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多元感官能力學生的高等教育經驗及其對健康之影響：

台灣北部的質性研究

The Experiences in Higher Education of Students with Diverse Sensory
Abilities and Their Health Impact: A Qualitative Study in
Northern Taiwan

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本論文係__高玉婕_____R12853003_____在國立臺灣大學_ 全球衛生碩士學位學程_____(系/所/學位學程)完成之碩士學位論文，於民國_114_年___07_月 25__日承下列考試委員審查通過及口試及格，特此證明。

The undersigned, appointed by the Department / Graduate Institute of _Global Health Program on __25__ (date)__07__ (month)__2025___ (year) have examined a Master's Thesis entitled above presented by_____Jade Samantha Gabbidon_____ (name)____R12853003_____ (student ID) candidate and hereby certify that it is worthy of acceptance.

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Acknowledgement

The journey to the completion of this project was not something I could have done alone. There were many moments along the way when I truly wondered if I would be able to finish, but thanks to the encouragement, support, and guidance of the following people, I was able to complete this thesis with a meaningful conclusion and a deeper understanding of disability studies.

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To my church family, thank you for always praying for my success, wisdom, and peace of mind. Your encouragement and spiritual support have meant so much.

And finally, I want to thank God for placing me in this position. It is by his grace that I was given the opportunity to study abroad, to grow, and to do my best to advocate for

students with hearing and visual impairments. This journey has had its ups and downs, but I know I couldn't have done it without the incredible people around me. Thank you truly from the bottom of my heart.

摘要

在臺灣，身心障礙學生在進入高等教育的過程中經常面臨持續性的障礙。本研究旨在探討身心障礙學生於臺灣高等教育體系中所遭遇的系統性與制度性障礙。這些障礙可能包括：校園設施的無障礙性、支援服務的可獲得性，以及社會大眾的態度等。本研究以質性方式分析這些因素如何影響學生的社會福祉與學業進展，並期望提出策略以促進更具包容性與支持性的教育環境。研究主要探討以下兩個問題：

具有感官多樣性的學生所面臨的挑戰與支持系統，如何影響其整體健康與社會福祉？

大學中的支持系統如何影響具有感官多樣性的學生之學業進展？

為探討上述主題，本研究採取質性研究設計，並運用半結構式訪談作為主要資料收集方法。初期的資料收集階段透過社群媒體平台、各大專院校之身心障礙資源中心與學生社團發送問卷，以瞭解北臺灣具有感官多樣性的學生對參與研究的興趣。完成招募後，進入第二階段，與參與者進行每場約 40 至 70 分鐘的面對面、一對一半結構式訪談。

研究結果顯示，儘管《特殊教育法》與《身心障礙者權益保障法》的實施在支持感官障礙學生方面已有所進展，但在實現全面性包容與教育公平方面，仍存在明顯的落差。這些缺口反映出對醫療模式的過度依賴，限制了社會模式的廣泛採納。研究指出，亟需進行政策改革與制度重組，特別是在大學如何提供學生支援、課程設計與制定有關社會包容與學業進展的校級政

策方面。更有力地整合社會模式對於營造一個真正公平且具包
容性的高等教育環境至關重要。

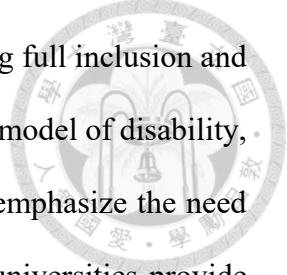關鍵詞：感官障礙、高等教育、學業進展、社會健康、包容與
平等、質性研究

Abstract

In Taiwan, students with disabilities often face persistent obstacles when accessing higher education. This study explores the systemic and institutional barriers that students with disabilities encounter within Taiwan's higher education system. These barriers include challenges related to facility accessibility, availability of support services, and societal attitudes. The study qualitatively analyzes how these factors influence students' social well-being and academic progress, with the goal of identifying strategies to foster a more inclusive and supportive educational environment. The following research questions guided the study:

1.   How do the challenges and support systems that students with diverse sensory abilities encounter influence their overall health and social well-being?

2.   How do university support systems impact the academic progress of students with diverse sensory abilities?

To explore these questions, the study adopted a qualitative design using semi-structured interviews. The recruitment process began with the distribution of a questionnaire through social media platforms, disability support centers, and student clubs across Northern Taiwan to identify interested participants. After recruitment, the research team conducted 40–70-minute face-to-face, one-on-one semi-structured interviews with 7 participants. These consisted of 5 students, 1 staff member, and 1 assistive staff typist. After conducting interviews, the responses were analyzed thematically to identify, analyze, and interpret the participants' experiences from their perspectives.

Findings suggest that while the implementation of the Special Education Act and the People with Disabilities Rights Protection Act in Taiwan has supported progress for

students with sensory impairments, significant gaps remain in achieving full inclusion and equity. The analysis highlights an ongoing overreliance on the medical model of disability, which limits broader adoption of the social model. The findings also emphasize the need for policy reform and institutional restructuring, particularly in how universities provide support, organize classes, and design policies related to social inclusion and academic success. Stronger integration of the social model of disability is essential to fostering a more equitable and inclusive higher education environment allowing for positive social health and academic progression.

Keywords: Sensory Impairment, Higher Education, Academic Progression, Social Health, Inclusion and Equity, Qualitative Research

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List of Abbreviations

CRPD - Convention on the Rights of People with disabilities

DSS - Disability Support Services

ICF - International Classification of Functioning

NTU- National Taiwan University

NHRC- National Human Rights Commission

PDRPA - People with Disabilities Rights Protection Act

PWD - Person with Disabilities

SWD - Student with Disabilities

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1. Introduction

1.1 Research Background

Students with disabilities (SWD) are currently among the most marginalized communities worldwide. As access to higher education becomes an ever-increasing demand, universities must acknowledge and address the inherent ableism within the foundations of their structure. Until the 1980s, Taiwan had very few means of supporting and advocating for people with disabilities (PWD). Challenges such as reduced governmental support, social discrimination, stigmatization, prejudice, and microaggressions were consistent barriers to PWD (Chang, 2021). Often, PWD were seen as a burden to their families. Terms such as "cán-fèi" 殘廢, translating to "useless and worthless", were used as a means to objectify PWD (Chang, 2007), and with little educational support and job security, social inclusion within society continued to become a distant dream for many PWD.
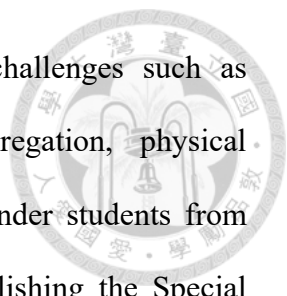
In 1975, the United Nations adopted the Declaration of Rights of Disabled Persons, signaling the start of concerted efforts to address human rights issues for PWD (United Nations, 1975). A few years after this, Taiwan passed the Handicap Welfare Law in 1981, aiming to meet the needs of PWD and protect their rights as equal citizens under the law (Chang, 2007). While this law represented a significant step forward for PWD advocacy in Taiwan, it lacked a comprehensive internal structure with minimal regulations and concrete policies to uphold the rights of PWDs effectively (Chang, 2007). Many individuals continued to encounter challenges in their surroundings, and a notable stigma against PWD persisted (Chang, 2007; Hsu et al., 2021). Subsequently, the government enacted the Special Education Act in 1984 to empower individuals with disabilities and giftedness to access inclusive

education, allowing them to realize their full potential, develop their personalities, and contribute to society (Ministry of Education, 2023).
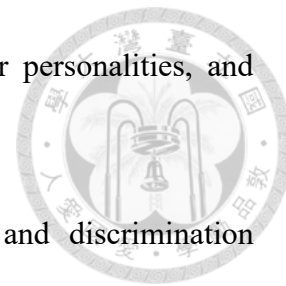
Unfortunately, this legislation led to increased segregation and discrimination towards PWD, as educational environments lacked cohesive support from trained teachers and supportive staff to educate those with disabilities (Chen et al., 2017). This Act has also undergone multiple amendments since its enactment in 1984, the most recent being its third amendment in 2009. These legal reforms reflect a gradual alignment with international disability rights frameworks such as the UN Convention on the Rights of Persons with Disabilities (CRPD), which Ta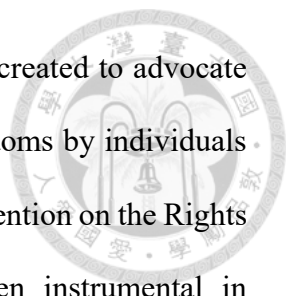iwan ratified in principle, despite not being a member of the United Nations (Chiu & Turnbull III, 2014). Although Taiwan is not a signatory state, the CRPD has influenced domestic policy discussions and reform efforts, including those surrounding inclusive education and access to support.

During this period, religious groups, parent advocacy organizations, and charitable institutions frequently intervened to offer services and financial support for the rights of PWD. Father Brendan O'Connell from the United States recognized the insufficient care in private institutions and the lack of educational opportunities for PWD in Taiwan. In response, he established the "mental retardation" association in 1983 (Ma, 1995), intending to enhance the quality and professionalism of institutions serving PWD (Ma, 1995). By then, three institutions for the deaf and blind had already been established in 1915 in Tainan and 1917 in Taipei, with the third school established in Taichung in 1956 (Liu, 2019). Although these schools provided foundational education, they were only available for students up to the high school level. As a result, students seeking higher education faced inadequate support and increased discrimination.

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Despite the initial implementation of educational reforms, challenges such as classroom discrimination, government regulations, classroom segregation, physical inaccessibility to facilities, and community resistance continued to hinder students from achieving academic success and social inclusion. For instance, establishing the Special Education Act only offered students the option to attend public schools or be educated at home (Chang, 2007). However, the lack of necessary infrastructure and accommodations for SWD meant that many were still facing social ostracization and segregation, even with the ability to attend classes at public schools.

Following this period, the League of Enabling Associations was established in 1990, as well as the Parents' Association for intellectual disabilities in 1992, signifying an era of legislation reform and accountability demand from the state regarding the monitoring of human rights violations (The League for Persons with Disabilities, 2024). Through targeted legislative reforms and various strategies to raise public awareness, it became the most influential civic organization for disability rights in Taiwan at the time. It is important to note that the policies and laws enacted during this period were seen through the lens of the medical model, which viewed individuals with disabilities as needing to be fixed or cured (Chiu et al., 2013). This perspective framed disability as a medical problem due to a disease or an impairment or dysfunction of organs of the individual, removing the humanization and social context from the challenges individuals with disabilities have faced (Chiu et al., 2013; Chang, 2007). Despite limited funding in many institutions, discrimination, inequality, and public prejudice were prevalent towards PWD. Fortunately, as advocacy efforts continued in academic and social spheres, treaties such as the Convention on the Rights of People with Disabilities (CRPD) were established to assist in advocating for the social model of disability.

Adopted by the UN General Assembly in 2006, the CRPD was created to advocate for the full and equal enjoyment of human rights and fundamental freedoms by individuals with disabilities while promoting respect for their inherent dignity (Convention on the Rights of People with Disabilities [CRPD], n.d). This convention has been instrumental in advancing special education in Taiwan, facilitating the development of education-specific policies through the framework of the social model of disability. Among various provisions, Article 24 stands out for its focus on education. This article comprises five parts that emphasize the need for inclusive, high-quality education, along with effective classroom support, and individualized assistance to enhance both the academic and social development of students (CRPD Article 24). While this convention aims to facilitate the proper application of the social model of disability, significant gaps remain, resulting in graduation rates and student outcomes that fall short of expectations (Chiu et al., 2013). Additionally, the convention addresses the necessity for students to experience equality and non-discrimination across all environments, as outlined in Article 5 (CRPD).

Additionally, this study does not argue against the inclusion of laws and articles, such as those in the CRPD. Rather, it highlights the challenges surrounding the effective implementation of these policies and the necessity for ongoing evaluations within universities, particularly since these measures have been introduced in recent years. It is essential to ensure that students' needs are considered comprehensively. While this research reiterates many of these challenges and goals, it underscores that despite advancements, the critical issues of implementation and addressing student needs remain unmet. Further exploration is required to determine effective methods for the continued application of these policies and articles.

The Taiwanese government has also implemented various legislations and policies to define the eligibility criteria for individuals seeking disability benefits, including financial aid and in-kind support from the government. One significant development was the enactment of the People with Disabilities Rights Protection Act (PDRPA) in 2007, which was designed to enhance the evaluation process for disability. Prior evaluations predominantly adhered to the medical model of disability, failing to consider the social implications of disability support (Lin et al., 2009). In July 2012, the International Classification of Functioning (ICF) framework was adopted as a new national model that established connections among disability evaluation, needs assessment, and social welfare services, aiming to promote the participation of PWD (Chiu et al.,2013).

Following Taiwan's incorporation of the CRPD into its domestic legal framework in 2014, along with the adoption of the ICF and the PDRPA, the country began to align its regulations and policies to enhance the inclusion and rights of SWD in society and on campus. However, the emphasis on implementing reasonable accommodations for these students did not gain traction until the revision of the CRPD report in 2017 and its subsequent revision in 2022. Despite these positive developments and ongoing efforts, a considerable journey remains ahead to achieve full inclusion in university classrooms. The transition to the social model of disability poses significant challenges for educational institutions. Consequently, issues such as inadequate facilities, support services, transportation, and the need for desegregation in higher education have become central to the advocacy for PWD and represent the primary focus of this research.

1.2 Ongoing Modern-day Educational Advocacy for Students with Sensory Impairments
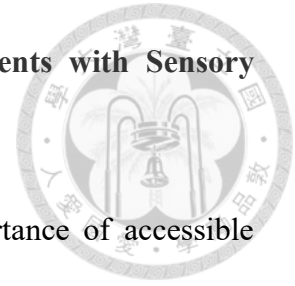
In Taiwan, there has been increased recognition of the importance of accessible education for PWD. According to the Ministry of Education, as of 2021, the total number of students in special education across the country was 171,201, with 14,747 enrolled in universities (Ministry of Education [MOE], 2023). Recently, the articles within the

CRPD have been modified and enhanced as the committee aims to further improve the understanding and recognition of PWD. Article 2 of the CRPD is an example of current-day advocacy, as the article emphasizes "universal design" and "reasonable accommodation" as fundamental concepts in all forms of special education (National Human Rights Commission [NHRC], 2023). This means that support for PWD in higher education must be able to meet the needs of students, allowing for their future success, because the denial of such provisions would constitute discrimination (NHRC, 2023).
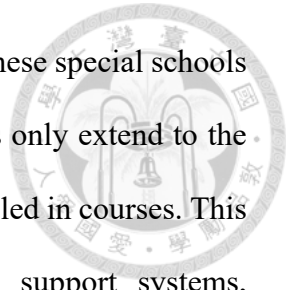
The NHRC also included a guideline for reasonable accommodation for PWD to detail the statement of accommodation from the Article 2 revision (Taiwan National Human Rights Commission, n.d). The Ministry of Education has also pushed for the proper inclusion of SWD by calling for universities to establish support offices and personnel to meet the needs of these students (MOE, 2023). This was done by providing a budget of 577 million NTD for supportive staff, after-school tutoring, teaching materials, and other necessary resources for the 14,000+ PWD in higher education (MOE, 2023).

The incorporation of these resources and the implementation of the CRPD have resulted in a notable increase in higher education enrollment. According to the Ministry of

Education, Taipei City enrolled 2,675 students with disabilities in educational institutions in 2023 (Beiter, K., 2010). Among this group, 89 students had visual impairments, while 187 had hearing impairments. A closer examination of institutions like NTU reveals disparities in graduation rates. For instance, during the 2006-2007 academic year, following the CRPD's introduction, NTU enrolled 162 students with disabilities (Disability Support Services et al. [DSS NTU], 2020). By the 2020-2021 academic year, this number had risen by over 100, reaching a total of 271 enrolled students (DSS NTU, 2020). Of these students, 21% had hearing impairments, 4% had visual impairments, and 75% had other disabilities, including physical disabilities and autism (DSS NTU, 2020). Despite the increase in student enrollment, the implementation of policies to ensure accessibility for SWD has not been effectively monitored. Students accessing post-secondary education still encounter numerous barriers and challenges once they join the university. For example, the graduation rates at NTU exemplify the ongoing challenges in monitoring the rights and progress of SWD. In the 2020-2021 academic year, only 53 SWD graduated (DDS NTU, 2020). This is not just the case at NTU, as many schools are showcasing difficulties in student outcomes and retention rates.
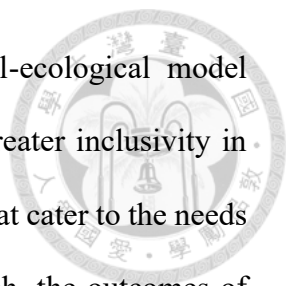
Furthermore, a 2014 study highlighted that SWD attending college in Taiwan encounter difficulties in meeting academic requirements and engaging in self-advocacy. As a result, they are less likely to secure employment after graduation compared to their peers without disabilities (Cheng, 2014). Most of Taiwan's current literature and educational policies focus on high school and younger students, with insufficient research on post-secondary education (Hsu et al. 2021; Liu et al. 2019; Ministry of Education, 2023). Taiwan has allocated resources to include special schools, making education more inclusive for PWD. Article 16 of the Special Education Act also highlights the inclusion of grants and assistance

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within the private sector to assist students financially when enrolling in these special schools (Ministry of Education, 2023). However, since these private institutions only extend to the high school level, public universities must do more to support those enrolled in courses. This emphasizes the importance of public universities having adequate support systems, prioritizing social well-being, and offering guidance for future career opportunities. One study revealed that although there is a positive attitude toward inclusive instruction, it does not necessarily translate into adequate inclusive classroom practices at the university level (Hsu et al., 2021). Significant barriers to inclusivity, such as negative attitudes and stereotypes held by peers and faculty members toward SWD, continue to hinder their full integration into academic settings (Hsu et al., 2021; Francis et al, 2019).

In March 2025, a significant issue regarding the inclusion of SWD emerged in a private school in Northern Taiwan. A petition was circulated to highlight the lack of inclusion within the school's environment. Students from across Taiwan are urging the Ministry of Education to pay greater attention to this matter. The ongoing petition reflects the increasing growth of student advocacy; however, it also emphasizes that attention to social considerations and care for students is progressing at a slower pace than desired.

Without addressing these issues, society perpetuates the neglect of SWD, leaving them without the necessary support to transition into society after graduation and increasing their risk of poor health outcomes. These projected health outcomes for SWD could include an increased risk of mental health disorders, such as depression, due to prolonged exposure to stress, isolation, and academic challenges (Cheng, 2019; Fox ML et al., 2019). Additionally, a lack of education leads to job insecurity, affecting financial security and access to healthcare and quality housing, ultimately reducing overall quality of life and

potentially shortening life expectancy, as detailed through the social-ecological model (Francis et al., 2019; Lollar et al., 2020, p. 52). As Taiwan aims for greater inclusivity in higher education, it is equally important to introduce laws and policies that cater to the needs of students seeking to attend higher education institutions. Without such, the outcomes of PWD are not only at a higher risk but also continue the perpetual cycle of suffering for an already greatly marginalized minority group.

