastructure clearly is not suitable and hinders PWDs from living in an equal and conducive manner, similar to typical students.

5. Discussion

The findings indicate that the provision of equipment or facilities for people with disabilities benefits everyone. Besides providing comfort to people with disabilities, these facilities also enhance the safety systems of buildings in higher education institutions. From a social aspect, such facilities encourage interaction among all parties, regardless of whether they are able-bodied or have disabilities. The implementation of facilities for disabled users must adhere to the standards and guidelines set by the relevant authorities. These guidelines and standards are designed to assist all parties, particularly the management of higher education institutions, in planning and providing adequate facilities for people with disabilities within the institution's buildings.

The findings reveal several critical infrastructure and accessibility issues faced by respondents, indicating significant gaps in the accommodation of people with disabilities (PWD) within the institution. These issues highlight areas that require immediate attention for promoting inclusivity and ensuring that PWD can navigate the campus and its facilities safely and independently.

5.1 Infrastructure Issues

The absence of disability-friendly infrastructure, such as elevators, proper ramps, and non-slip surfaces, presents significant challenges for individuals with mobility impairments and other physical limitations. These challenges make it difficult for people to access upper floors or safely navigate the buildings. The steep stairs, combined with the slippery nature of cement floors, further exacerbate the risk of accidents and create an environment that is hazardous for users.

5.1.1 Lack of Elevators and Stairs Design Issues

The lack of elevators in multi-story buildings is a primary barrier for individuals with disabilities, older adults, or anyone who may struggle with stairs. According to accessibility standards, such as those outlined in the Americans with Disabilities Act (ADA), elevators are essential in buildings that have more than one floor to ensure that all individuals can move between levels without difficulty (ADA, 2010). In buildings where elevators are absent, people with mobility impairments may face exclusion from services or areas located on higher floors, creating inequality in access (Imrie & Hall, 2001).

The design of stairs also poses issues. In many cases, stairs are too high or steep, making them difficult to use, particularly for individuals with limited strength, joint issues, or balance problems. Studies have shown that excessively high steps increase the physical exertion required to ascend and descend, putting individuals at higher risk of falls (Cohen & Cohen, 2015). Stairs that do not meet recommended design standards, such as a maximum riser height of 7 inches (17.8 cm) and a tread depth of at least 11 inches (28 cm), can significantly reduce safety and usability for a wide range of users (Imrie & Hall, 2001).

5.1.2 Slippery Cement Floors and Accident Risk

Cement floors, especially when smooth or polished, present another risk factor in terms of building accessibility. Smooth surfaces can become slippery when wet or when dust accumulates, creating hazardous conditions for all users, particularly those with mobility issues or vision impairments (Liu, 2018). Slippery floors have been directly linked to a higher incidence of falls, which are a leading cause of injury in both public and private spaces (WHO, 2011). Inaccessible flooring can further deter individuals with disabilities from navigating these environments independently, further contributing to their exclusion from public spaces.

5.1.3 Absence of Ramps and Handrails

A lack of proper ramps and handrails compounds the difficulty for people with disabilities to access and navigate buildings. Ramps are critical for individuals who use wheelchairs, walkers, or strollers, providing a gentle slope that allows them to move between levels without the need to navigate stairs (ADA, 2010). Without ramps, buildings are effectively inaccessible to wheelchair users. Even when ramps are present, they must comply with

standards, such as a slope ratio of 1:12 (i.e., for every inch of height, the ramp should extend 12 inches in length), to ensure safety and ease of use (Preiser & Smith, 2011).

Similarly, handrails play a critical role in preventing falls and supporting individuals with balance or mobility issues while ascending or descending stairs. Handrails should be available on both sides of stairs and ramps, extending continuously along the entire length of the stairway (ADA, 2010). The absence of handrails is a significant safety concern, as individuals who need extra support have nothing to grasp, leading to an increased risk of falls and injuries (Shakespeare, 2013).