1.3 Theoretical models

This research will explore the social-ecological model and the social and medical model of disability to gain a deeper understanding of the disparities in health outcomes and the impact of support, or lack thereof, on students with diverse sensory abilities. Coined by Bronfenbrenner, the social-ecological model illuminates the complex interplay between different levels of influence, providing insights into the underlying mechanisms of the social determinants of health (Lollar et al., 2020, p.52). This model utilizes the concept of fundamental cause, which allows researchers to explain how "upstream factors" can significantly affect the long-term health outcomes of SWD, shaping their future employment opportunities and overall earning potential while enhancing their knowledge and life skills through university (Lollar et al., 2020, p.52). Figure 1 illustrates the interconnected consequences of a lack of education, including economic disparities, which can result in social isolation, mental health issues, future stress-related chronic health conditions, and an overall increase in mortality (Lollar et al., 2020, p.52).
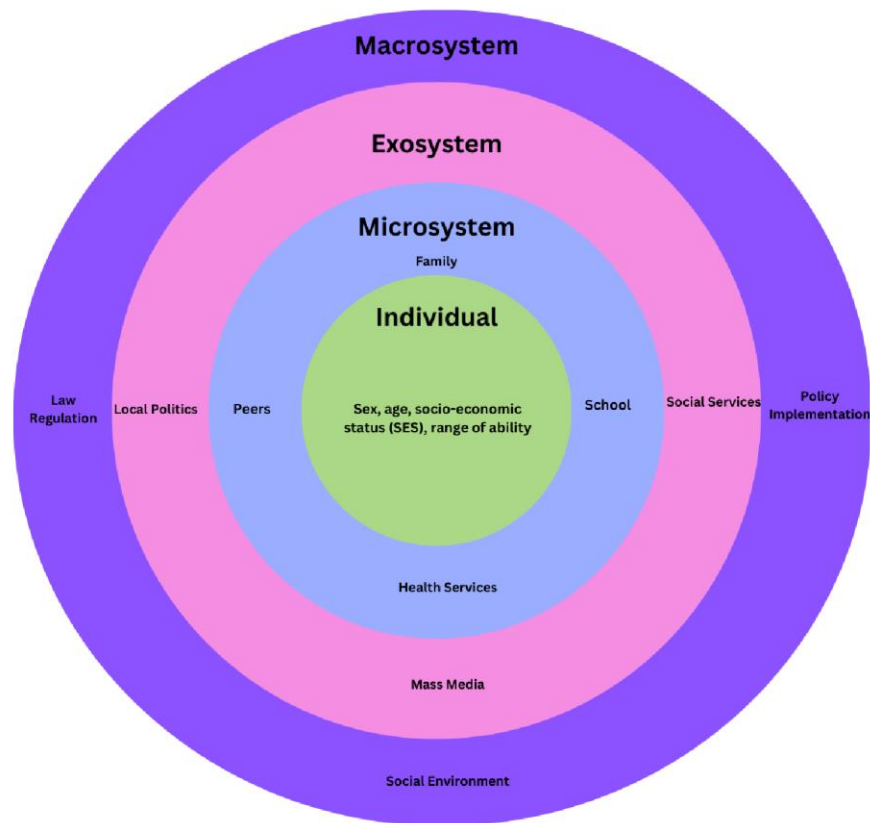
Figure 1: Social-Ecological Model

(Lollar D. et al., 2020; done by Jade Gabbidon)

On the Individual level, factors such as socioeconomic status, sex, age, and perception of health determine the impact that a student may face regarding their social health and academic success. For example, gender discrimination in university or the opportunity to afford personal tutors before attending university can impact the ease of transition a student has to university settings. A student with teacher and outside support is more likely to continue through university than those with limited support (Yu et al., 2022). At the Microsystem level, one study highlighted that Teachers' negative perceptions of students with chronic illnesses and/or disabilities are sometimes attributable to a lack of understanding of the conditions (Hsu et al., 2021). The shortage of educators with specialized training in special education who possess the necessary skills to effectively support these students,
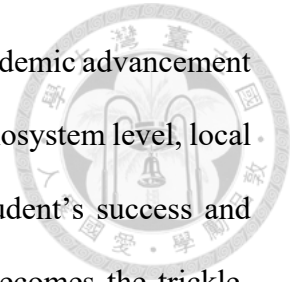
coupled with limited peer and family support, can adversely affect the academic advancement and social integration of students with diverse sensory abilities. At the Exosystem level, local university policies or social services implementation also impact a student's success and outcomes. Finally, at the Macrosystem level, policy implementation becomes the trickle-down piece that affects the rest of the levels. Policy implementation and the use of laws such as Article 2 from the CRPD or assisted laws from the Ministry of Education impact what resources will be allotted to students and overall aid in determining their future health outcomes.

Similar unaddressed barriers for SWD are observed globally. Given the limited research on the subject, conducting research specific to the Taiwanese context would be valuable in shaping more targeted policies for college-level students. Additionally, utilizing the social-ecological model in this study is essential as it forms the foundation for comprehending the various layers that contribute to the health outcomes of these students.
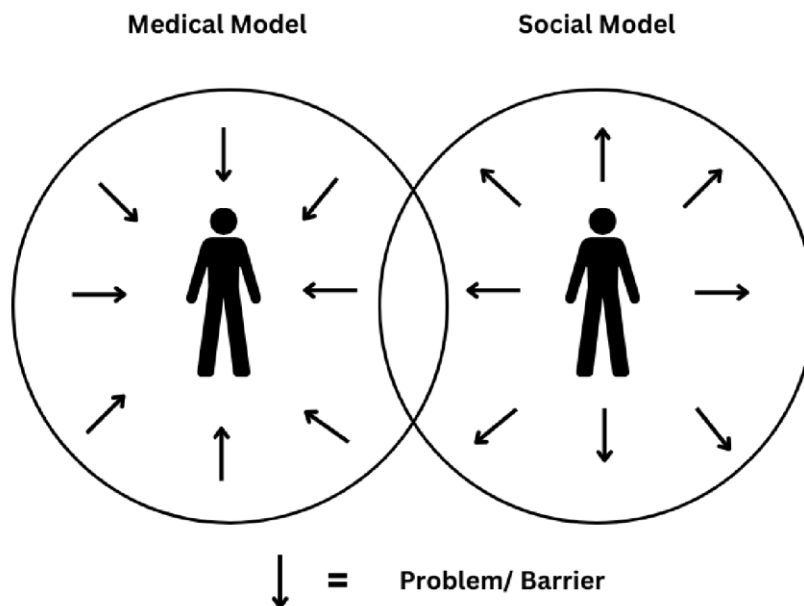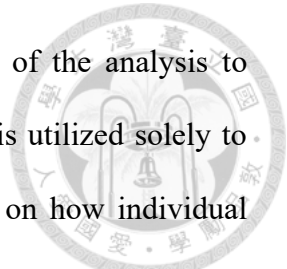
Figure 2: Social and Medical Model of Disability

(Moore, 2017; redone by Jade Gabbidon)

This study will also explore both the medical and social models of disability, aiming to challenge the conventional understanding of disability through the lens of the medical model. The medical model typically perceives individuals with disabilities as needing to be fixed or cured (Hogan, 2019). Originally used to shape policies and structures for SWD, the medical model has failed to facilitate a shift in perspective that would offer more suitable support and resources to these students. In contrast, the social model argues that the obstacles to students' participation in higher education are external, such as unequal access to facilities, services, and trained faculty members specializing in special education (Chiu et al., 2013). As shown in Figure 2, while the medical model remains important, prioritizing the social model could highlight the societal inequalities linked to disability. Shifting the focus from the individual to societal barriers could lead to more impactful policies for students seeking fair support in higher education. This study will integrate the medical and social models, as well as the social-ecological model, to identify the shortcomings in higher education environments in Taiwan (Disability Nottinghamshire, 2022). Furthermore, incorporating the social and medical models in this research aims to acknowledge the stance of organizations and laws concerning students with diverse sensory abilities and to determine how to allocate resources more effectively for the improvement of health and academic outcomes for these students. The focus is on developing policies that promote equal access to higher education and ultimately improve the quality of life for SWD.

Both models play a crucial role in illuminating student experiences within this study, each serving a distinct and intentional purpose. These frameworks are not used

interchangeably; rather, they are applied in different segments of the analysis to address specific aspects of the research. The Social Ecological Model is utilized solely to examine students' social health, providing a multi-layered perspective on how individual experiences are influenced by interpersonal, institutional, and societal factors. This model enhances our understanding of how support systems, or the absence of them, affect students' social well-being in the university context. In other situations, the social and medical models of disability offer the conceptual basis for analyzing institutional structures, policies, and regulatory frameworks. These models inform the exploration of how disability is defined and managed within higher education systems and the ways in which students with sensory impairments interact with and are impacted by those systems. Employing these models concurrently, but for distinct analytical purposes, enables the study to thoughtfully balance personal experiences with a critical examination of structural forces.

1.4 The Importance of Social Health

Social health plays a crucial role in a student's overall success in higher education. Doyle defines it as the adequate quantity and quality of relationships in a particular context to meet an individual's need for meaningful human connection (Doyle, 2023). Social health also ties into the social-ecological model, as this model analyzes the factors outside of an individual's self that contribute to their health and well-being. As previously noted, students at NTU are graduating at less than half of their enrollment rate. So, while there might be resources for SWD, there is a gap in implementation that is preventing students from graduating and reaching their full potential. In a previous study, Yu and colleagues found that student interactions, academic integration, and social satisfaction influence their persistence and academic performance at school. It has been noted that family relationships

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were also strongly related to academic performance, but further research is required to determine the other factors that may impede these students' academic success (Yu et al., 2022).
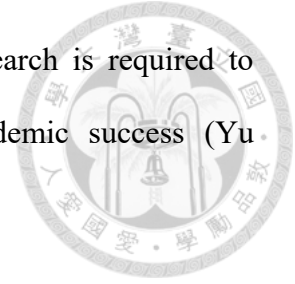
Without the appropriate management of these factors, students with sensory impairments who already have to navigate the struggles of academic support and resource availability are less likely to complete their degree (Francis et al., 2019). Without degree completion, students face many other hardships, such as social exclusion, lack of job availability, housing insecurity, and further health disparities. As the inclusion of SWD increases, it is essential to monitor the implementation of assistance meant to improve the resources of those in need.

1.5 Stigma:

Stigma plays a significant role in shaping the social and academic experiences of students with sensory impairments. A foundational text on stigma is *Erving Goffman's "Stigma: Notes on the Management of Spoiled Identity"* (1986). Goffman defines stigma as an attribute that excludes individuals from full social acceptance, often marking them as "other" in contrast to what society deems "normal" (Fitzpatrick, 2008; Goffman, 1986). While Goffman's work remains foundational in discussions of disability, it has also faced considerable critique. His portrayal of PWD as passive and inherently separate from "we normals" has been challenged by scholars who emphasize empowerment and agency. For instance, scholars such as Abrams (2023) and Garland-Thomson (2016) argue that Goffman's framework often overlooks the agency, resistance, and collective identity of disabled individuals, and fails to account for structural forces shaping their experiences.

Goffman's ideas resonate with W.E.B. Du Bois's concept of double consciousness, which highlights the conflict between individuals' self-perception and how they are perceived by others. This dual awareness is particularly significant for students with sensory impairments, as they navigate both their internal experiences and external judgments often imposed by peers, instructors, and educational institutions. This is a challenging endeavor that is further explored in this study.

In conclusion, while Goffman's work offers a valuable foundation for understanding the dynamics of stigma, this study expands upon and critiques his framework by highlighting the evolving discourse within disability studies. It specifically centers on the perspectives of students with sensory impairments who actively engage in self-advocacy, challenging stigma through visibility, supportive networks, and academic success. The persistent relevance of stigma, both in existing literature and in the lived experiences of students, renders it a vital lens for analyzing the findings of this research.

Terminology and Defining Key Terms

In this thesis, I deliberately employ a variety of terms, such as "diverse sensory impairments," "students with disabilities (SWD)," and "students with hearing and visual impairments," to capture the complexity and nuances of the population under examination. The term "diverse sensory impairments" recognizes the distinct experiences of students whose disabilities affect either hearing or vision, while avoiding the reduction of their identities to a single category, as some participants in the study may have multiple impairments. The phrase "students with disabilities" aligns with institutional and policy language, particularly in discussions of systemic barriers and available supports. Conversely, "students with hearing and visual impairments" offers specificity when further elucidating

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quotes or contexts. By utilizing this varied terminology, I aim to promote inclusivity and precision, while resisting any tendency to reinforce a monolithic perspective on disability.

2. Methods

2.1 Setting

The research was conducted at National Taiwan University, with approval from NTU's Research Ethics Committee Case No.202412HS002. Five of the interviews were held in the conference rooms of the NTU library, while two were conducted online to accommodate participants who would have had to travel a greater distance for the in-person interviews.

2.2 Data Collection, Sampling Stages

The initial data collection phase involved administering a survey-based questionnaire to students with sensory impairments in universities across Northern Taiwan. This was done through purposive sampling and liaising with student unions, clubs, and university disability centers to gauge interest and find participants. Additionally, the advertisement was shared on social media platforms such as Instagram and Facebook in an effort to attract more participants. The goal was to include at least three universities in the study, with five students from each institution, resulting in a total of 15 participants, which would illustrate the diverse resources, policies, and demographics of Northern Taiwan. Ultimately, however, we secured only seven participants, five students and two staff members. I believe the final number fell short for several reasons, which I will elaborate on in the limitations section. To briefly highlight this issue, challenges with translation and participants' hesitations in communicating with a foreigner may have constrained recruitment efforts for this study. The following universities were approached for participation:
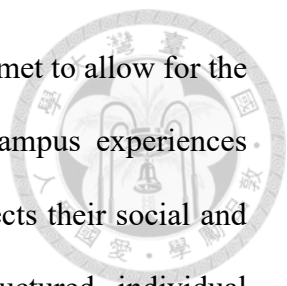
1. National Taiwan University 國立臺灣大學

2.   National Taiwan Normal University 國立臺灣師範大學

3.   National Taipei University of Education 國立臺北教育大學

4.   University of Taipei 臺北市立大學

5.   Tatung University 大同大學

I believe that current literature on this topic has yet to fully capture the lived experiences of students with diverse sensory abilities on college campuses, and this study seeks to address this gap through qualitative research. Before the initial data collection phase, the interview protocol was developed based on a review of relevant literature on disability, social health, and academic inclusion in higher education, with particular attention to studies focused on students with sensory impairments (e.g., Doyle, 2022; Yeh, 2015; Chou, 2016). Student representatives from NTU's Disabled Students' Rights Association were consulted to review the questionnaire, interview questions, and promotional materials. This step ensured that the research adhered to ethical standards. This approach aligns with the Ethical Guidelines for disability research, which advocate for the principle of conducting research "with us, not about us," highlighting the importance of incorporating input from SWD in the research process (Cheng, 2023).

I also sought out input from teachers and support staff, such as special education assistants, counselors, and academic advisors. The participation of these additional teachers and staff aided in allowing me to better understand how the university implements support programs and their perspectives on the challenges that these students encounter in receiving support.

Once the saturation point for the collection of narrative data was met to allow for the completion of this study, I initiated a qualitative analysis of their campus experiences regarding the support they received for their disabilities and how it affects their social and academic well-being. This involved conducting face-to-face, semi-structured, individual interviews, each lasting 50 to 70 minutes, from March to May 2025. The individual interviews helped me to understand personal perspectives as well as issues such as specific access barriers (Kroll et al., 2007; Ralejoe, 2021).

2.3 Justification for Participant Focus

This study concentrates specifically on students with hearing and visual impairments, a decision rooted in both research necessity and ethical considerations. Initially, the intent was to investigate the experiences of students with physical or sensory disabilities more broadly. However, upon reviewing the existing literature in Taiwan, it became apparent that students with physical disabilities have garnered relatively more academic focus, while those with sensory impairments, particularly in relation to hearing and vision, remain significantly underrepresented in higher education research (Francis, 2019; Ministry of Education, 2023). By centering on this group, the study aims to address this gap and contribute to a more comprehensive understanding of disability within academic environments.

This focus necessitates careful reflection on the implications for access, communication, and inclusion throughout the research process. For example, recruitment efforts were designed to be flexible and attuned to the preferred modes of communication of the students. Consideration was also given to the potential need for sign language interpretation or alternative media formats. Acknowledging that some students may encounter obstacles in articulating their experiences due to limited institutional support or

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stigma, the study sought to foster an interview environment that emphasized accessibility, comfort, and participant autonomy. In doing so, the research design not only aims to learn from students' experiences but also to exemplify inclusive and respectful research practices aligned with the social model of disability.
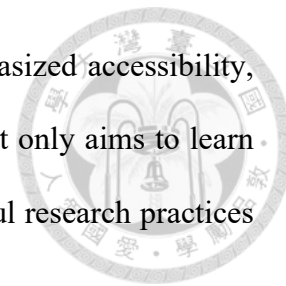
2.4 Participants

Participant inclusion criteria targeted students who identified as having a visual or hearing impairment, as well as relevant staff members experienced in supporting students with such impairments. This approach aimed to gather additional perspectives that extended beyond the initial student interviews. It was permissible for participants to have multiple disabilities, provided that at least one was specifically related to hearing or visual impairments. Furthermore, participants were required to be currently enrolled in post-secondary education and at least 18 years of age to take part in the study.

Regarding the exclusion criteria, students who did not have disabilities specifically related to visual or hearing impairments were not eligible to participate. Additionally, individuals who were not students or relevant staff members in connection with the study were also excluded. Ultimately, the recruitment process yielded a total of five students, representing a mix of visual and hearing impairments, alongside two staff members who support these students. The following table provides an overview of the demographics of the interviewees. Once the saturation point for collecting narrative data was reached, I began a qualitative analysis of the participants' experiences on campus concerning the support they receive for their disabilities and its impact on their social and academic well-being. The following chart details each participant's demographic information concerning the study.

2.5 Demographic Chart

The demographic chart was divided into two sections: one for students and another for staff members, including support staff. This division allows for the collection of specific information related to each demographic, helping to maintain anonymity while providing a clearer understanding of student needs. In Taiwan, universities are granted considerable autonomy under Article 1 of the University Act, enabling each institution to determine its internal structure, staffing, and support services. Consequently, job titles, responsibilities, and support systems for students with disabilities can differ significantly among universities (Ministry of Education, 2023). While the term "teacher" (老師) is frequently used in Taiwan to encompass a range of university personnel, this study distinguishes between faculty/instructors—those responsible for teaching courses—and support staff, including professionals in student services and disability resource roles. This distinction is crucial for accurately assessing the contributions of various personnel in supporting students with sensory impairments, as well as accounting for the institutional variations permitted by the autonomy framework.

I would like to additionally note that most of these students came from National Taiwan University, with one student from NTNU. This focus does narrow the scope of the study and makes it specific to more prestigious institutions in northern Taiwan. It is important to acknowledge that these students likely received more family and financial support compared to those who may not have had the opportunity to attend such institutions, but that in no way minimizes the experiences they've had on these campuses. So, while the voices and experiences of these students are adequately represented, this account does not fully

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address the challenges faced by students in more rural areas of Taiwan, private schools, students who lack any support, or students with carrying levels of impairment.
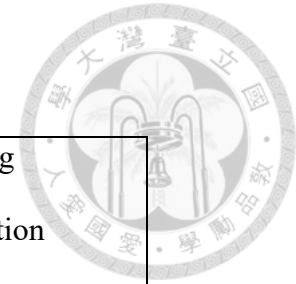
Participant	School	Age Range	Current Year	Type of Impairment	Uses school accommodations	Year of Diagnosis	Living Situation
Student 1	NTU International Student	20's	Master's 2nd year	Visual Impairment	Yes	Around Junior High School	Dorm
Student 2	NTU	20's	Junior	Hearing & Visual Impairment	Yes	Around 7 years old	Family Home
Student 3	NTNU	20's	Master's 1st year	Hearing Impairment	No	Around 2-3 years old	Family Home
Student 4	NTU	18-20's	Freshman	Hearing Impairment	Yes	Around 2 years old	Dorm

Student 5	NTU	20's	Senior	Visual Impairment	Yes		Around Kindergarten	Dorm

Participant	Age Range	Type of Job	Years in Position	Previous experience working with SWD	Understanding of school resources	Visual or hearing impairment
Staff 1	20's	Disability Center Staff Member	1 year	Yes	Yes	Visual Impairment
Staff 2	20's	Typist	3 years	Yes	Yes	No Impairment
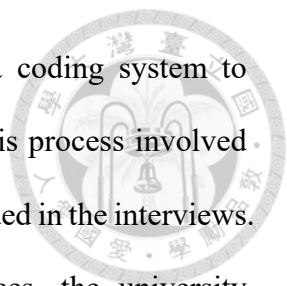
2.6 Interviews

All seven interviews conducted were semi-structured, in-depth discussions from March - May 2025. This format allowed participants to engage with the questions while also sharing their personal experiences and elaborating on topics that I had not initially included in the interview framework. Since I am not fluent in Chinese, I had a Chinese speaker accompany me during these interviews to assist with translation and help facilitate the conversation.

Each interview was recorded and lasted between 50 to 70 minutes. All interviews were conducted with the participants' consent, who filled out a consent form acknowledging their agreement to share their experiences for the study. During the interviews, questions were initially posed in English, and if the participants understood, they were welcome to respond in either Chinese or English. In cases where understanding was difficult, the translator would pose the questions in Chinese and subsequently provide me with the participant's responses in Chinese. If any clarifications were necessary, the translator requested follow-up questions to address any confusion and then communicated the participant responses back to me for a better understanding.

2.7 Analysis

In this study, I conducted a thematic analysis to identify, analyze, and interpret the participants' experiences from their perspectives. After conducting interviews with students and reviewing documentation from multiple sources, I identified common themes related to

their experiences with academic and social support. I then utilized a coding system to categorize sections that correspond to my initial research questions. This process involved applying descriptive or interpretive codes, depending on the details provided in the interviews. Relevant contextual factors may include the availability of resources, the university environment, and perceptions surrounding disability support. To code the data systematically, I utilized Excel, which would significantly aid in managing the large and diverse dataset presented in the study.

As principal investigator, I also securely stored and maintained the data within the recorded transcripts and translations on my password-protected device and stored them in a folder titled "Interview Recordings" and named each interview by the student's impairment and school, as well as maintaining the order from start to finish. Hard copies of the consent forms and printed transcripts are kept in the same location, which is in a securely locked cabinet in Dr. Po-Han's office. Participants were also deidentified during the analysis section to maintain participant confidentiality. All files were also encrypted and password-protected protected requiring multi-factor authentication to ensure the safety of the information. Finally, before analysis in collaboration with Dr. Po-Han and the translator, all personal information about participating students was anonymized to ensure confidentiality and the protection of individual identities.

2.8 Data Retention and Destruction Policy, Retention Period

All research data, including audio recordings, interview transcripts, and analyzed documents, will be securely stored until **December 31, 2025**. During the retention period, the data is also stored in a password-protected digital storage system with restricted access

and complies with relevant data protection regulations (Taiwan's Personal Data Protection Act).

2.9 Positionality Statement:

As a non-disabled Black woman, my approach to studying students with visual and hearing impairments and the impact of support on their social well-being and academic progress is informed by my commitment to equity, inclusion, and an understanding of diverse experiences within educational settings. I recognize that my own identity and lived experiences are different from those of the students I aim to study, which positions me as an external observer regarding disability. Nevertheless, as a Black woman, I am well-acquainted with navigating systems not originally designed with my needs in mind. This background provides me with a degree of empathy for the challenges these students face in postsecondary institutions.

I approach this research with cultural humility and an open mind, acknowledging that each student's experience with sensory impairments and their specific support needs is distinct. To address potential biases stemming from my positionality as a non-disabled researcher, I am dedicated to engaging with the communities under study by actively listening to and prioritizing the voices of students with visual and hearing impairments. My objective is to illuminate how effective support can promote social inclusion and academic achievement, ultimately contributing to a more inclusive and accessible educational environment.

3. Results

The following section presents five interrelated themes and subthemes that describe the experiences of students with hearing and visual impairments in postsecondary education in Northern Taiwan. These themes include: (1) Support Systems, which examines both institutional and interpersonal support available to students; (2) Impact on Social Health, which highlights how sensory-related challenges affect students' social inclusion, relationships, and sense of belonging; (3) Impact on Academic Progression, focusing on how accessible learning environments and university accommodations influence students' academic performance; (4) Barriers and Gaps in Support, emphasizing systemic limitations and inconsistencies across services; and (5) Coping and Advocacy, which describes how students navigate challenges and advocate for themselves within and beyond the university environment. These themes are interconnected through the frameworks of the Social Ecological Model and the Social and Medical Model of Disability, revealing how support systems, institutional environments, and broader societal attitudes shape individual experiences. Instead of merely focusing on impairments, this perspective emphasizes how structural barriers and social dynamics affect students' academic and social outcomes. Collectively, these findings address the core research questions by illustrating how the challenges and support systems encountered by students with diverse sensory abilities impact their social well-being and academic progress. The upcoming sections will provide an in-depth exploration of these themes to inform future policies and campus practices that aim to create more inclusive environments.

3.1 Support Systems

Participants identified a variety of support systems that were crucial to their academic and social experiences. These systems encompassed several key themes, including peer support, teacher or institutional support, and accessibility services, each providing distinct forms of assistance. For example, while peer support and accessibility services offered immediate, flexible, and informational aid, teacher and institutional support focused on creating access, structure, and academic continuity. This section addresses the second research question by detailing students' experiences with their support systems and examining how these systems mainly impact their academic progression. Regardless of the specific type of support received, all participants highlighted the significant role these systems play in shaping both academic progress and social health.

3.1.1 Peer Support/ Friendships

Peer support has emerged as a crucial and often indispensable complement to formal services, while friendships play a vital role in ensuring emotional well-being during university life. Students turned to their classmates and friends for physical assistance, academic collaboration, and the creation of more accessible environments while additionally seeking to form and maintain strong connections with these friends. This informal support established a sense of balance and proved vital when institutional resources were delayed or insufficient to fully address a student's needs. Moreover, peer support and friendship play a foundational role, as they can influence students' decisions regarding attendance at university and whether their chosen institution can meet their specific needs. Both staff and students have noted that the quality of peer connections has a significant impact on students' comfort during their transition to university life.

"I asked my senior if Taiwan had some kind of service that they could help me. They said they [the school] could me to enlarge my exam or give me extra time, so once I understood all the services and it was confirmed to me that they could help, then I decided to come here." (Student 1)
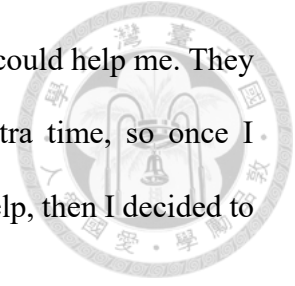
" When I entered college, I didn't know about it [the disability student resource center], it was only afterwards that my friends told me about it. But I didn't see the need to use it." (Student 3)

"In my experience, I haven't met any students who care a lot about rank. A lot of the time, it's like "Oh, my friends are going to college, and so maybe I'll also go." (Staff 2)

Additionally, despite the various barriers encountered, one student has reported positive experiences related to disclosing their disabilities, particularly in earlier educational contexts. These experiences highlight the importance of early peer education and the cultivation of a culture of openness, which can foster social acceptance in certain environments.

"Ever since I was young, my peers were very accepting of me because I would tell them about my situation, and they would be accepting. In elementary school, the teacher would tell students about my impairment, but starting in middle school, I felt I didn't need the teacher to explain, and I could do it myself. When I would tell my peers, they were especially nice about it." (Student 4)

Once students are on campus and in a classroom setting, they face the important task of effective participation. While discussions often highlight the role of peer support in

facilitating academic engagement, one student with hearing impairments pointed out that having a trusted friend during group activities is essential. This support enables them to engage more fully in class discussions and assignments.
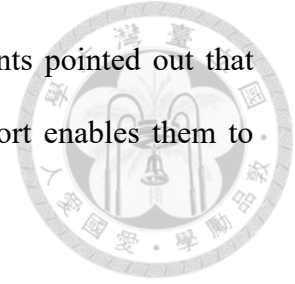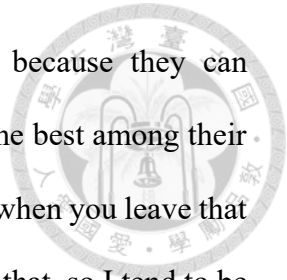
"I typically need another person, maybe a new friend, to help me when I attend class, when I can't hear. For example, making discussions for presentations. Most of the time, 2–4 people are ok, but if we meet for discussion privately at maybe Starbucks, I would need to meet in a quieter place like an empty classroom without much background noise." (Student 3)

This was not an isolated case; another student highlighted that they frequently relied on their classmates for material review and to catch up after class. This collaboration proved particularly beneficial, especially when accommodations, such as test modifications, were not consistently accessible or did not adequately meet their needs.

"After class, I will ask my classmates for help with the material to catch up. Then, occasionally, I will request other services, such as having a waiver for the listening portions on tests." (Student 4)

The two preceding quotes highlight the second research objective, demonstrating how students perceive their connections with classmates as vital secondary resources for enhancing academic performance. Many find these connections within smaller communities of students who share similar experiences, which fosters a sense of mutual understanding and emotional safety. However, this can also suggest a limited integration into the broader campus peer network.

"Students with disabilities tend to gather around each other because they can understand similar difficulties, understand that their grades may not be the best among their peers. So, when you're in that group, you can understand each other, but when you le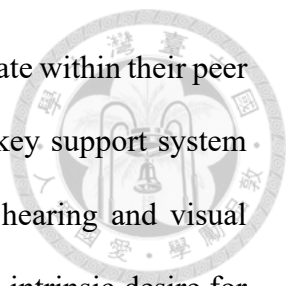ave that group, some students may choose to hide their disabilities, but I can't do that, so I tend to be open about it." (Student 5)

Institutional staff and teachers have pointed out that students often perceive themselves as somewhat different from others. However, this self-awareness does not diminish their natural ability to form friendships within the broader social context of their daily interactions. Additionally, another assistant teacher suggests that students in the college environment may tend to prioritize friendships formed earlier in life, particularly when forging new social connections on campus proves to be challenging:

"I think, generally speaking, students are very natural. If students have disabilities that are not that serious, then their daily socialization wouldn't be affected… Maybe they would have an understanding that the way maybe they speak would be different, but they would go about their day the same as others." (Staff 1)

"Maybe students don't have a lot of friends in college, but they do have friends from high school that they keep in touch with." (Staff 2)

These examples demonstrate how peer support and friendships serve not only as a vital bridge for students to access otherwise partially available systems but also as a means of fostering social connection and empowerment. While peer relationships are not formally recognized as part of institutional accommodations, they play a crucial role in transforming passive participation into active engagement. Ultimately, this supports the second research

question by addressing the complex emotional landscape that SWD navigate within their peer interactions. Specifically, it highlights how the presence of peers as a key support system contributes to the academic and social development of students with hearing and visual impairments. Additionally, it illuminates the interplay between students' intrinsic desire for social connection and the numerous challenges they face, such as communication barriers, stigma, and social friction, which often obstruct their efforts to form and sustain interpersonal relationships.

3.1.2 Teacher/Institutional Support

The presence of efficient teachers and robust institutional support is optimal for students to make meaningful progress in their studies. This sentiment emerged consistently across various interviews with students, disability staff, and in-class assistant staff members, who discussed the tools and resources available through the school or introduced by professors. From these diverse viewpoints, it is evident that while institutional support is generally accessible, its effectiveness often relies on the initiative taken by students. Several participants highlighted that resources offered through official channels, such as the Disability Support Center, Counseling Center, and Office of Student Affairs, were instrumental in helping them maintain academic performance, manage their mental health, and navigate logistical challenges. Those who spoke positively about these resources emphasized the promptness and attentiveness of the staff and their commitment to ensuring resource availability.

Whenever I need help, they provide it immediately and will react as soon as possible. (Student 1)

Another student participant described the structure of services related to emotional and mental health, emphasizing the significance of these services in light of how her impairments sometimes impact her confidence and ability to study.
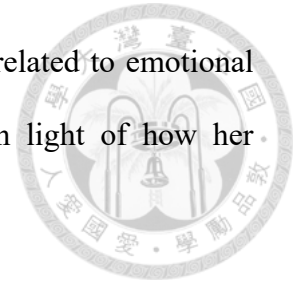
"If my grades drop as a result of my visual or audio impairments, I will seek help from the student counseling center. If my emotional or mental state declines due to similar reasons, I can find therapy or counseling. I go once a week and meet for 2–3 hours to talk about how my disabilities affect my mental state or affect my studies." (Student 2)

Teachers and advisors also played a crucial role in connecting institutional policies with real classroom experiences. Several participants noted that many teachers provided personalized support, such as ensuring privacy, sharing resources, and implementing accommodations at the classroom level.

"The teacher assigned to me by the disability services center really does help with any disability-related problems I have in class… teachers will provide a magnifying glass or switch classrooms… the teacher will come into the class and talk to the class first and let them know about my needs… and then they will accommodate by speaking louder or something like that." (Student 2)

"The advisor makes the effort to take care of me because of my disability, which is really nice… He would also make sure no one else is around before asking me questions about my condition to protect my privacy." (Student 3)

Support also extended beyond NTU; for example, assistive devices could be borrowed from external centers, and typists were provided to assist students with in-class note-taking.

"We will help them lend the assistive devices from the center outside the school. The department of education has a center we will rent them from." (Staff 1)

"Usually when we [the school and her] find out that students have these sorts of needs, then I will go into the school and accompany them into classes… I will go in for that." (Staff 2)

The collective analysis of these accounts highlights the critical role of institutional and teacher support in providing students with the formal structures essential for academic success. However, it is important to note that the effectiveness of these support systems frequently relies on the students' initiative and their capacity to navigate a complex array of available services. The challenge at hand lies in determining how to better implement support systems, which requires appropriate training for teachers. However, other barriers and questions regarding support persist. For instance, many professors in higher education focus primarily on research and advancing societal knowledge in their specific fields rather than on teaching. If teaching is not their primary role, then who is responsible for assisting these educators in acquiring more knowledge? Additionally, we must consider whether the issue of appropriate knowledge and inclusion is part of a broader systemic problem. Institutions such as NTU, striving to compete on an international level for educational rigor, may prioritize different objectives over funding for disability services or further training in student inclusion. This highlights the need to address foundational issues that may be impacting student support. Ultimately, this underscores a significant concern: the preference for the medical model of disability over the social model has led to increased separation in student inclusion, adversely affecting students' social well-being and academic integration.

3.1.3 Accessibility services

While the utilization of teachers and peers has allowed for students to have more access on campus as well as overall greater class outcomes, many students have emphasized that the utilization of accessibility services has been an essential tool in properly completing their daily class needs. Many of the participants have emphasized that they utilize assistive technologies such as an iPad, their phones, assistive hearing devices, or even monitors to help them enlarge text or listen during lectures.

"I have a lot of technology in my studies because most of the time I need an iPad or some type of technology to enlarge the font size so I can see. Also, sometimes I take exams on the computer screen instead of the paper one because it's easier for me to enlarge. It's helpful and necessary for me." (Student 1)

"In class, my hearing aid technology is called an FM system. So, it is a microphone for the teacher to speak into this way I can directly hear what the teacher is saying. It's mainly difficult when there are English portions, and I have a difficult time following. Especially during COVID because everybody was wearing masks, I couldn't really understand because the sound ended up being muffled." (Student 4)

Even with the availability of digital accessibility tools, full accessibility is not guaranteed. For example, ongoing issues like formatting problems and eye strain continue to present challenges, affecting how PWD interact with digital content. These barriers highlight the need for ongoing improvements and better evaluation of accessibility in online platforms. "My visual impairment isn't too severe as others, but when I use the Mac, the words are too small, so even if I enlarge the words, sometimes it would throw off the format of the page.

Also, if I stare at the screen for long periods of time, the words begin to feel small and my eyes get uncomfortable." (Student 5)
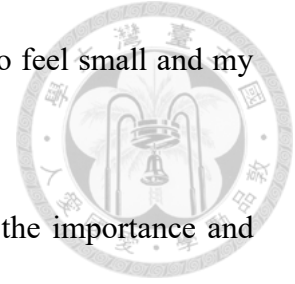
Similarly, another student with hearing impairments described the importance and frequent failure of classroom microphone systems. While FM systems were designed to channel the teacher's voice directly into hearing aids, they were often unreliable:

"In regard to hearing impairments, the biggest issue is the microphones. A lot of times they don't work because they're out of battery or they're just broken. I hope they can be fixed." (Student 2)

In addition to personal technology, institutional resources, when available, do their best to address these gaps. These resources include assistive devices that can be rented or borrowed, tutoring services, and funding specifically designated for disability-related needs. Such initiatives aim to improve access to educational opportunities and promote a more inclusive environment for all students.

"If students are falling behind, they can have a teacher come and tutor them on the class material. Separately, they have hearing aids where they can borrow or use/rent in the disability office. There is also a sum of money students have access to buy anything that they need for their learning, either a USB hearing aid or something like that." (Staff 1)

This staff member also articulated the significant impact that these tools had on their academic success during their time in school.

"Without these sorts of resources as a core, it would be hard for students to really achieve their full potential in the classroom. Based on my own experience, it was hard to

keep up I would need some sort of magnifying glass… So, with it, I was able to keep up with the material." (Staff 1)

Despite the value of these services, students highlighted that their effectiveness is directly tied to the systems that support and maintain them, offering clearer insights into our second research question. For instance, challenges such as equipment malfunctions, insufficient professor training, and a lack of institutional proactivity have consistently hindered the college experience. Conversely, the presence of strong peer support and meaningful teacher connections can significantly enhance student experiences and outcomes. These reflections highlight the critical need for ongoing maintenance, active faculty involvement, and a heightened awareness of how accessibility tools, peer support, and institutional backing should be implemented to foster equitable learning environments and achieve positive student outcomes.

3.2 Impact on Social Health

The university experience encompasses much more than academics; it is profoundly social. In addressing the first research question, we aim to explore how students with visual and hearing impairments navigate the social landscape of higher education. For these students, building connections involves a continuous balancing act between their desire for social interaction and the challenges posed by their impairments. In various interviews, participants shared their insights on how social isolation can emerge not only from physical impairments but also from the reactions and misconceptions of those around them. Instances such as classmates ridiculing a temporary eye bandage, avoiding group activities because of hearing limitations, or hesitating to access campus resources due to stigma illustrate that factors
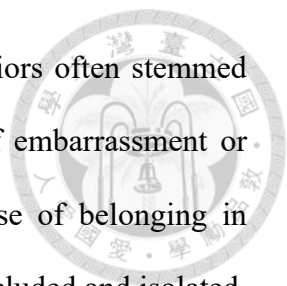
beyond mere accessibility influence students' social environments. Cultural attitudes, perceptions, and the design of institutional structures also shape these environments.

Their stories also highlight resilience and a desire for participation, which will be explored further in a subsequent theme. Many students actively seek out smaller or safer social environments, confidently disclose their disabilities, and cultivate meaningful friendships, often within peer groups that share similar experiences. However, even in these efforts, the necessity to "manage" social interactions, ranging from avoiding crowded spaces to minimizing communication challenges, can be quite taxing.

This theme emphasizes that social health is not solely an individual issue but a structural one, particularly illuminated by the shift to the social model of disability, which focuses on societal change rather than just individual circumstances. While some students may find inclusion within small circles or through personal interactions, the broader campus environment often lacks the necessary resources to support their full engagement. Their experiences underline the urgent need for a more inclusive social culture, one that recognizes diversity not as a disruption, but as an essential component of the university's fabric, as reflected in the social model of disability.