5.1.4 Psychological and Social Implications of Poor Accessibility

The absence of essential accessibility features not only poses physical risks but also contributes to the social and psychological exclusion of individuals with disabilities. People may feel unwelcome or unsafe in public buildings that lack accessible infrastructure, discouraging them from fully participating in social, economic, or cultural activities (WHO, 2011). This can have lasting effects on their independence and overall quality of life (Shakespeare, 2013).

5.1.5 Recommendations for Improvements

To address these infrastructure issues, several changes are necessary to make buildings more accessible:

- i. Install Elevators: Buildings with multiple floors should be equipped with elevators, especially in areas where essential services are provided (ADA, 2010).
- ii. Modify Stairs: Stairs should be designed to meet accessibility standards, with appropriate riser heights and tread depths, to ensure they are usable for a broad range of individuals (Imrie & Hall, 2001).
- iii. Provide Non-Slip Flooring: Cement floors should be treated with non-slip coatings or replaced with materials that provide better traction, especially in high-traffic areas prone to wetness (Liu, 2018).
- iv. Install Ramps and Handrails: Ramps should be built with the correct slope, and handrails should be installed on all stairs and ramps to ensure the safety and accessibility of the building (Preiser & Smith, 2011).

The absence of elevators, poorly designed stairs, slippery floors, and a lack of ramps and handrails all contribute to an environment that is unsafe and inaccessible for many individuals. Addressing these design flaws through the implementation of proper infrastructure can significantly improve building accessibility, safety, and inclusivity for all users.

5.2 Accessibility Issues

The accessibility of parking facilities is a critical aspect of ensuring equitable access to buildings for individuals with disabilities, particularly those who use wheelchairs or other mobility aids. While designated parking spaces for disabled individuals are a positive step towards accessibility, the absence of ramps linking the parking area to the building creates a significant barrier. Additionally, the misuse of these spaces by non-disabled individuals exacerbates the problem, further limiting access for those who need it most.

5.2.1 Absence of Ramps from Parking to Building

Designated accessible parking spaces are intended to provide convenient and close access to buildings for individuals with disabilities. However, the absence of ramps to facilitate the transition from these parking spaces to the building undermines the purpose of the accessible parking. According to the Americans with Disabilities Act (ADA) Standards for Accessible Design, ramps must be provided where there are changes in level greater than ½ inch, and these ramps should be located along accessible routes from parking areas to building entrances (ADA, 2010). Without ramps, wheelchair users or individuals with limited mobility are left to navigate curbs or stairs, which is both unsafe and challenging (Imrie & Hall, 2001).

Inaccessible parking infrastructure can render an otherwise accessible building unusable for people with disabilities, as they are unable to enter the facility in the first place. This lack of accessibility contributes to a broader sense of exclusion and frustration, as individuals with disabilities face unnecessary physical and psychological barriers when trying to access basic services (Shakespeare, 2013).

5.2.2 Misuse of Designated Parking Spaces

Another significant issue observed is the misuse of designated accessible parking spaces by individuals who do not have disabilities. This misuse directly undermines the availability of these spaces for those who truly need them. Accessible parking spaces are not simply a convenience; they are a necessity for individuals who require additional space to maneuver wheelchairs or other mobility aids safely and efficiently (Liu, 2018). When non-

disabled individuals occupy these spaces, they deny access to those who rely on them, increasing the difficulty of accessing buildings.

Research shows that misuse of designated parking spaces is a widespread issue that leads to significant inconvenience and frustration for individuals with disabilities (Cohen & Cohen, 2015). To address this, many jurisdictions have implemented fines and penalties for the improper use of accessible parking spaces. However, enforcement is often inconsistent, leading to continued misuse and limited effectiveness of these deterrents (Shakespeare, 2013).

5.2.3 Impact on Accessibility and Mobility

The combination of the absence of ramps and the misuse of parking spaces highlights the broader issue of incomplete or poorly enforced accessibility measures. Parking facilities that are not fully accessible effectively bar individuals with disabilities from utilizing public spaces independently. This is not only a violation of accessibility laws, such as the ADA in the U.S. or similar legislation in other countries, but also an ethical failure in ensuring inclusivity (Barnes, 2016).