3.2.1 Isolation vs. Inclusion

The impact of sensory impairments on social participation emerged as a recurring theme among both participants and staff members. As previously mentioned, significant barriers to inclusivity on campus persist, particularly negative attitudes and stereotypes held by peers and faculty towards SWD. While a few students reported actively seeking social interactions in more controlled or comfortable environments, the majority exhibited
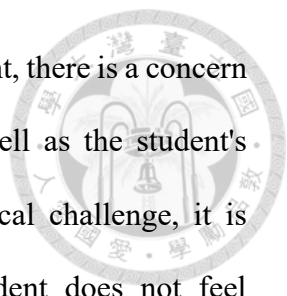
tendencies toward avoidance, exclusion, or self-isolation. These behaviors often stemmed from environmental challenges, fear of stigma, or past experiences of embarrassment or misunderstanding. This theme captures the emotional and social sense of belonging in relation to students' feelings of being either accepted and included or excluded and isolated. Such dynamics contributed to feelings of limited social belonging and heightened anxiety in public or group settings. One student recounted their experience with visible symptoms of their condition, leading to mocking and exclusion from peers. Reflecting on a period of vision loss, the student shared:

"There were wounds on my cornea. So, I had to wrap a bandage and could see nothing. At that time, I looked just like a pirate, and my classmates would laugh at me, mock me, and pretend they had the same bandages." (Student 2)

This experience illustrates how the visible nature of an impairment can provoke social ridicule and heighten feelings of discomfort. Such experiences may lead students to become indifferent toward social inclusion and foster enduring habits of non-participation. Another student emphasized this by sharing their experience, which was influenced by environmental inaccessibility.

"Since youth, I wouldn't participate. Even now, I still wouldn't participate in things like swimming events because I wouldn't be able to hear." (Student 3)

This sense of exclusion was not solely linked to the activities themselves, but also to the overarching social environment. School social spaces frequently lack the design to accommodate students with sensory impairments, as many university facilities continue to adhere to the medical model of disability by focusing on individual cases rather than
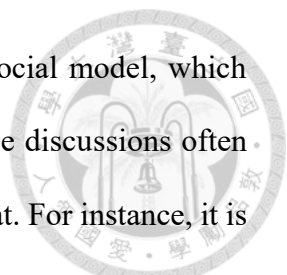
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enhancing overall accessibility within the space. For this particular student, there is a concern regarding their hearing aid potentially getting wet in the water, as well as the student's inability to have their ear submerged. Although this presents a medical challenge, it is essential to implement appropriate accommodations so that the student does not feel completely excluded from class activities due to their impairment. This concern has been echoed in various discussions regarding students' preferences to avoid large group settings, as illustrated by the following comments from both students and staff:

"I won't go to big social events… I choose to go places without too many people, where I don't need too much help… Sometimes I won't even like going onto crowded MRT trains. If I drop my earpiece, it'd be a hassle to pick it up… I want to avoid my important devices being damaged." (Student 3)

"In group settings, sometimes it's hard to hear, and so I will avoid those settings. Especially if it's not needed to attend, for example, a large group of friends would go out, and I would usually reject that offer. Normally, I just go out with two or three close friends." (Student 4)

"Most of the students I have worked with, with hearing impairments, tend not to want to interact… there is a small group of students who reach out… but that is a very small number compared to the whole." (Staff 2)

This is a persistent challenge that spans across schools and affects students with various types of impairments. Achieving full inclusion in both classroom settings and society at large poses significant difficulties for these students. Insights from student experiences reveal a continuing pattern of exclusion, prompting the essential question of how to enhance

student inclusion. We can examine this issue through the lens of the social model, which emphasizes the need to reshape society to mitigate this exclusion. While discussions often center on increasing teacher training, the solutions can extend beyond that. For instance, it is crucial to frame student social withdrawal as a consequence of inaccessibility rather than a personal choice. Implementing strategies such as inclusive planning, creating quieter spaces at events to facilitate engagement, and educating students about effective communication etiquette can significantly aid in this process. By fostering inclusion, we can improve social integration and create more positive experiences for students with hearing and visual impairments, ultimately enhancing their overall social well-being.

On some occasions, students noted that the social norms of group interactions can also lead to feelings of partial inclusion or even withdrawal. As previously highlighted, for some students, impairments in hearing or vision can make it particularly challenging to follow group conversations. This may result in discomfort or disengagement, even when individuals are genuinely motivated to connect. When asked about this phenomenon and why a student may or may not want to interact, the following statement was made:

"I am a very social person. Even though I really want to interact with others, sometimes I feel I can't fully integrate with others. I still want to engage and interact. It is because of my visual and audio impairment that keeps me from fully integrating into spaces.

Sometimes, because of the hearing impairment, I can't hear what others are saying. I will sometimes ask if people can speak louder, but it kind of disrupts the conversation… from the other person's perspective, when I constantly make these disruptions, they may not want to have conversations with me." (Student 2)

Additionally, to emphasize how students are often overlooked, one support staff member noted that some students or teachers often wouldn't even attempt to engage with those who have impairments.

"Sometimes when the students' teacher or peers want to talk to the student, they actually come to talk to me first, which is a little bit awkward. Students also usually wouldn't say if they are uncomfortable… someone would maybe have started to try and talk with them, but then would just say, 'Oh, so you can't hear?'... That's when they start going to the helper first." (Staff 2)

Although these actions may not be overtly discriminatory, the recurring pattern of redirection has intensified the isolation that some students have faced for an extended period, ultimately impacting their academic and social well-being. Understanding the reasons behind why students and teachers may or may not engage with sensory-impaired students extends beyond the realm of potential discrimination. There may be gaps in knowledge and understanding regarding students with diverse sensory impairments, coupled with nervousness about communication and a tendency to see the assistant as a spokesperson for the student. This highlights a significant lack of social awareness and acceptance of these individuals. It is crucial to educate society on who these students are and how to interact with them more effectively. By doing so, we can encourage a shift towards embracing the social model of disability, rather than allowing experiences to be shaped by unconscious social stigma, prevailing school culture, and inconsistent interactions.

3.2.2 Participation in Campus Life
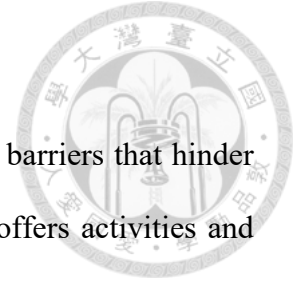
Students with visual and hearing impairments may face various barriers that hinder their meaningful engagement in campus life. Although the university offers activities and events designed to promote inclusion, students lived experiences suggest that their participation is often limited by physical discomfort, social anxiety, or the symbolic nature of inclusion initiatives that do not adequately address their genuine needs. This theme explores this engagement and involvement on campus, focusing on students' ability to access and engage in these structures of campus experiences, emphasizing institutional access and structural inclusion rather than emotional belonging, which was highlighted in the previous sub-theme. While closely related, a student may participate in campus events yet still feel emotionally isolated. Conversely, a student may feel included in informal peer settings but be excluded from formal campus opportunities due to accessibility issues. Thus, both themes capture distinct yet interwoven dimensions of student life.

As previously stated, several participants described avoiding university events and extracurricular activities due to sensory overload or communication barriers. For example, one student explained how common aspects of athletic events were

incompatible with their hearing condition:

"For outside activities or athletic fairs, if they would have a starting gun for racing, for example, I wouldn't run at the first gun, or the microphones playing loud music having high pitch would hurt my ears. So, sometimes I just say I can't go because it makes me feel uncomfortable." (Student 3)

In some cases, the discomfort and fear of bullying associated with disability led students to take more drastic steps, such as withdrawing from school events entirely. One student articulated the significant pressure students encounter to avoid scenarios in which their differences might be accentuated:
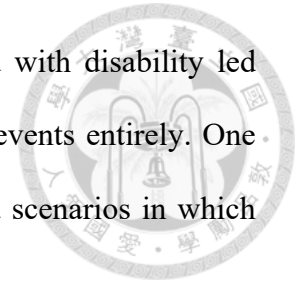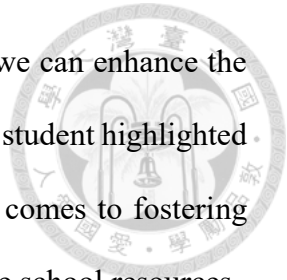
"I don't know… a lot of other students in my situation would take a leave of absence. Maybe because they may not have someone available to accompany them, or they do, but would be bullied for it… Initially, I also took a leave of absence, but eventually decided to go, and my parents were happy to go." (Student 3)

If more comprehensive levels of inclusivity were implemented in relation to the social model of disability, students would not have to consider whether to take a leave of absence for participation in activities. This should indeed be the case, as many students are missing out on essential aspects of their social experiences due to inadequate accessibility. Conversely, some university-organized events aimed at specific disabilities, intended to promote inclusion, have been perceived by students as performative or ineffective. One student raised concerns that these events often reinforce existing divides rather than fostering authentic connections and understanding among diverse student populations.

"To try and break this stigma, events would be held where a bunch of students with disabilities gather together, but it is a bit humiliating that Taiwan and Taiwanese schools focus on saying 'you, as students with disabilities, can be just the same as students without disabilities.'" (Student 5)

No one should experience feelings of ostracism or humiliation while seeking out social circles where they feel at ease. I believe that if schools take into account the requests

of students in this situation and prioritize their voices and experiences, we can enhance the social health of campuses throughout northern Taiwan. Additionally, this student highlighted that such events seldom address the genuine needs of students when it comes to fostering meaningful connections and sharing essential information about available school resources.

"There is an event that NTU hosts to gather together students with disabilities, but usually that event just involves board games… or they invite a very expensive counselor to come in and talk about things, but it's not very useful… It would be more helpful if we came in and talk about the services the school offers and talked about some of the experiences of other students on campus." (Student 5)

These findings underscore that, despite ongoing efforts to promote inclusion, SWD frequently experience marginalization within campus life. They encounter both structural barriers and gestures that may not effectively facilitate genuine participation. This is where a comprehensive application of the social ecological model can greatly benefit universities. For instance, during orientation week, when the disability center organizes interactive activities, it would be beneficial to incorporate additional resources that address students' specific needs. This could be achieved through pamphlets or other means that promote proactive assistance. Often, it requires a small extra step of intentionality to foster lasting change and enhance students' overall graduation outcomes throughout their academic journey.

Achieving meaningful inclusion necessitates not only modifications in event design and accessibility but also a deeper engagement with the voices and needs of students. Fortunately, after navigating these challenges, a student reached out to the disability center to advocate for change. Their efforts received a positive response, reinforcing the idea that when students articulate their needs, the center is committed to accommodating them as best

as possible. The students generally concluded that, while there is still progress to be made, they feel encouraged by the center's willingness to listen and its dedication to implementing necessary changes.

3.3 Impact on Academic Progress

For students with visual and hearing impairments, academic progress is shaped by a complex interplay of individual strategies, institutional resources, and learning environments. Two key aspects that influence this experience are students' academic performance, represented by grades and exam results, as well as their access to crucial learning materials. Although support services and assistive technologies are available, many students find themselves adapting these resources or supplementing them through personal initiative to address their unique learning needs. Successfully navigating this process necessitates not only persistence but also a strong sense of self-awareness and advocacy. This section explores how participants experience and manage their academic journeys, emphasizing the significance of accessibility in both tangible resources and classroom dynamics, as well as how these factors contribute to or challenge their academic success.

3.3.1 Grades or Performance

For students with visual and hearing impairments, academic achievement is frequently influenced not only by their individual abilities and motivation but also by the accessibility of their learning environment. This encompasses classroom infrastructure, interpersonal communication with peers, and the level of institutional support available. Many students have expressed the challenge of meeting Taiwan's rigorous academic standards while simultaneously navigating their personal hearing or visual impairments. For

example, the intense pressure to study continuously, culturally embedded in Taiwan's education system, can directly clash with the physical needs of students with hearing or visual impairments, as elucidated by the following student:

"In Taiwan, a lot of students are expected to constantly study throughout the day. Doing this is not good for my eyes, and so I have to find a balance between the expectations of studying and taking care of and protecting my eyes. This is something I am still working on." (Student 2)

In addition to the pressures stemming from extended academic engagement, and to address the first objective of this study, students have reported practical challenges, such as difficulty seeing the board clearly and struggling to initiate interactions with peers, as significant factors impacting their academic performance. Furthermore, although some students may maintain grades within the average range, they often find themselves comparing their achievements unfavorably to those of their peers:

"Right now, my grades are not that good, mostly because I can't see the blackboard, and because of my audio-visual impairments, I also can't ask other students for their notes because of the interaction barriers I have with other students. So, I believe that having the resources, such as sitting in the front and having working microphones, would help me to have better grades." (Student 2)

"My grades are about 70s–80s, but I feel it isn't as good as other students who may have these sort of visual or hearing impairments." (Student 4)

Students within the interviews have also reflected that low grades have a lasting impact that extends beyond immediate academic challenges; they can significantly influence

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their long-term educational and professional outcomes. This is discussed through conversations about how fostering a proactive approach to academic performance will impact future success:

"I want to go abroad to work and take what the school has taught me to new places, but I feel like I can't do that right now because my grades are bad… If the school can help prevent this situation, even by just improving the environment and supporting fostering a good learning environment for students with disabilities, it would also prevent future students from being in the same situation as myself right now." (Student 2)

While acknowledging the potential impact that lower grades may have on students' long-term educational and professional prospects, some faculty and support staff highlight the challenges in assessing the direct effect of accommodation on grades, especially when some students may not consistently utilize or engage with the support offered.

"It's hard to really know if any improvements in grades are because of this help or because of students' own efforts." (Staff 1)

"I never really ask students about their academic performance. My job is to type out class notes… some students choose not to take the notes and go home without them. In these cases, I don't know how the student is able to study once they get home." (Staff 2)

This dynamic is intriguing because, while staff members strive to assist students, they often express difficulty in knowing or discussing student outcomes. The question arises: could this disconnect contribute to the challenges that hinder students from fully succeeding or integrating, given that staff members' complete knowledge and support are not always available? Nonetheless, despite these potential gaps, support staff reported instances of

quietly achieved academic success, indicating that, with or without strong institutional support, students frequently discover ways to excel.

"The only challenges my students have, are that they might differ from other students in terms of communication, but otherwise, I still believe my students don't differ much in terms of learning potential in terms of academics." Staff 2)

"Students actually end up testing really well sometimes… the teacher would go up to me and say this student tested really well on that exam as compared to other students. So, that's good." (Staff 2)

The integration of these narratives highlights the nuanced relationship among individual abilities, environmental influences, and self-efficacy. While students frequently encounter structural and interactional barriers that can impede their academic success, achievement remains within reach when comprehensive support systems and well-designed accommodations are thoughtfully and effectively implemented. Although self-efficacy and advocacy are commendable traits demonstrated by students, it is essential to emphasize that these support systems should be established in a manner that allows for appropriate accessibility without requiring extensive advocacy. Given that these systems were recently developed, a more expedited integration process could be beneficial in providing timely assistance to students.

3.3.2 Access to learning materials

SWD reported encountering distinct obstacles when attempting to access academic materials, which may directly impact their learning experiences and increase their workload compared to their peers. Participants highlighted the difficulties they face when using

assistive tools, the need to create accessible content independently, and the absence of adequate structural or instructional support in the classroom. One significant challenge mentioned was the inconsistency of classroom technology, particularly microphones, which are essential for students with hearing or visual impairments.
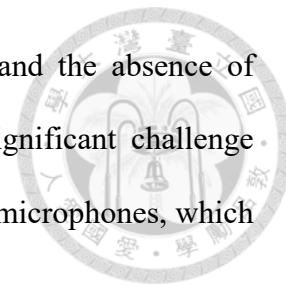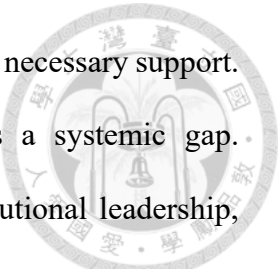
"In regard to visual impairments, the biggest issue is the microphones. A lot of times, they don't work because they're out of battery or they're just broken. I hope they can be fixed. Professors also need some sort of basic training… they should know what kind of situation the different special students are in." (Student 2)

This quote highlights the unreliability of technology, which is often taken for granted in mainstream classrooms, and how it can become exclusionary for students with hearing and visual impairments. The request for additional training for teachers emphasizes the university's responsibility to take action and challenge the belief that accessibility should be the sole burden of the student. This perspective aligns with the medical model. Moreover, students pointed out that learning materials often lack availability in accessible formats, such as large-print texts. As a result, they are compelled to undertake the labor-intensive task of adapting these materials on their own.

"Many of my texts need to be enlarged, and I need more pages to do so. This cannot be done in the classroom, and so I will need to enlarge them myself and bind them. This is hard to manage, and I must spend a lot more time and effort doing this compared to other students." (Student 2)

This analysis provides a deeper insight into the broader structural exclusion present within academic environments. While it should not fall solely on the faculty to enlarge text
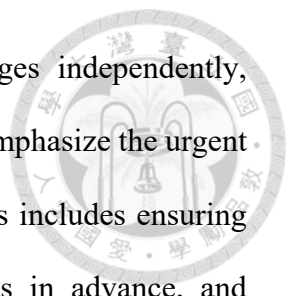
for students, it is reasonable to engage the resource center, as it serves as a necessary support. However, relying exclusively on the center for this task highlights a systemic gap. Responsibility should be shared among faculty, departments, and institutional leadership, with the resource center acting as a coordinator and specialist rather than the sole provider. Furthermore, even with the implementation of adaptive technologies such as tablets or iPads, students have reported that the additional effort and multitasking required to keep pace with classroom instruction present significant challenges. This emphasizes the complexity of integrating technology into learning environments and the cognitive demands placed on students in such scenarios.

"When I was in class, I often couldn't see the notes and couldn't keep up, so I would use the tablet to take photos or record the class. If there are slides, I would download them onto my iPad so I can take notes and listen at the same time. This still takes a lot of time and effort…" (Student 2)

Certain students, however, have indicated the employment of alternative study strategies that facilitate self-managed learning. These strategies include the integration of traditional classroom instruction with the utilization of physical textbooks, thereby enhancing their grasp of the material at their own pace.

"Normally, when I'm in class, I usually don't look at my laptop. I usually look at the slides being presented, and when I get home, I use the physical books that I bought." (Student 5)

This example illustrates a form of self-reliant adaptation, where students develop personalized strategies to address institutional gaps. However, these approaches also

highlight the extent to which students must navigate these challenges independently, underscoring the absence of systemic accommodations. Such accounts emphasize the urgent need for systemic improvements in accessibility and preparedness. This includes ensuring that technology is functioning properly, providing accessible formats in advance, and equipping professors with essential training to support students with diverse impairments. While students often make significant efforts to adapt, institutional support is vital for ensuring equitable access to resources.

3.4 Barriers and Gaps in Support

While numerous support structures are in place within higher education to assist SWD, participants in this study highlighted a variety of persistent barriers that hindered their ability to fully engage with both academic and campus life. These challenges often transcended personal effort and reflected broader systemic issues. Participants specifically noted how service eligibility, campus infrastructure, and prevailing social attitudes influenced their access to equitable support. Experiences of insufficient services, physical and environmental inaccessibility, and both subtle and overt discrimination expose significant gaps in the design and implementation of support systems. Rather than suggesting a complete lack of assistance, these insights highlight the need for more consistent, inclusive, and proactive support approaches that recognize the diverse needs of students. The forthcoming sections will explore how these barriers materialize through service limitations, environmental design flaws, and social perceptions, highlighting the ongoing efforts required to ensure meaningful accessibility for all.
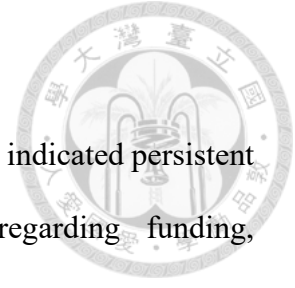
3.4.1 Inadequate services

While support services are available for SWD, many participants indicated persistent gaps, inconsistencies, and accessibility challenges, particularly regarding funding, communication, and equity among diverse student populations. For instance, while numerous faculty members were described as supportive during interviews, this did not resolve the structural issues, such as the fast-paced or unstructured nature of lectures, which hindered inclusion and equitable grade acquisition for these students compared to their experiences in primary and secondary education.

"In high school, teachers normally follow a textbook… but in college, professors typically end up skipping around and talking about different materials. So, it is difficult to follow…" (Student 4)

Through this quote, we are seeing how normative teaching styles in higher education, which often assume auditory and visual processing fluency, inadvertently exclude students with hearing and visual impairments. Furthermore, it was highlighted that support mechanisms are predominantly reactive in nature, necessitating that students possess the awareness to identify their needs and advocate for themselves. This sentiment was reiterated by Student 2, who emphasized their experiences with the disability services center on campus, stating:

"If students ask for help, then they will try to help, but not everything that students ask for will be offered… A lot of needs and support will only be given once a student asks for it. If you don't know what to ask, you won't get the support. I think it would've been a little more friendly for the school side to ask the student…" (Student 2)
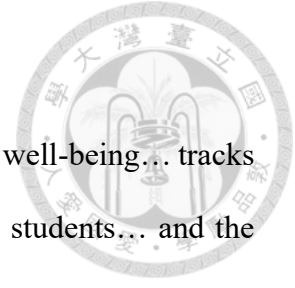
The same student also stated:

"There are three services that are available: The center for student well-being… tracks academic progress… the student counseling center helps special needs students… and the disability support center will assign a teacher to a student, but you have to find the person yourself… If you want more, you can get it, but you need to know what your needs are. If you don't, you won't get help." (Student 2)

These quotes enable us to reflect more critically on the broader issue of institutional passivity, which places the burden on students to initiate their own engagement, often in the context of the medical model. Adhering to this model risks the ongoing exclusion of those who might be unaware of their rights on campus, who lack a full understanding of the educational system, or who are reluctant to disclose their disabilities. This creates a persistent cycle of disadvantages. While resources are available, students are frequently required to demonstrate proactive behavior to have their needs addressed. These dynamics highlight how institutional frameworks often assume a level of self-advocacy that overlooks the diverse capacities of students to navigate bureaucratic processes. It is fundamentally unjust, as it challenges the prevailing notion that all students enter the university experience on a level playing field, which is not the case. The pressure to self-navigate, combined with the social dynamics at play, clarifies why some students might choose to forgo available resources, to be perceived as independent, or to avoid stigma. Unfortunately, this decision not only impacts their personal experience but may also lead to a reduction in available services over time.

"In college, a lot of people tend to hide their disabilities or don't like to look for resources. Unfortunately, when students do not use these resources, then the amount of resources and staff available decreases over time." (Student 5)

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Another challenge students often face is navigating the financial aspects of student opportunities, aid, and how financial resources impact access to both class materials and school tuition. One intriguing angle from an international student is that there is a gap in financial aid for international SWD.
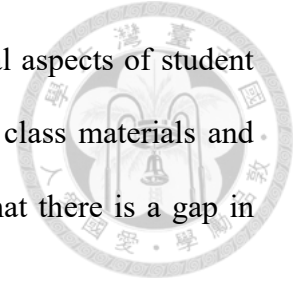
"The service for the disability department is a little different for foreigners. So, foreigners cannot apply for scholarships, like most of the scholarships for disability students are not available to me. So, I don't get that much financial support from this kind of access." (Student 1)

In the context of the social ecological model, this statement of exclusion highlights structural inequities at the policy level, demonstrating that access to resources is influenced not only by disability status but also by nationality. In these instances, financial inaccessibility exacerbates the challenges that students already encounter due to their impairments.

Even among domestic students, the constraints imposed on the utilization of support funds significantly diminish their overall efficacy. Many students have articulated their frustrations regarding the inability to allocate disability support funds toward essential academic resources, a limitation exacerbated by the conditional and restricted nature of these funds.

"Every semester, the disability support services center gives students who need this 3,000NTD to buy whatever sort of supports they need for their disabilities. But they are not allowed to use it on anything academic. So, you can't buy textbooks or anything like that with the money." (Student 2)

"Whether it's getting human help or the 3,000NTD fund… you only get paid if you actually use the resources. This isn't like a scholarship where they give you the money first." (Student 5)
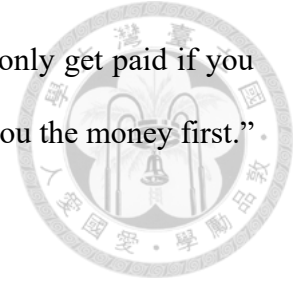
There is a significant disconnect between the actual academic needs of students and the bureaucratic structure of support mechanisms, which often overlook essential academic expenses. Consequently, the policies in place inadvertently hinder educational access. When discussing the available funding for students, a member of the disability support staff noted that the allocation of funds is a frequent concern among students. Although they would prefer to see the funding distributed more effectively to meet students' needs, the distribution requirements are dictated by the Ministry of Education, leaving them without the authority to alter this allocation.

"It's a little bit complicated, but basically the reason why that policy exists is that there is an understanding that there should be textbooks offered by the class, so you shouldn't need to use this money to pay for things like that. It should be a part of the class material that is offered already. So, then for teachers who don't offer it, it's just something that has to be done within a different section of the school. That policy is not because of NTU; it's the Ministry of Education's policy, so it's a little bit hard to do anything about that. It's the system." (Staff 1)

The sentiment expressed by the staff members illustrates a broader concern regarding the limitations of individual efforts in addressing systemic issues within the academic framework. It becomes clear that effective improvement within services necessitates a collaborative approach that engages various stakeholders across multiple tiers of the

academic system. This collective endeavor is essential to foster meaningful change and enhance overall efficacy in service delivery.
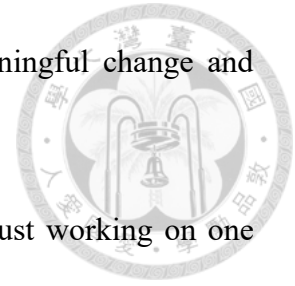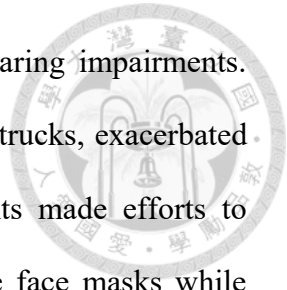
"It's hard to improve upon situations… because when you're just working on one specific angle… most problems require a whole bunch of people… Targeting only one specific person doesn't allow progress to go very far." (Staff 2)

This acknowledgment and section further address both initial research questions by highlighting the necessity of a multi-level, collaborative approach to enhancing support for students with hearing and visual impairments. Institutional actors alone cannot resolve structural exclusion without accompanying broader policy changes. These findings reinforce the notion that meaningful inclusion cannot be achieved through individualized support alone. Instead, there is a need to establish a more proactive, inclusive, and adaptable support framework, particularly concerning policy formulation, funding mechanisms, and the communication of available services. This approach emphasizes not only the resources that are available but also how they are communicated, allocated, and integrated into the learning environment. Without implementing these critical changes, students are likely to continue encountering barriers that limit their academic engagement and social participation.

3.4.2 Physical/Environmental accessibility

Environmental and infrastructural challenges on campus consistently pose obstacles for students with visual and hearing impairments. Across all participants, issues related to classroom design, acoustic conditions, and seating arrangements repeatedly arose in interview conversations as factors affecting their learning experiences. A major concern pointed out by the assistive staff member was the acoustic environment and the

communication behaviors of teachers, especially for students with hearing impairments. Frequent distractions from external noise, such as ambulances and fire trucks, exacerbated difficulties in comprehending lecture content. Although some students made efforts to address this by requesting that professors use microphones or remove face masks while speaking, students may or may not have received indifferent reactions.

"Sometimes it is so loud in the classroom… It's hard to concentrate or pay attention, let alone for a student with hearing impairments… A lot of times, we will remind the teacher to use a microphone or take off their mask… Although a lot of the time they would just say 'oh oh oh' and not really make progress on it." (Staff 2)

The statement "say 'oh oh oh' and not actively work on it" (Staff 2) illustrates a lack of commitment and engagement from instructors, indicating that even fundamental adjustments are not consistently prioritized. The support staff teacher also mentioned that a lack of proactive communication from instructors can lead to unmet accommodation needs, particularly when disability support services try to tailor solutions for different departments.

"Sometimes we will have these conversations, but if the teacher doesn't reach out to have these types of conversations, then it is hard to meet the student's needs." (Staff 2)

The physical layout of classrooms presents significant challenges, particularly for students with mobility limitations or visual impairments. For instance, multiple students articulated the difficulties encountered when navigating stairs and experiencing obstructed sightlines, especially when entering the classroom late or being seated at the back of the classroom. These factors not only impede access but also affect the overall learning

experience for individuals with multiple disabilities, highlighting the urgent need for inclusive design in educational settings.

"My main difficulty is usually related to the classroom because a lot of them have stairs… if I sit in the back, then it would make it difficult to see the front." (Student 5)

"Because of my visual impairment, I can't sit too far back in the classroom, but a lot of classrooms on campus have the wheelchair seats in the back… so the assigned support teacher will talk to the professor to see if the room can be switched." (Student 2)

For students with hearing impairments, comprehending spoken content requires additional time and effort, which can further contribute to academic stress and fatigue.

"When attending class, I can't really catch up with what the teacher is saying, and I have to use a lot more time and energy to catch up with class material." (Student 4)

Together, these experiences demonstrate how inaccessible physical environments and inadequate classroom adaptations can exacerbate educational inequalities. While some students receive support from staff to navigate or request necessary changes, the responsibility often falls on the student to advocate for these adjustments. These systemic challenges highlight the pressing need for more proactive infrastructure planning, increased faculty awareness, and inclusive design standards in university settings.

3.4.3 Discrimination

Discrimination, both systemic and interpersonal, has emerged as a significant barrier for SWD seeking equitable academic support. Participants reported both subtle and overt instances of bias, skepticism, and social stigma within university systems.

A major challenge mentioned was the skepticism from professors, especially when students requested accommodations without formal endorsement from the Disability Support Office. This occasionally resulted in uncomfortable confrontations, placing the burden on students to "prove" the legitimacy of their needs.
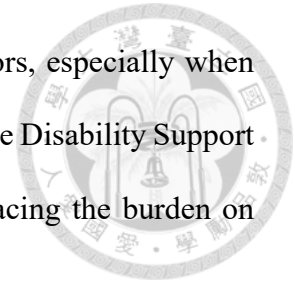
"Sometimes I go to the professor without the department, and sometimes a few professors are like, 'Do you need that really?' So, I have to turn back to the teacher in charge and h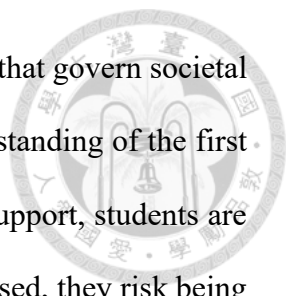ave them prove to the professor that I really need this help… They ask, 'Is that going to be fair to other students?'" (Student 1)

This form of skepticism emphasizes the undue burden placed on students, as teachers often require justification for aspects of a student's identity that should never need explanation. These interactions not only create uncomfortable confrontations for students but also hinder access to necessary accommodations. Furthermore, they reveal a lack of awareness and sensitivity among faculty regarding disability rights and the objectives of inclusive practices. How can students feel supported and motivated to succeed academically when professors make them feel inadequate or ashamed for simply being themselves? Additionally, social stigma often deters students from seeking help. One student pointed out that using disability services in public might lead others to perceive them as having a mental disability. This perception can reinforce harmful stereotypes, causing those who genuinely need these services to avoid seeking assistance.
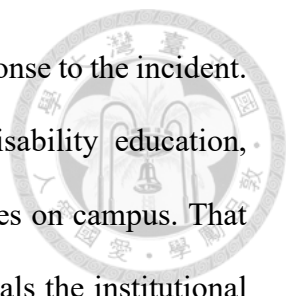
"There is a stigma that here in Taiwan, if you're looking for these resources, such as special resources, then people would think that you have a mental disability… so to avoid that kind of thought, a lot of people won't look for these services." (Student 5)

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This reveals potential foundational issues within the frameworks that govern societal interactions with students who have impairments. It enhances our understanding of the first research question posed in this study, as we realize that without social support, students are unlikely to utilize available services. When these services remain underused, they risk being eliminated for all students, perpetuating a challenging cycle. Regarding student perceptions, one participant recounted a particularly shocking experience of discrimination they faced as a freshman. When asked to lead a discussion on disability in the classroom, a fellow student responded in an exceedingly inappropriate manner, stating:

"When I was either during freshman or a sophomore year. I took a class that had a lecture on disabilities. So, during my first year, separately from the class, I held a disability experience event that allowed people to better understand the experience of people with disabilities and, through the use of certain tools and to experience campus with those disabilities. So, after I held that event, the teacher of that class asked me to speak about the topic about disabilities for that lecture. And so, when there was a discussion section of that class, one student said that he thinks that they should call people with disabilities and kill them off."

This horrifying remark, made by a fellow student in an academic environment, not only illustrates a lack of understanding but also reveals a blatant hostility toward students with disabilities. This is profoundly troubling and highlights the persistent prejudice that can still exist, even in educational settings designed to promote inclusion and respect. Following this interaction, the student later encountered the same individual on another occasion and characterized them as a class clown or prankster who seemed to lack seriousness regarding their studies. Regardless of this perception, it is crucial that the student be held accountable

for their behavior, and appropriate disciplinary measures be taken in response to the incident. Nonetheless, this moment painfully indicates the urgent need for disability education, awareness, and stronger institutional responses to discriminatory attitudes on campus. That such a comment could even be voiced in a classroom environment reveals the institutional gaps in ensuring a safe and respectful learning space for SWD.

Another notable manifestation of structural discrimination is apparent in admissions policies, wherein academic departments possess complete discretion regarding the admission of SWD, including the number of such students they choose to accept. This discretionary power can lead to unequal opportunities, reinforcing systemic barriers for individuals with disabilities within higher education.

"How admission works is that each department decides its own quotas for how many students with disabilities to accept. It's at their whim to decide even whether or not to accept any students with disabilities." (Staff 1)

When asked to further elaborate regarding the potential discrimination that this might cause towards SWD, the disability staff member gave us three reasons why they believe a department might not accept SWD and recorded them as follows:

"Reasons why they wouldn't accept students with disabilities:

1.   Departments get extra funds if they accept students with disabilities. So, if they say no, they likely have enough money in the department.

2.   They think the department or course might be too disruptive with students who have disabilities, or they cannot accommodate them.

3.   Sometimes department heads are more conservative and don't have a good view of students with disabilities."
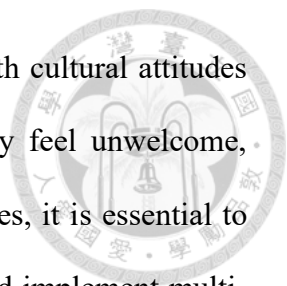
The responses elucidate a critical aspect relevant to the research questions, specifically how factors such as financial stability, convenience, and systemic prejudice impact admissions processes. These influences contribute to the marginalization of already underserved populations, thereby adversely affecting their academic progression.

The staff member also highlighted that they do try to create and maintain relationships with departments, so that if a student desires to join this department, they can have a committee discussion to request that the student be included in the department. However, even though students can request a meeting to advocate for admission through a committee involving department deans and the vice president, these meetings are largely non-binding discussions:

"Ultimately, it is usually just a discussion and the VP can apply pressure to the department head in question, but ultimately the decision still lies with the department head." (Staff 1)

The assistive support staff member emphasized that ineffective proactive communication from instructors can result in inadequately addressed accommodation needs. This issue becomes particularly pronounced when disability support services attempt to customize solutions for various departments.

"Sometimes we will have these conversations, but if the teacher doesn't reach out to have these types of conversations, then it is hard to meet the student's needs." (Staff 2)

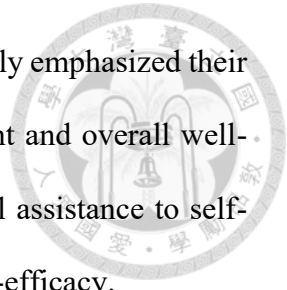These examples illustrate how discrimination is ingrained in both cultural attitudes and institutional practices, fostering an environment where SWD may feel unwelcome, misunderstood, or inadequately supported. To overcome these challenges, it is essential to adopt a comprehensive understanding of the social ecological model and implement multi-level responses that address both students and university structures. This entails stronger enforcement of policies, thorough faculty training, and a cultural shift that recognizes disability not as a burden, but as a vital component of a diverse academic community.

3.5 Coping and Advocacy

In addition to institutional services and academic accommodations, SWD often cultivate personal strategies to navigate the complexities of university life. Participants in this study illustrated how their confidence, mindset, and self-advocacy significantly impacted their academic and social experiences. Through a gradual journey of self-discovery and learning, many students reported becoming more proactive in seeking assistance, communicating effectively with professors, and making personalized adjustments to their learning environments. These individual efforts were not only crucial for navigating daily challenges but also demonstrated a broader sense of resilience and adaptability in the face of limited or inconsistent support. The following sections will explore how students develop self-efficacy, advocate for their needs, and creatively adapt to overcome obstacles throughout their university experience.

3.5.1 Self-Efficacy/Confidence

A common theme among participants was the increasing sense of independence and personal agency in managing academic life while living with a disability. Although

institutional support and accommodations are essential, students frequently emphasized their own commitment and mindset as pivotal to their academic advancement and overall well-being. One student shared their journey from depending on institutional assistance to self-advocacy, a transformation that signifies heightened confidence and self-efficacy.

"I don't really face that much difficulty. Most of my professors are willing to provide me with the special help that's required for an exam. I remember at first, I would tell my teacher in the disability department to help me send an email at the beginning of the semester to each professor to tell my situation… but after a few years, I can do this myself." (Student 1)

This student's progression from relying on institutional mediation to advocating for themselves marks an important transformation, not only in terms of academic navigation but also in how they conceptualize their role within the university system. In a beautiful narrative, even when support systems are in place, students often credit their own initiative as the primary factor in their academic success:

"Overall, I get support from the university, professors, and on exams as well as a tutor to support my academic performance, but it mostly depends on myself, I think." (Student 1)

The student clearly acknowledges that their internal motivation serves as a fundamental driver of success. However, this recognition should not be misconstrued as an endorsement of self-reliance devoid of support. Instead, it highlights the dynamic relationship between structural support and individual development, a connection best examined through the lens of the social ecological model. It is also important to note that building the confidence to seek assistance is not always an immediate process, particularly

for international students or those who may be less familiar with the available support systems. They may face uncertainty regarding the accessible services or how to navigate them effectively.

"It can be difficult to get to know a department. Like I have my senior to get to know the services, but I'm not sure if other foreigners have this kind of support… I didn't know whether I could get help from this school and if there's open access for foreigners." (Student 1)

This sentiment was similarly reflected in discussions about the student support center. One student noted their appreciation for the challenge of navigating college life independently; however, they also pointed out that the physical and structural barriers of institutional services complicated this process. Accessibility issues, such as support centers being located far away or hard to reach, made it even more difficult.