Without ramps, accessible parking spaces become less useful, as individuals who require mobility aids still face challenges in reaching the building. Furthermore, when parking spaces are misused by non-disabled individuals, the already limited number of accessible spots becomes even scarcer, compounding the issue and increasing the difficulty for those who truly need these spaces.

5.2.4 Recommendations for Improvements

To resolve these issues, a multi-faceted approach is necessary:

- i. **Install Ramps:** Ramps should be installed wherever there are curbs or steps leading from parking areas to building entrances. These ramps should comply with accessibility standards, ensuring a slope that is easy to navigate (ADA, 2010).
- ii. **Improve Signage and Enforcement:** Clear signage indicating that accessible parking spaces are reserved for individuals with disabilities should be installed, along with penalties for misuse. Consistent enforcement is necessary to ensure that these spaces are not occupied by non-disabled individuals (Liu, 2018).
- iii. **Increase Public Awareness:** Public education campaigns can help raise awareness about the importance of leaving accessible parking spaces open for those who need them. This can help reduce instances of misuse and create a more respectful and inclusive environment (Shakespeare, 2013).

While the provision of designated parking spaces for individuals with disabilities is a positive step towards accessibility, the lack of ramps connecting these spaces to building entrances, combined with the misuse of these spaces by non-disabled individuals, creates significant barriers. To ensure true accessibility, it is essential to install ramps, enforce the proper use of accessible parking, and raise awareness about the importance of these accommodations.

5.3 Facility Design Issues

The design of buildings that fail to meet necessary accessibility standards, especially in the absence of essential facilities like elevators, presents significant challenges for individuals with disabilities or mobility impairments. This situation is further exacerbated when no assistance is available, leaving people to face physical discomfort, frustration, and feelings of embarrassment as they struggle to navigate the built environment independently.

5.3.1 Failure to Meet Accessibility Standards

Accessibility standards, such as those outlined in the Americans with Disabilities Act (ADA) and other international guidelines, require that buildings provide accessible routes, including ramps and elevators, particularly in multi-story structures (ADA, 2010). The absence of elevators in such buildings forces individuals with mobility impairments to rely on stairs, which are not only difficult but, in many cases, impossible for them to use. This directly violates the ADA and similar regulations, which state that buildings must provide equal access to all users, regardless of their physical abilities (ADA, 2010).

Inaccessible buildings can severely limit the ability of individuals to participate fully in academic, professional, or social environments. For example, in educational settings, students with disabilities may face exclusion from classrooms or offices located on upper floors, placing them at a disadvantage compared to their peers (Imrie & Hall, 2001). The absence of elevators and other essential facilities not only poses physical barriers but also leads to psychological distress and feelings of exclusion (Shakespeare, 2013).

5.3.2 Challenges of Using Stairs Without Assistance

The absence of elevators forces individuals with mobility issues, or those who may simply struggle with stairs due to age or injury, to use stairs as the only means of accessing upper floors. Without elevators or ramps, stairs become a significant obstacle, requiring substantial physical exertion, balance, and strength—qualities that some individuals may lack. This is particularly problematic in buildings designed with steep or high steps, which increase the difficulty of use and heighten the risk of falls (Cohen & Cohen, 2015).

When assistance from others is not available, the challenge of using stairs becomes even more pronounced. Individuals may experience feelings of embarrassment, discomfort, and helplessness as they struggle to navigate the environment independently. Research shows that people with disabilities often avoid using spaces that are not designed to accommodate their needs, leading to social isolation and reduced participation in public life (Liu, 2018).

The situation is especially dire in academic environments, where students or staff members who are unable to access certain areas due to the lack of elevators may miss out on important activities or opportunities. The absence of accessible facilities, such as elevators, directly impacts their ability to perform at their best and engage fully with the community (Imrie & Hall, 2001). These barriers contribute to a broader culture of exclusion, where individuals with disabilities feel like outsiders in spaces that are not designed for their use (Shakespeare, 2013).