"There is a student support center, and I think there are some support staff who can offer support, but college is big, and if I go there, it will take some time. There are also better opportunities to try and be independent without relying on others." (Student 3)

The desire for independence serves as a powerful motivator, yet it can be influenced and occasionally limited by the physical layout and adaptability of the institution. In this context, a student's motivation coexists with an institutional design that subtly deters help-seeking by creating logistical challenges. This scenario illustrates how structural factors shape individual choices, in line with the social ecological model's understanding that behaviors are embedded within complex, layered systems.

Another student echoed this sense of self-efficacy when detailing her sense of personal responsibility, encouraging openness as a way to build both support and confidence.

"If you're willing to say out loud and ask for help, then people will be willing to help, and don't be scared or worry that you will annoy people." (Student 2)

This advice, while encouraging, reveals the emotional labor and fear of judgment often associated with seeking help. The onus remains on the student to demonstrate bravery, persistence, and to navigate the concern of being perceived as "not annoying," all of which indicate internalized stigma or previous experiences of being dismissed. Collectively, these insights underscore that while personal resilience is vital for student success, self-efficacy does not emerge in isolation. It requires time, encouragement, and, importantly, a system that fosters growth rather than hinders it. Therefore, cultivating self-efficacy should complement, not replace, institutional support, serving as a constructive outcome of well-designed, inclusive environments.

Framing these findings within the social and medical models of disability and the broader ecological context reveals that supporting SWD means more than offering tools or services. It means shaping a campus culture and structure that equips students to discover and trust in their own capabilities, while ensuring that they are not left to succeed in spite of the system, but because of it.

3.5.2 Self-Advocacy Strategies

Self-advocacy has emerged as a crucial mechanism for coping and empowerment among students with hearing and visual impairments. Participants articulated that the transition to college necessitated the cultivation of personal responsibility and the initiative

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to address their own needs, frequently representing this process as a novel experience. This development not only emphasizes the importance of self-advocacy skills in the academic realm but also showcases the transformative journey that these students undertake in navigating their educational environments.
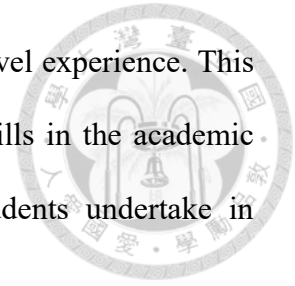
"When transitioning into college, students don't have a sense of how to take care of themselves. For example, getting new prescription glasses are usually taken care of by their parents before college, and with any related disability, you have to train yourself how to understand your situation, which is a slow process." (Student 2)

This was re-emphasized as a student highlighted the following:

"I believe the support systems in place right now have been enough for me to get acclimated. The only issue initially was finding ways to get acclimated to begin with." (Student 4)

Another student articulated their capacity to implement strategic modifications within the classroom environment autonomously, without any formal encouragement from the institution. These modifications encompassed both physical alterations to their seating arrangements and proactive communication with their instructors.

"When I entered college, I didn't have any special conditions, but I could see that I was different than others. So, to be able to hear better, I would sit near the front.

"Sometimes I would tell my instructor that I would love to have handwritten versions of class material, especially if the prof doesn't offer it themselves. Other than the fitness class, most would use a microphone, which helped me hear."

(Student 3)

One student described how their educational experience shaped not only their current advocacy skills, but also influenced their career aspirations:
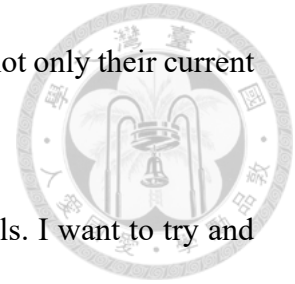
"My school history experiences will affect my future career goals. I want to try and become a civil servant, but my dad said I should try and go into higher education first, and then getting a civil servant role will be easier to get." (Student 4)

Self-advocacy is also important when finding a way to have personal evolution characterized by a transition from a posture of quiet endurance to one of assertive self-defense when confronted with instances of microaggressions. This transformation reflects a deeper understanding of one's agency and the socio-cultural dynamics at play, highlighting the importance of resilience and active resistance in the face of subtle forms of discrimination.

"In the past, for other aggressions or discriminations, I used to endure them, but now in college, I would speak up and say we're already all adults, and so if I experience something, I will be a little bit more forceful against it." (Student 5)

The narratives presented exemplify the notion that students are not merely passive recipients of educational services; rather, they are actively engaged in the process of shaping their own educational experiences. Self-advocacy emerges not only as a vital mechanism for daily coping but also as an essential life skill that is cultivated over time, ultimately playing a crucial role in fostering future independence. This emphasizes the importance of empowering students to take an active role in their education, highlighting the intersection of agency and personal growth within the learning environment.
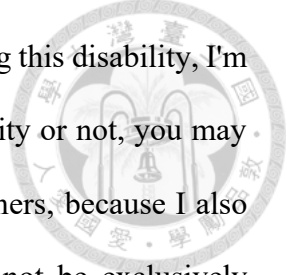
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3.5.3 Adaptation and Resilience
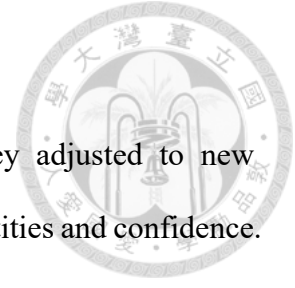
Numerous participants exhibited remarkable resilience as they adjusted to new learning environments, social challenges, and internal shifts in their identities and confidence. For students with hearing and visual impairments, navigating the demands of higher education often necessitated a transformation in their approaches to learning and daily functioning. While the resilience exhibited in students is quite remarkable, it is important to frame this not as a simplistic narrative of individual triumph, but as a response to environments that are repeatedly failing to accommodate student needs. Recognizing this distinction allows us to celebrate students' agency while still calling attention to the institutional reforms urgently needed to reduce the burden on individual students. One student recounted a challenging yet ultimately empowering adjustment:

"After this [gaining the impairment], I had to change my whole method, how to learn, because the normal size in textbooks is too small for me, I have to have an enlarged one. So, it was a tough time for me, but once I got to college, Taiwan is quite good at this kind of thing, and so they helped me." (Student 1)

The narratives shared by participants revealed a transformation in their attitudes towards seeking assistance and engaging in collaborative efforts, largely influenced by their experiences with their impairment. These accounts indicate a nuanced understanding of how disability can reshape personal agency and foster a willingness to connect with others for support and collective problem-solving. Such insights indicate the importance of recognizing the diverse impacts of disability on interpersonal dynamics and the pursuit of help.
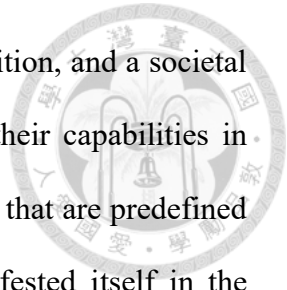
"At first, I'm not used to calling on others for help, but after getting this disability, I'm more willing and not as shy to get help. No matter if you have a disability or not, you may need help from someone, so it's not difficult for me to get help from others, because I also like to help others at the same time." (Student 1) Resilience should not be exclusively characterized by the mere capacity to surmount challenges; rather, it encompasses the ability to uphold a robust sense of identity and ambition even amidst adversity. This multifaceted understanding showcases resilience as a dynamic process involving both the navigation of difficulties and the preservation of one's core values and aspirations.

"Even with all of these barriers, I still feel like I can do whatever I want to do and achieve any of my goals, so for my future career goals, they will still be big. I will still aim high and not let my disability become a barrier or drag me down. That is what I have learned from college." (Student 2)

Participants offered a critical examination of prevailing societal assumptions regarding the capabilities and aspirations of SWD. They advocated for expanded educational opportunities that encompass a diverse range of pursuits, while simultaneously challenging entrenched norms that may limit these individuals' potential.

"I think special students should have more opportunities. Taiwan usually puts disability students in vocational schools to learn hand skills because we think they can only handle these kinds of more simple factory work jobs. They should have the opportunity to explore more kinds of fields. Have more people hold more activities to gain hands-on experience and for people to interact with more people with disabilities." (Student 3)

This illuminates the tension between students' capacity and ambition, and a societal framework that often limits them. Students consistently demonstrate their capabilities in multiple fields, but the pushback from society leaves students to do jobs that are predefined by social attitudes rather than personal interest. Resilience also manifested itself in the proactive strategies employed by students to secure their academic access, including the initiation of communication with professors before the commencement of classes.

"In terms of going to class, I would usually be the one to initiate reaching out to teachers before the first class. Either going to them in person or writing them an email telling them about my situation and then asking the teacher to wear the microphone, and sometimes applying for the waiver for the listening portion of tests." (Student 4)

While these actions reflect impressive personal agency, they also highlight a lack of institutional preparedness. As previously highlighted, students are often required to preemptively advocate for themselves to access basic accommodations, reinforcing the idea that there is still systematic exclusion within classroom settings.

On another accord and to beautifully conclude how adaptation and resilience were present amongst participants, the final student regarded it within their statement. This student emphasized the importance of maintaining a sense of self-worth in the face of peer judgment, underscoring the intricate interplay between personal agency and societal perception. This reflection highlights the ability of individuals to navigate external criticisms while cultivating a robust internal self-concept.

"My attitude is to still treat people with kindness, but if you don't want to be friends with me just because of things like my grades or getting into NTU, that's fine. I want college to be a new start where myself and others are not defined by our challenges." (Student 5)
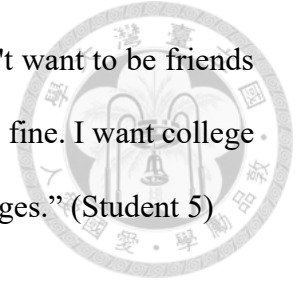
These examples illustrate that students do more than simply rely on coping mechanisms; they embody creative adaptability, foster resilience, and cultivate positive aspirations for their futures, even when faced with systemic and interpersonal challenges. This being said, while the resilience of students is beautifully shown, their stories reveal a troubling truth: students should not have to be this self-reliant. The burden of navigating exclusionary environments should not fall on the individuals, especially when institutions have the power to establish systems that ensure equity and inclusion. This act of persistence also reflects in interpersonal dimensions of the ecological model, where peer interactions can either bolster or undermine a student's confidence and sense of belonging. Ultimately, while their persistence is undeniably admirable, it should not be interpreted as evidence that the system works. Instead, it serves as a critique of a system that demands such extraordinary effort just to ensure basic access and recognition.

3.6 Conclusion

The lived experiences of students with visual and hearing impairments within Taiwan's higher education system elucidate a complex interplay between systemic limitations and personal agency. While many institutions, including NTU, have adopted the social ecological model to emphasize various foundational levels of support, students continue to face significant barriers related to accessibility, resource allocation, and attitudinal acceptance. Nevertheless, they demonstrate a strong desire and capacity to persevere through consistent self-efficacy and advocacy. Key themes, such as "Barriers and
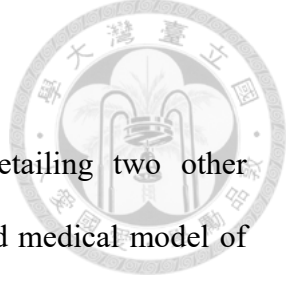
Gaps in Support" and "Discrimination," address the research objectives of this thesis by highlighting existing gaps in services, particularly for international students or those unfamiliar with their rights.
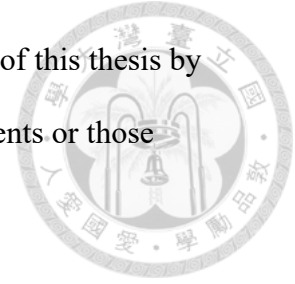
Furthermore, the tension between social health and academic progression is exacerbated by challenges related to Physical and Environmental Accessibility, particularly when faced with inflexible classroom designs or inattentive faculty. These issues could be mitigated through greater adherence to the social model and the incorporation of accessible environments. Despite these structural challenges, students exhibit remarkable resilience. Through self-advocacy strategies and adaptability, they develop new learning techniques, engage in dialogue with professors, and actively shape their environments, positively impacting both their social health and academic progression.

These narratives showcase the vital role of Support Systems, both formal and informal, in facilitating academic success and fostering social belonging. Ultimately, the findings highlight the urgent need for a proactive, inclusive, and socially-driven framework that shifts from reactive assistance to institutional cultures rooted in equity, empathy, and universal design.

4. Discussion

This study draws upon two dominant frameworks while detailing two other approaches for better understanding in disability studies: The social and medical model of disability, as well as the social ecological model. As a reminder, the medical model views disability as an impairment to be treated; the social model frames disability as arising from environmental and societal barriers, and the social ecological model demonstrates how barriers and support operate across multiple levels from individual behaviors and interpersonal relationships to institutional policies and broader cultural norms. This study also looks at individualized approaches from students, which emphasize personal adaptation and rights-based approaches, which center on legal and human rights protections for SWD. While overlapping in some respects, each model and approach offers a distinct lens for interpreting the experiences of SWD. To gain a deeper understanding of these outcomes, the following section explores the social ecological model, as well as the social and medical models of disability.

4.1 Tension Between the Social and Medical Model of Disability
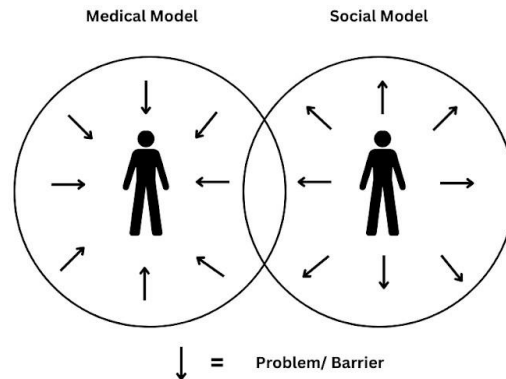
Figure 2: Social and Medical Model of Disability
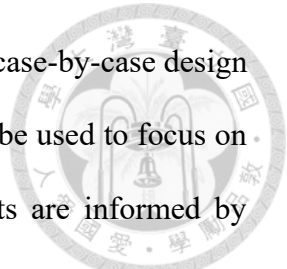
(Moore, 2017; Redone by Jade Gabbidon)

Within the university context, the medical and social models find themselves in constant tension with each other. As previously stated, the medical model is a model that views individuals with disabilities as needing to be fixed or cured (Chiu et al., 2013). This model has been instrumental in shaping not only policies but also the structures within which schools operate for SWD. This is often evident through challenges such as the lack of sufficient and extensive faculty training in inclusive pedagogy, as well as the tendency for schools and services to be more reactive than proactive in their approach to student support. There is a prevailing mindset focused on "fixing" students to conform to a perceived notion of "normal," rather than examining how the environment can be inadequate for individuals of all abilities (Chiu et al., 2013). Although many schools endeavor to use an individualized approach by addressing students' needs on a case-by-case basis, this still reflects a deficit-

oriented mindset that places the burden of change directly on the student, rather than adapting the environment to be more inclusive, a perspective deeply rooted in the medical model.

While the intention behind providing individualized support can be beneficial, it is not without its shortcomings. For instance, this focus on helping individual students can sometimes leave those who are unaware of available resources without adequate assistance, as the burden is placed on the student as an individualized medical issue, meaning that if a student doesn't have the knowledge or Self-efficacy to seek out these resources, then they will spend their university years without them. Consequently, this does not create equitable opportunities for success. Moreover, since services are often reactive rather than proactive, students who lack an understanding of the resources at their disposal may never gain the chance to fully access them. As highlighted in Figure 2, these examples illustrate that while individualized approaches may be well-intentioned, the medical model remains pervasive in their implementation. There is an urgent need to reframe this model, shifting the focus from solely addressing the students' needs to transforming the environment to better support all students.

In previous studies the utilization of the medical and social model has primarily been focused on medical spaces or the assessment of disability as a whole, but discussions specific to university campuses often have yet to be discussed (Chiu et al., 2013). This highlights the need for a more thorough investigation of the social model's application on college campuses and underscores the tension that exists between the social and medical models. Understanding students lived experiences should inform systemic, structural, and cultural changes within the university setting, not merely individualized accommodations, but collective shifts that create accessible environments from the outset. This emphasizes the
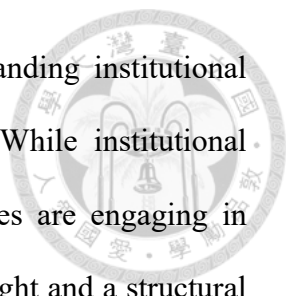
tension between the two models as it highlights the shortcomings of the case-by-case design of the medical model while also reflecting on how the social model can be used to focus on dismantling structural and systematic barriers, even when those efforts are informed by individual experiences. These lived experiences are not to be used to justify isolated fixes, but to guide systemic reform and move towards proactive accommodations.

The findings of this study reveal that students are increasingly pushing against the limitations of the medical model while moving towards the social model of disability. Through self-advocacy, peer collaboration, and informal support systems, many students challenge the idea that disability is solely a personal issue (Dolmage, 2017). Instead, they call for a shift toward the social model of disability, which emphasizes the role of institutional, social, and environmental structures in enabling or disabling individuals (Chiu et al., 2013; Oliver, 1996). This includes calls for better training for faculty, more inclusive classroom design, and a deeper cultural understanding of disability beyond medicalized frameworks (Francis et al., 2019).

The tension between these two models on a college campus becomes particularly apparent when students are required to repeatedly "prove" their needs or when services are granted only after self-identification and formal requests, processes that many participants found to be exhausting, stigmatizing, or generally inaccessible. These moments repeatedly exemplify how the persistence of the medical model within higher education systems can unintentionally exclude or marginalize the very students it aims to support.

At the same time, efforts to move toward the social model remain uneven and often student-led (Dolmage, 2017; Hsu et al.,2021). This is where change must emerge. In this context, the social model aligns with rights-based advocacy by framing disability not as an

individual problem but as a result of systemic barriers, thereby demanding institutional accountability and positioning accessibility as a right, not a favor. While institutional structures continue to reflect a deficit-based logic, students themselves are engaging in advocacy that reimagines support not as charity or exception, but as a right and a structural necessity. This ongoing tension reflects a system in transition, caught between traditional, diagnosis-driven responses and emerging demands for equity, participation, and dignity. I believe that while the medical model is beneficial in some contexts, it is time to listen to the voices of students and create active change to better the experiences and outcomes for SWD regarding the implementation of more social model strategies across Taiwan.

4.2 Framing Findings Through the Medical and Social Models

4.2.1 Medical Model Interpretation

The narratives presented by students in this study illustrate the impact of the medical model of disability within university structures, policies, and interpersonal interactions. The model views disability as an individual impairment to be managed through treatment or accommodation (Hogan, 2019), which remains a dominant framework in how higher education institutions address the needs of students with hearing and visual impairments. As previously noted, one way in which this model is expressed is through eligibility-based support services, wherein assistance frequently depends on a formal diagnosis or evidence of the severity of impairment. Several participants recounted their experiences of needing to "prove" their disability, either by supplying documentation or relying on the disability services office to affirm their needs to skeptical professors. This highlights how institutional support often begins not with a proactive commitment to inclusion but rather with a

gatekeeping process rooted in deficit-based thinking, placing the responsibility on the student to demonstrate their deficiencies.

The framework of academic accommodations also mirrors this medicalized perspective. For instance, supports like assistive technology, tutoring, and modified classroom environments are typically framed as corrective measures intended to help students achieve normative academic performance. While these supports are essential and often valued, their implementation tends to be highly individualized, frequently lacking broader changes in pedagogy or classroom culture. Consequently, the responsibility to adapt again falls primarily on the student rather than on the educational system as a whole.

Furthermore, the medical model is subtly ingrained in institutional policies and cultural assumptions, as evidenced by the fact that some faculty members questioned the fairness of their accommodations. This skepticism reveals a persistent belief that disability accommodations represent "special treatment," reinforcing a medicalized perspective that views disabled students as "exceptions" to be managed rather than as integral members of a diverse learning community. These dynamics were particularly pronounced in the students' accounts of feeling isolated, stigmatized, or compelled to justify their presence in academic environments such as those of NTU or NTNU.

At times, even well-intentioned services fell into a medicalized framework by emphasizing the need to fix or compensate for impairments, rather than addressing structural barriers. As a point repeatedly discussed through multiple interviews, many students observed that support tended to be reactive rather than proactive. These services were typically provided only after a student articulated a specific need, and often not at all if the student lacked the language, confidence, or understanding to make such a request. This

scenario illustrates a system that perceives disability as an individual problem to be resolved through tailored interventions, rather than recognizing it as a mismatch between individuals and their environments.
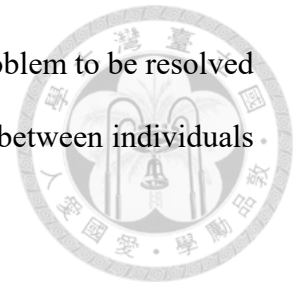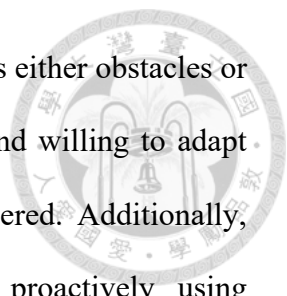
These findings highlight the pervasive influence of the medical model within university systems, which shapes not only the delivery of support but also how students internalize their identities and navigate both academic and social contexts. While many students devised strategies to advocate for themselves and thrive despite these challenges, their experiences illuminate an urgent need to transition toward more inclusive approaches aligned with the social model. This shift would reframe disability as a collective, environmental issue rather than an individual deficit.

4.2.2 Social Model Interpretation

In contrast to the individualized, deficit-oriented framing of the medical model, the social model of disability conceptualizes disability as the product of inaccessible environments, discriminatory practices, and social barriers, not as a problem located within the individual, as shown in Figure 2 (Chiu et al., 2013). The narratives from participants in this study show a clear desire to move toward this more inclusive and empowering framework, even as they continue to navigate systems still largely grounded in medicalized thinking.

Students frequently emphasized the importance of changing their environments, not themselves. For example, participants expressed that access to functional microphones, flexible seating arrangements, or quieter classrooms significantly shaped their ability to engage and succeed academically, rather than viewing their hearing or visual impairments as

personal deficits. Similarly, Peer and faculty attitudes were recognized as either obstacles or facilitators to inclusion. When classmates were informed, accepting, and willing to adapt their communication styles, students felt more integrated and empowered. Additionally, when faculty treated accessibility as a shared responsibility by proactively using microphones, providing accessible materials, and maintaining open lines of communication, students reported increased confidence and a stronger sense of belonging. These instances support the social model's claim that disability is not an inherent trait but rather a construct of social conditions that either encourage or hinder participation.

In regard to social health, participants emphasized the importance of transparency, education, and collective responsibility in fostering a more inclusive campus culture. Several students took the initiative to organize disability awareness activities and advocated for more student-led discussions on inclusion, reflecting a proactive effort to reshape the cultural dialogue surrounding disability. Furthermore, some students requested changes within disability support centers to create a more inclusive social environment that promotes advocacy and resource accessibility for all students. These initiatives align with the principles of the social model, which emphasizes empowerment, self-determination, and the right to engage fully in academic and social life without the need to mask or justify one's access needs.

Yet, even in moments where the social model seemed present, it was often driven by individual student advocacy, not institutional design. The reliance on students to teach their peers or correct misunderstandings about disability points to a gap between inclusive values and consistent practice. This suggests that while the social model is increasingly visible in student perspectives and advocacy efforts, it has not yet been fully institutionalized in

policies or classroom norms. Still, the persistence and clarity with which some students were able to articulate their needs and call attention to the ways their environments could better support them signal an important cultural shift. These students are not asking to be fixed; they are asking to be included. Their stories emphasize that disability is not a deviation from the norm but a natural part of human diversity, one that should be met with collective accountability, acceptance, and systemic design, so that students may not only succeed but thrive in their collective environments.
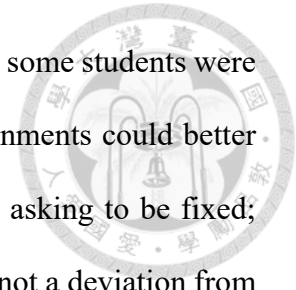
4.3 Applying the Social Ecological Model to the Findings
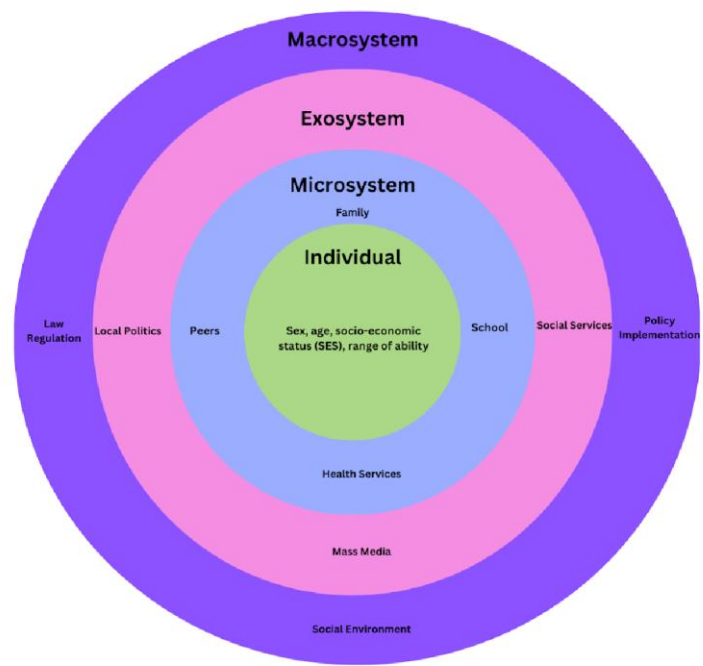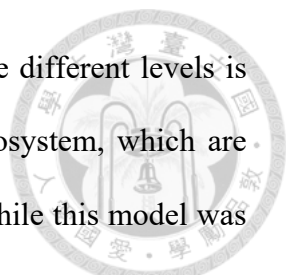
Figure 1: Social-Ecological Model
(Lollar D. et al., 2020; Redone by Jade Gabbidon)

Participants have demonstrated how upstream factors such as law regulations, school policies, peers, and self-efficacy impact their social health and academic progression. As stated in earlier texts, the social ecological model illuminates the complex interplay between different levels of influence, providing insights into the underlying mechanisms of the social
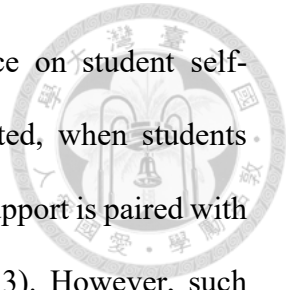
determinants of health (Lollar et al., 2020, p.52). The interplay of these different levels is showcased through the individual, microsystem, ecosystem, and macrosystem, which are detailed below, along with the impacts observed by various students. While this model was used as well as the social and medical model of disability, this model is specifically detailing how social health is detailed and explained across experiences. Additionally, due to the limited nature of papers available specifically in Taiwan's context regarding students with hearing and visual impairments, studies from other countries were utilized as support for the analysis of observations within this research.

4.3.1 Individual

At the individual level, we can understand how personal attitudes and coping mechanisms influence students' outcomes. Many participants in this study displayed a strong sense of self-awareness, recognizing not only the ways their disabilities affect their academic and social experiences but also the tools or strategies that aid their adaptation to institutional limitations. For instance, some students proactively selected seating arrangements to enhance their ability to hear or see, while others utilized their assistive technologies, such as tablets, FM systems, or enlarged texts, to improve their access to course content. These self-directed adaptations reflect both individual resourcefulness and the inadequacy of systemic support.

Students exhibited varying levels of self-efficacy, which is the belief in their ability to succeed despite challenges ("Self-efficacy, n.d.). For some, confidence grew over time as they learned to advocate for themselves. Student 4 shared that during their first year, they relied on the disability support office to communicate with professors on their behalf, but later chose to initiate those conversations independently. This developmental shift echoes research showing that self-efficacy is positively correlated with academic performance

(Shahed, 2016). Yet, this resilience also reveals the system's reliance on student self-management rather than institutional responsibility. As one study noted, when students receive consistent support, their outcomes improve significantly; when support is paired with self-efficacy, results improve even further (Shahed,2016; Pacheco,2013). However, such growth should not be a prerequisite for equity, and this details how much students must compensate for inconsistent or insufficient structures.

As stated previously, the need for self-advocacy highlights a consistent, significant tension: while resilience and independence are often celebrated, students often find themselves having to navigate institutional shortcomings on their own. Participants reported the emotional strain of repeatedly having to explain their conditions, seek accommodations, and negotiate with skeptical professors. As one participant noted, unfortunately, not all professors understood what resources were available to SWD, placing the burden of education communication and negotiation squarely on the student.

This dynamic reflects a larger power imbalance where institutional actors are untrained or unaware, yet still control access to vital accommodations.

These dynamics are further shaped by intersectional factors such as nationality, class, gender, language ability, and type of disability. International students faced unique challenges, especially if they were unfamiliar with the local language or eligibility requirements for services. One international student articulated that the uncertainty surrounding eligibility for disability services left them feeling unsupported and anxious during a critical transition period, not knowing whether they qualified for disability accommodations. While a senior mentor helped guide them, this student noted that many

international students lack this resource. Their experience highlights how language barriers and policy opacity compound the structural exclusion faced by disabled students.

Class identity also shaped how students were perceived by peers and faculty. As several participants noted, attending a prestigious institution like NTU often exposed them to classmates from more privileged socioeconomic backgrounds, some of whom questioned their right to be there. One student recalled being asked how they "got in", implying disbelief that someone with a disability could succeed based on merit. These class-based microaggressions reflect internalized meritocracy and ableist assumptions, reinforcing the idea that disabled students are "others" in elite spaces. This kind of stigma not only contributes to social exclusion but also undermines the self-efficacy that students work hard to build.

While these dynamics were common across both student with hearing and visual impairments, their manifestations of challenges varied. Students with hearing impairments more frequently reported challenges related to real-time communications, such as professors wearing faulty microphones, uncooperative peers, or frustration repeating themselves in conversation, whereas students with visual impairments described greater difficulty accessing printed course materials or navigating campus independently. Despite these differences, both groups described a shared need to constantly justify their place, revealing that institutional and cultural ableism cuts across impairment categories.

Despite these barriers, many students expressed a commitment to self-determination, reframing academic and social inclusion not as a matter of "overcoming" disability, but of claiming rightful space in a system not originally designed with them in mind. This agency, while powerful, reflects not just personal strength but a quiet resistance to exclusionary
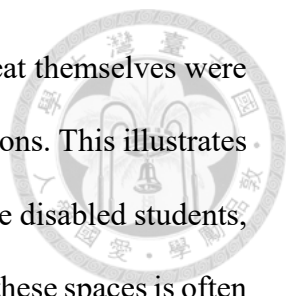
norms. Yet, their experiences also make clear the need for institutional structures that support, rather than rely on, individual effort. Thus, institutions must move from reactive accommodation to proactive design, centering student choices and dismantling structural barriers rather than leaving students to work around them.
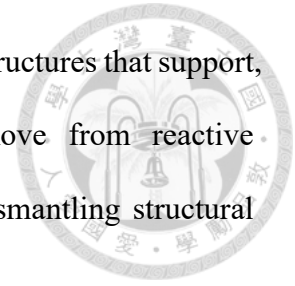
4.3.2 Microsystem

At the microsystem level, the presence or absence of support from peers, teachers, advisors, and family members significantly influenced students' experiences related to both academic achievement and social inclusion. Participants recounted various interactions that either helped mitigate the difficulties of navigating a non-inclusive system or, conversely, deepened feelings of exclusion and isolation.

Peer relationships often acted as informal bridges to access. Several students recounted experiences where friends assisted in interpreting classroom discussions, sharing notes, or accompanying them to campus events. These types of peer support were not only practical regarding academic progression but also fostered a sense of belonging and emotional security concerning their social health. A study conducted by Roberta Fadda in China and other countries found that higher social support does in fact predict greater engagement in students and in such produces better academic outcomes (Fadda et al, 2024). In this study, Participant Two highlighted how a classmate willingly continued to assist them in navigating the classroom even after their assigned duties had concluded, demonstrating how authentic peer connections can extend beyond formal obligations. However, peer interactions were not always affirming. Many participants voiced a longing for deeper social integration but encountered communication barriers, especially during group conversations, that often resulted in feelings of exclusion. Several deaf and hard-of-hearing students

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indicated that their frequent requests for others to speak louder or to repeat themselves were often viewed as interruptions, causing them to hesitate in joining discussions. This illustrates how ableist norms around "normal" communication practices marginalize disabled students, subtly framing their access needs as inconvenient or disruptive. Power in these spaces is often held by the majority group, meaning SWD must either conform or self-silence to maintain social inclusion. This subtle breakdown in interpersonal communication intensified feelings of being a burden, leading some students to withdraw from social activities entirely. This rhetoric was also reflected in a study from New Zealand, where the researcher noted that students also found that meeting people in university was challenging for most of their participants and that oftentimes making new friends was perceived as a way to fulfill a student's needs for socialization while also receiving support and information regarding academic matters (McKay 1995).

Interactions with faculty revealed similar tensions. While some professors were accommodating and respectful, others questioned the legitimacy of student needs or suggested that providing support might be "unfair" to other students. This reflects a deeper institutional culture where "equality" is wrongly interpreted as sameness, reinforcing ableist assumptions that accommodations are extra privileges rather than rights. In the classroom, power is predominantly held by faculty, and when professors misunderstand or resist accommodations, it perpetuates systemic inequities often disguised as fairness. A study conducted by Lombardi, Murray, and Gerdes (2012) found that, although college faculty in the U.S. generally exhibited a relatively high awareness of students with disabilities, this awareness did not consistently translate into effective inclusive practices. This offers a

valuable point of comparison for the Taiwanese context, where both awareness and systemic action frequently remain deficient.

In such cases, students often had to rely on institutional intermediaries to reassert their rights, highlighting how fragile interpersonal trust can be when awareness and training are lacking. This gap in preparedness and training is echoed by Pérez-Jorge (2021), who found that teachers who lacked formal training in disability support often felt uncertain and unqualified to provide appropriate responses to students with special needs. These emotional and professional gaps create inconsistent support, especially for students with sensory impairments. In this study, participants similarly noted that professors were often unaware of available accommodations, which led to uneven responses across departments. The delegation of responsibility onto individual instructors, without systematic oversight, creates a patchwork system of access, one in which students' academic outcomes hinge not on institutional commitment, but on the personal attitudes and awareness levels of those in power.

Family support varied among participants, with differing levels of mention during interviews. Although family was not frequently referenced spontaneously, some students acknowledged their parents for encouraging their ongoing involvement in school activities and assisting them in navigating initial interactions with the disability support office. Many studies highlight that the integration of family support does increase student efficacy and, in such increase's student outcomes (Bowman et al,.2023; Luo et al., 2024). The more limited discussion of family support in this study may reflect cultural nuances specific to Taiwan, where students may seek to assert independence in university life or may avoid burdening their families with their disability related needs. I believe that there may be a cultural nuance

in Taiwanese families that might have it where students don't often bring up their parents, or potentially just rely on their self-advocacy after hearing all of the interviews. This could be due to a desire for increased independence, viewing the transition to university as a chance to cultivate their self-advocacy skills.
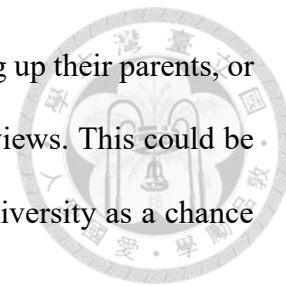
The interplay of interpersonal dynamics highlights the dual nature of relationships, serving both as potential sources of empowerment and inclusion, while also functioning as spaces where misunderstandings and stigma can exacerbate marginalization. Enhancing disability awareness and providing communication training for peers and faculty could help minimize unintentional harm and promote more inclusive everyday interactions. Ultimately, microsystem relationships reveal how power is enacted and negotiated in everyday spaces, shaping whether SWD are included, ignored, or actively excluded.

4.3.3 Exosystem

Within the Exosystem, elements such as local policies, mass media, and social services interact in ways that indirectly influence the social and academic experiences of students with hearing and visual impairments. Though not always directly visible in day-to-day life, these systems shape the landscape of accessibility and inclusion in higher education.

Local institutional policies from the Ministry of Education, for example, play a significant role in setting the boundaries of what kinds of accommodations and financial supports are available. For instance, although students have reported receiving a 3,000 NTD subsidy for assistive resources, the stipulation that this funding cannot be used for academic materials, such as textbooks, highlights a disconnect between the needs of students and the design of policies. This reveals a disconnect between policy intent and student reality,

suggesting that these regulations are shaped more by bureaucratic definitions of disability than by the lived educational experiences of students. These restrictions imply that support policies may be based on standardized or medicalized assumptions about disability rather than on the actual experiences of students.
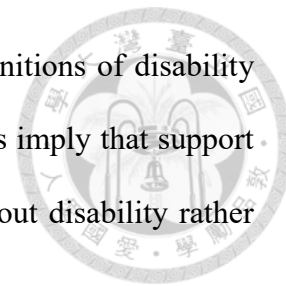
Additionally, the exclusion of international students from financial scholarships available to those with disabilities not only limits access but may also constitute discrimination. This exclusion reflects an institutional hierarchy of deservingness, where access to disability-related resources is filtered through nationality rather than need. In doing so, Taiwan's support systems inadvertently reproduce discriminatory structures, disadvantaging already marginalized students and increasing their financial and psychological burden. When international students must work part-time jobs to cover academic costs that their peers receive funding for, they not only face reduced time for study but also may experience higher stress, ultimately affecting their academic performance and ability to graduate on time. Here, policy becomes a gatekeeper of opportunity, revealing how access is mediated not by ability, but by belonging to institutional categories of "insider" or "outsider".
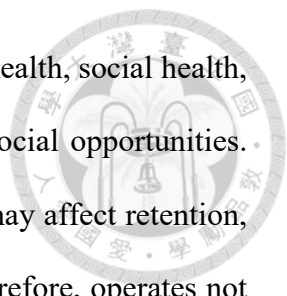
Another important aspect pertains to social services, including tutoring support, note-taking assistance, and assistive technology are often described as valuable but underutilized. Many students have indicated that, although these resources are available, they usually require specific access requests, leaving them systematically disadvantaged. The very design of these systems, requiring students to ask, justify, and persist, creates a tiered system of access that privileges those with social capital, confidence, or language fluency. This reliance on student self-advocacy creates inequalities, particularly for those who may be unaware of

the services, hesitant to seek help, or unfamiliar with navigating bureaucratic systems. This easily and particularly affects students with intersectional disadvantages, compounding their exclusion.
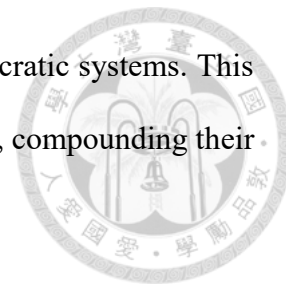
Regarding assistive technologies, students from the study all highlighted the use of either hearing aids, iPads, monitors, or other technologies to assist them in their learning process. These tools are indispensable for many students, not optional learning enhancements. Yet without proper institutional coordination or training for instructors, even the best technologies fall short. This was also echoed in the Fadda study, as they found that students not only need adequate support devices in class but also properly trained support teachers to thrive socially and academically (Fadda 2024). The fact that students must often supply their own devices or explain how to use them to instructors further reinforces the idea that inclusion is the student's responsibility rather than the institution's.