5.3.3 Psychological Impact and Feelings of Embarrassment

The psychological impact of navigating inaccessible environments cannot be overstated. Individuals forced to use stairs without assistance often experience feelings of embarrassment and discomfort, as they may need to stop frequently, rest, or even ask for help from others. This can lead to feelings of vulnerability and a loss of independence (Shakespeare, 2013). The frustration and emotional toll of these experiences contribute to a diminished sense of self-worth and belonging in public spaces (Barnes, 2016).

Additionally, the lack of accessible facilities sends a message that the needs of individuals with disabilities are not prioritized. When buildings are not designed to accommodate everyone, it creates an environment of exclusion, making people with disabilities feel as though they are an afterthought in the design process (WHO, 2011). This not only affects their physical access but also their mental and emotional well-being.

5.3.4 Recommendations for Improvements

To address these challenges, it is essential to adhere to accessibility standards and incorporate universal design principles into building planning. Key recommendations include:

- i. **Install Elevators:** Elevators should be mandatory in all multi-story buildings to ensure that individuals with disabilities can access every floor. Elevators should also be designed to accommodate wheelchairs and include features such as auditory signals for individuals with vision impairments (ADA, 2010).
- ii. **Provide Alternative Routes:** Where elevators are not feasible, accessible ramps or other forms of transportation should be provided to ensure equal access. These alternatives must comply with slope and accessibility guidelines to ensure usability (Preiser & Smith, 2011).
- iii. **Assistive Services:** In addition to physical infrastructure, buildings should offer support services, such as staff assistance, for individuals who need help navigating stairs or other barriers (Liu, 2018).
- iv. **Training and Awareness:** Building managers and staff should be trained in disability awareness to ensure they can provide appropriate assistance and support to individuals with mobility challenges (Shakespeare, 2013).

The failure of buildings to meet accessibility standards, particularly in the absence of essential facilities like elevators, creates significant barriers for individuals with disabilities. This leads to both physical challenges and psychological discomfort, as those affected must navigate stairs without assistance. Addressing these shortcomings through the implementation of accessible design standards and supportive infrastructure is crucial for fostering an inclusive environment that meets the needs of all individuals.

5.4 Unfriendly Facilities

High inquiry counters present a significant barrier for wheelchair users, adversely affecting their ability to interact with service providers and access essential services effectively. This design flaw stems from the elevated positioning of counters, which are often optimized for standing customers, inadvertently excluding those with mobility impairments.

5.4.1 Physical Accessibility Challenges

The primary issue with high inquiry counters is their height, which typically ranges between 42 to 48 inches (106 to 122 cm). For individuals using wheelchairs, reaching over these counters necessitates considerable effort and can lead to discomfort or strain (ADA, 2010). According to the ADA Standards for Accessible Design, counter heights should be adjustable or provide sections at a lower height (27 inches or 69 cm) to accommodate wheelchair users (ADA, 2010). Failure to implement these standards results in a physical barrier that hinders effective communication and service delivery.

5.4.2 Impact on User Experience

High counters impede the ability of wheelchair users to engage in eye-level conversations with staff, which is crucial for clear communication and establishing rapport. The inability to see over the counter can lead to misunderstandings, increased frustration, and a sense of exclusion (Imrie & Hall, 2001). Additionally, tasks such as handing over documents or receiving information become cumbersome, prolonging service interactions and reducing overall efficiency (Liu, 2018).

5.4.3 Psychological and Social Implications

Beyond the physical challenges, high inquiry counters contribute to the psychological marginalization of individuals with disabilities. When public spaces and services are not designed inclusively, it sends a message that the needs of wheelchair users are an afterthought, fostering feelings of alienation and reduced self-worth (Shakespeare, 2013). This exclusion can deter individuals from seeking necessary services, adversely affecting their quality of life and social participation (WHO, 2011).

5.4.4 Legal and Ethical Considerations

From a legal standpoint, inaccessible inquiry counters may violate disability rights legislation, such as the ADA in the United States or the Equality Act in the United Kingdom. These laws mandate equal access to public services and prohibit discrimination based on disability (ADA, 2010; UK Public General Acts, 2010). Ethically, service providers have a responsibility to ensure that their facilities are accessible to all users, promoting inclusivity and equity (Barnes, 2016).

5.4.5 Recommendations for Improvements

To mitigate these challenges, adopting universal design principles is essential. Universal design advocates for creating environments that are inherently accessible to people of all abilities without the need for adaptation (Mace, 1985). Specific recommendations include:

- i. Adjustable Counters: Implementing counters with adjustable heights can cater to both standing and seated users, enhancing accessibility (Preiser & Smith, 2011).
- ii. Lowered Sections: Incorporating a section of the counter at a lower height (approximately 27 inches or 69 cm) allows wheelchair users to engage comfortably without the need for adjustments (ADA, 2010).
- iii. Clear Space for Maneuvering: Ensuring adequate space around counters for wheelchair maneuvering facilitates easier access and interaction (Imrie & Hall, 2001).
- iv. Staff Training: Educating staff on disability awareness and effective communication strategies can improve interactions with wheelchair users (Shakespeare, 2013).

High inquiry counters significantly hinder the accessibility and usability of services for wheelchair users, leading to physical, psychological, and social disadvantages. Addressing this design flaw through universal design principles and adherence to accessibility standards is crucial in fostering an inclusive environment that accommodates the needs of all individuals.

6. Conclusion

In conclusion, people with disabilities (PWD) should not be marginalized because they are individuals with the same instincts and feelings as typical people. Physical limitations are not obstacles to pursuing desires and achieving success. PWDs can also make valuable contributions to society and the country. This is evident in the many students with disabilities who pursue higher education, proving that they can compete academically and in other aspects with typical students. Therefore, to foster spirit and motivation among students with disabilities, higher education institutions (HEIs) need to take proactive steps in ensuring their welfare. Although they are a minority, students with disabilities have the potential to become outstanding graduates who can contribute to society and the country.

Providing disability-friendly facilities is essential to ensure they can learn and live comfortably throughout their studies. In addition, the management and typical students should also reach out to and support students with disabilities to foster positive relationships. In this way, students with disabilities will feel loved and valued, thereby increasing their motivation to succeed in academics and extracurricular activities.

Additionally, the lack of financial allocation causes these institutions to struggle in providing the required facilities. This also involves maintenance and improvements of existing facilities, which require better maintenance or upgrades to ensure they function properly at all times.

Here are some improvement steps to enhance facilities for people with disabilities in higher education institutions (HEIs):

- i. Audit and Assessment: Conduct regular audits of facilities for people with disabilities and gather feedback from students with disabilities to identify shortcomings and areas needing improvement.
- ii. Investment in Infrastructure: Improve infrastructure to ensure it is truly disability-friendly and complies with accessibility standards.
- iii. Awareness and Training Programs: Organize ongoing training programs for staff and students about the importance of accessibility and how to provide effective support.
- iv. Financial Support: Seek additional funding or financial resources to improve and add the necessary facilities.
- v. Community Involvement: Involve students with disabilities in planning and evaluating facilities to ensure that their needs are considered.

Overall, although many HEIs have made progress in providing facilities for people with disabilities, there is still room for improvement to ensure that all students with disabilities can enjoy a full and equitable educational experience.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: study concept and design: Akmal Abdul Rahman, Che Hasnah Mahmood; data collection: Akmal Abdul Rahman; analysis and interpretation of results: Akmal Abdul Rahman; draft manuscript preparation: Akmal Abdul Rahman, Che Hasnah Mahmood, Nursitihazlin Ahmad Termida. All authors reviewed the results and approved the final version of the manuscript.

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