The mass media and broader societal narratives surrounding disability contribute significantly to the challenges faced by students. As noted by several participants, stigma associated with seeking support is partly driven by societal beliefs that equate disability accommodations with weakness or mental illness. These perceptions are not neutral; they are shaped by dominant cultural narratives, including those circulated through Taiwanese media, that pathologize disability and reinforce able-bodied norms as ideal. Such a portrayal also discourages students from identifying as disabled or requesting support, as doing so invites judgment or exclusion. The consequence is internalized ableism and the concealment of disability strategies that protect students socially but come at great emotional and academic cost.
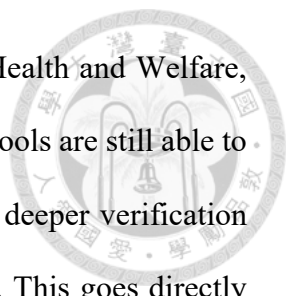
These intertwined stigmas can adversely affect students' mental health, social health, sense of belonging, and willingness to engage in both academic and social opportunities. Though often invisible to policymakers, the resulting marginalization, may affect retention, degree completion, and broader educational equity. The Exosystem, therefore, operates not just through the presence or absence of services, but through the cultural and bureaucratic norms that shape how, when, and for whom those services are accessible.

4.3.4 Macrosystem
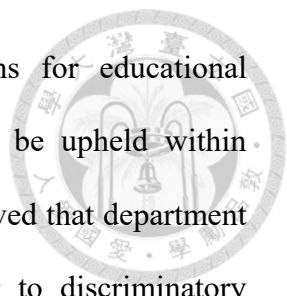
The macrosystem operates at the broadest level of influence, encompassing cultural attitudes, national laws, and societal norms that shape the understanding and management of disability within higher education institutions. In Taiwan, two major laws, the Special Education Act and the PDRPA, bring extensive guidance to disability policies. While these policies aim to ensure equitable access to education, participant experiences have revealed a crucial disconnect between the existence of these laws and their effective implementation. This level of influence significantly shapes both academic outcomes and social well-being, while also filtering down to the lower levels of the social ecological model.

One of the clearest sites of this disconnect is the accommodation process. While national law mandates equal access, students frequently encountered inconsistent responses from faculty, with some professors questioning the fairness of accommodations or requiring students to justify their needs. These responses do not share the protections that should be baseline accommodations towards students as outlined within Taiwan's legal framework. For example, Article 16 within the PDRPA states that PWD shall not be discriminated against in the rights and interests of education. The article additionally states that any person who operates public places or facilities shall not prevent PWD from fairly using and enjoying

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these facilities and rights only because of their disability (Ministry of Health and Welfare, 2023). While these are the written accounts that should be abided by, schools are still able to reject students from being allowed into specific departments or require deeper verification from disability offices before providing appropriate support to students. This goes directly against the acts that were created, but because of the wording, some gaps that allow for these means of discrimination to occur. So, through this account, we see how institutional discretion reflects how cultural values, such as meritocracy and able-bodied normativity, can undermine legal protections and national mandates.

The cultural environment of the macrosystem further reinforces these barriers. Students reported encountering deeply embedded stigma and ableism, both subtle and overt. One student recounted being repeatedly questioned about how they "got into NTU," which conveyed a sense of disbelief that a student with a disability could gain admission based on merit. Furthermore, ableism was starkly exemplified in a troubling account of a classmate suggesting that SWD should be killed. This is a reflection of the Goffman report, where students put themselves in the position of "we normals" and the "others", categorizing people into groups that should not inherently be categorized (Goffman 1986), even in less violent encounters, such as being targeted by religious groups or having their disability status disclosed without consent. Regardless of the severity of these incidents, they reflect a broader cultural framework that views disability as an anomaly within academic settings, something to be explained, justified, or quietly hidden. If these social environments persist unchanged, SWD will not only face marginalization but will also have to navigate substantial barriers to their mental health, social well-being, and overall academic success.

Although Taiwanese disability laws outline clear obligations for educational institutions, they often fail to specify how these protections should be upheld within individual departments, leaving gaps in enforcement. Participants observed that department heads have the power to retain discretion over admissions, leading to discriminatory outcomes that can affect students' academic decisions and overall career trajectories. Article 27 of the PDRPA states that schools of all levels that pass the evaluation/assessment arranged by competent authorities may not refuse PWD because of their disability, not being well equipped/ organized and other reasons (Ministry of Health and Welfare, 2023). However, the language remains vague, especially regarding what constitutes "refusal" within departments. Without explicit guidelines or penalties, departments may effectively gatekeep access, particularly when older faculty hold biased views about disability.

The Special Education Act similarly leaves room for interpretation. Article 30 details that the number of students in general classrooms that include SWD can be adjusted through evaluation by IEPC and a central authority (Ministry of Education, 2023). While seemingly supportive, this clause opens space for ableist discretion to hide behind procedural technicalities, enabling schools to subtly exclude students without appearing to violate the law. As findings suggest, students may not only be accepted into their desired departments but are often directed toward vocational tracks, reflecting a paternalistic view of what kinds of work are "appropriate" for PWD.
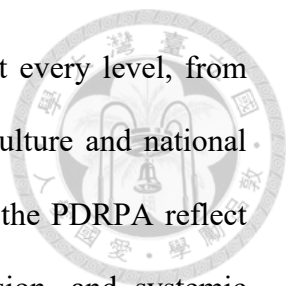
This redirection affects long-term outcomes. As previously mentioned by the NTNU participant, universities in Taiwan often direct SWD towards more technical occupations, thereby channeling them onto predetermined paths while reinforcing societal assumptions

about capability. These institutional practices exemplify structural ableism, where systems operate under the guise of neutrality but systematically disadvantage certain groups.

While these acts both represent important progress, through some gaps they begin to function more as symbolic protection than transformative tools. Legal frameworks alone are insufficient without stronger oversight, clearer implementation guidelines, and cultural shifts that challenge dominant narratives of meritocracy and able-bodied superiority. This analysis is not meant to dismiss Taiwan's progress in disability inclusion, but rather to emphasize that no policy is effective unless it is enforced equitably and interpreted through an inclusive lens. Legal reform, cultural transformation, and accountability mechanisms must work in tandem to ensure that all students, not just those who can self-advocate, are fully supported in their academic journeys.

4.4 Integration and Implications of the social and medical model of disability and the social ecological model

This study employs the Social Ecological Model in conjunction with the medical and social models of disability, providing a comprehensive framework for understanding the lived experiences of students with visual and hearing impairments in higher education. The narratives of these students reveal a diverse array of adaptive strategies, barriers, and support systems. However, it is evident that prevailing frameworks predominantly adhere to the medical model, which focuses on individual deficits and places the burden of adaptation on the student. As highlighted in the findings, students are frequently expected to self-advocate, independently seek out resources, and navigate systems that were not designed to accommodate their specific needs. This individualized approach not only limits the potential for academic and social inclusion but also masks broader systemic shortcomings.

Within the ecological framework, students encounter barriers at every level, from individual self-efficacy and interpersonal interactions to institutional culture and national policy implementation. Although Taiwan's Special Education Act and the PDRPA reflect the principles of the social model, emphasizing accessibility, inclusion, and systemic responsibility, their intent is often undercut by limited enforcement and inconsistent interpretation at the university level. When support is reactive instead of proactive, and when policies only benefit those who already know how to navigate them, true equity remains unachieved. In contrast, adopting the social model of disability, which reinterprets disability as a mismatch between individuals and their surrounding environments, facilitates a shift towards systemic accountability. Instead of expecting students to conform to rigid educational structures, this model challenges institutions to adapt their systems, cultures, and environments to foster the full inclusion of all learners.

I believe that genuine transformation occurs at the intersection of these collective models. Interventions should progress beyond mere accommodations and move toward universal design, ensuring that accessibility is integrated into every aspect of the learning environment. Furthermore, inclusive faculty training, enhanced student-to-student engagement, and clear, well-communicated policies are crucial not only for improving access but also for fostering a campus culture in which SWD are not just supported but are fully welcomed and valued. Therefore, this study emphasizes that by incorporating both the social model of disability and a social ecological perspective, as well as grounding these in the principles currently outlined in national policy, institutions can better foster holistic, equitable, and empowering educational experiences for all students.

5. Conclusion

This study explored a qualitative approach grounded in the social and medical models of disability, as well as the Social Ecological Model, to examine how students with hearing and visual impairments experience higher education in Taiwan. Specifically, the research addressed two guiding questions:

1.   How do the challenges and support systems encountered by students with diverse sensory abilities influence their overall health and social well-being?

2.   How do university support systems impact students' academic progress with diverse sensory abilities?

The final study included five students with sensory impairments as well as two university staff/assistant staff members. Through discourse and analysis, the research identified five key themes: Support Systems, Impact on Social Health, Impact on Academic Progression, Barriers and Coping, and Advocacy.

This study contributes to a more nuanced understanding of disability in higher education by critically examining how stigma, policy implementation, and institutional culture shape the experiences of students with hearing and visual impairments in Taiwan. By combining the medical and social models of disability with the Social Ecological Model, this research offers a layered analysis that highlights not only individual agency and resilience but also the systemic and cultural barriers students must navigate. In particular, it sheds light on the gap between Taiwan's legal protections, such as the PDRPA and the Special Education Act, and their inconsistent implementation at the departmental level. The study also brings forward the role of stigma, meritocratic bias, and ableism in shaping peer and faculty

perceptions, while demonstrating how class and international status intersect with disability to compound challenges. Ultimately, this research reframes resilience not as a solution but as a critique of institutional shortcomings, calling for structural reform and a more inclusive academic culture.
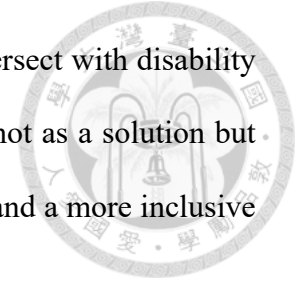
Additionally, this study fills a notable gap in Taiwan-specific research by centering the voices of students with sensory impairments, an often-underrepresented group in qualitative disability studies. While previous literature has focused more broadly on physical or learning disabilities, this research provides insight into the unique challenges and adaptive strategies used by students with hearing and visual impairments, particularly within the cultural and institutional context of Taiwanese higher education. By elevating student narratives and directly incorporating their recommendations, the study not only challenges dominant deficit-based framings but also positions students as agents of change. This participant-led approach highlights the importance of inclusive decision-making and demonstrates how students themselves envision a more equitable educational future. It is with this knowledge and understanding that we can reflect on limitations within the study, offer the following recommendations, and give direction for future research within similar scopes.

5.1 Recommendations for the study

There are two types of recommendations that I would like to highlight. As I previously stated, I want the study to appropriately include the voices of students by following the Ethical Guidelines for disability research, which advocate for the principle of conducting research "with us, not about us" (Cheng, 2023). So, to appropriately integrate the recommendations of students and myself, the following section includes recommendations

for a more inclusive and equitable campus that focuses on actionable categories stakeholders can respond to.

1. Ministry of Education & National Policy Makers

A. Expand Allowable Use of Disability Funds

While Taiwan provides various forms of financial support for students with disabilities, including a monthly NT$3,000 disability allowance, NT$10,000 in annual subsidies, and scholarships up to NT$30,000, the usage of these funds is often constrained by strict eligibility and spending regulations (Ministry of Education, 2023). Moreover, universities receive NT$10,000 per disabled student, which is intended to support institutional accommodations. Students have noted being unable to use these funds on printing costs to enlarge text, despite the direct relevance to their disability-related academic needs. Given these constraints, a moderate recommendation would be for the Ministry of Education to review existing guidelines to allow for more flexible, needs-based use of funds, potentially through a pilot program or case-by-case reimbursement system. Such a policy refinement could help align funding mechanisms with the diverse and evolving needs of disabled students without significantly expanding the current financial structure.

2. University Leadership and Administration

A.   Ensure Equal Access to Scholarships for All Students (NTU-specific)

Currently, some disability-related scholarships and financial aid are not accessible to international students at NTU, creating a gap in support and leading to discrimination. NTU should review and revise the eligibility criteria for their scholarship policies to ensure equitable access to funding and resources for all SWD, regardless of nationality. Inclusive

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scholarship eligibility would promote fairness and foster a more diverse and supportive learning environment.

B.   Standardize Departmental Accommodation Policies (NTU-specific)

NTU departments (department chairs) currently have the authority to decide whether or not SWD may access or complete certain majors, which creates unnecessary and discriminatory barriers. There should be standardized institutional policies ensuring that all academic programs provide proper accommodations and that students are not excluded from fields of study based on outdated or ableist assumptions.

C.   Include SWD in Decision-Making

Students justly emphasized the need to be included in decisions that affect their academic life, such as how resources are allocated on campus. Their lived experiences provide critical insight into which accommodations, programs, and services are most effective.

After discussing, we believe that creating channels for student input, through advisory boards, consultations, or participatory budgeting initiatives, ensures that institutional changes are grounded in real needs.

3. Disability Support Offices and Resource Centers

A.   Increase Visibility and Community Engagement

Students recommended organizing more informational and community-building events from the disability student resource center to help new and current students better understand available resources, connect with others who share similar experiences, and

reduce feelings of isolation. These sessions could include organizing workshops, orientation sessions, panel discussions, and informal gatherings/social events led by students and staff.

B.   Improving Awareness and Access to Existing Supports

From these accounts, I believe that the overall awareness regarding resource availability for students is minimal on public campuses. For example, while one-on-one peer or buddy programs may already exist in some universities, this study highlights a persistent gap in awareness and accessibility of such supports among students with sensory impairments. As such, my recommendation is not simply to create new programs, but to improve communication strategies and institutional transparency so that students are clearly informed of their rights and the resources available to them. Many participants in this study were either unaware of available services, such as the one-on-one peer program, or unsure of how to access them, pointing to a need for more proactive outreach from disability resource centers, orientation programs tailored to students with disabilities, and clear, accessible documentation of students' rights and accommodations. By empowering students with information and ensuring they know how to seek support, institutions can begin to close the gap between existing policy and lived experience.

4.   Faculty and Teaching Staff

A. Provide Ongoing, Mandatory Disability and Pedagogy Training

Many participants felt that faculty lacked awareness or preparedness in addressing the needs of students with diverse sensory abilities. Institutions should invest in mandatory, recurring training for all faculty, staff, and administrative personnel, regardless of discipline, that covers disability awareness, inclusive pedagogy, communication strategies, and

accessibility best practices. Training should also be co-created with disabled students to ensure relevance and authenticity. Equity should not be optional or situational.
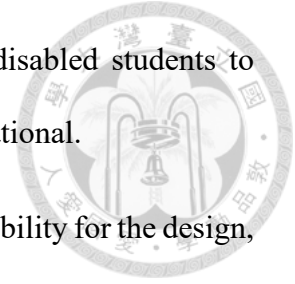
As previously noted, it is imperative to recognize that the responsibility for the design, implementation, and oversight of training programs should not rest exclusively on individual faculty members. Many professors prioritize research over teaching, which may not constitute their primary professional obligation. Therefore, a coordinated approach is essential. I believe that having university resource centers for students with disabilities lead the development of the training content, ensuring it is grounded in both the social model of disability and practical pedagogical strategies, would be optimal.

Following this, departments should be responsible for enforcing participation and integrating the training into faculty development programs. Moreover, centralized institutional support, from academic affairs or teaching and learning centers, can help standardize the training across disciplines while allowing for adaptation based on departmental context. This multi-level, collaborative approach ensures that all faculty, regardless of their teaching load or disciplinary background, are equipped with the understanding and tools needed to support students with disabilities effectively and equitably.

5.   The Broader Campus Community (Students and Culture)

A. Promote Disability Awareness and Empathy

Many students without disabilities still lack understanding of the lived experiences of their peers with disabilities, often due to limited exposure or reliance on societal stereotypes. Universities should actively promote disability education, storytelling, and dialogue across the student body to encourage empathy, reduce stigma, and build inclusive social

communities. Higher education institutions have a responsibility to counter mass misconceptions through public campaigns, diverse representation, and inclusive media that foster empathy, reduce stigma, and normalize diverse lived experiences of students with diverse sensory impairments.
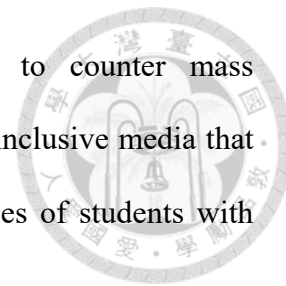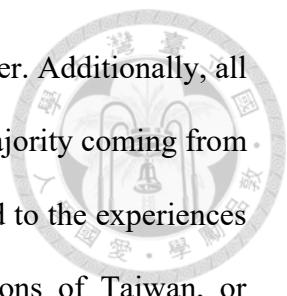
5.2 Limitations

This study has provided us with the opportunity to delve into the experiences of students, facilitating an understanding of the intricate system with which they frequently engage concerning their social health and academic advancement. However, certain limitations have emerged concerning data collection and the interpretation of study findings. Furthermore, the limitations outlined in the following sections are directly tied to the specific scope and context of this study. These constraints are indicative of the chosen scale, timeframe, and methodological approach. Future inquiries may expand upon these findings by conducting larger, longitudinal studies when circumstances permit.

Recruitment challenges:

The most significant challenge was participant recruitment. I believe that many students, faculty, and staff face heavy workloads due to academic, extracurricular, and personal commitments. Students typically possess a significant amount of social capital that they must navigate during their time at university, which can significantly influence both their willingness and ability to participate in qualitative studies. If students were potentially able to acquire more social capital, they might be more inclined to join such studies. Nonetheless, many students still express hesitation about their desire to engage with the research. Recruitment was also especially difficult given the relatively small population of

students with sensory impairments and the sensitivity of the subject matter. Additionally, all participants were from public universities in Northern Taiwan, with a majority coming from National Taiwan University. As such, the findings cannot be generalized to the experiences of students attending private institutions, those located in other regions of Taiwan, or individuals in less-resourced educational settings.

Furthermore, my position as an international student may have influenced participant comfort. Some individuals expressed hesitation, which I suspect may have stemmed from concerns about communication or the language barrier, as I am not fluent in Chinese. This has been echoed in other studies, as one noted that failure to address language barriers and the methodological challenges they present threatens the credibility, transferability, dependability, and confirmability of cross-language qualitative research (Temple and Young, 2004). So, while I did my best to acquire as many student perspectives as possible, I was only able to work with what was given at the time. My goal was to do everything to make sure the study, though small, would still be credible, and I do believe that I have accomplished that.

1.   Language barriers and access to resources:

A second limitation involved the accessibility of academic resources in Chinese. While I attempted to incorporate local context as much as possible, my limited fluency in Chinese meant that the majority of the literature I engaged with was in English. This restricted the scope of the study and may have led to an underrepresentation of locally grounded perspectives on disability in Taiwanese higher education. A study conducted by Amano Gonalez, while highlighting English as a main language used in literature, brought to light that oftentimes language barriers hinder researchers, such as myself, from contributing

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to and benefiting from global knowledge, which discourages the integration into academia (González-Varo et al. 2016).

2.   Gender inequality within the study

As previously stated, recruitment throughout the thesis process was quite a difficult challenge. Ultimately, 4 out of the 5 student participants were females. While the participants have done a fantastic job explaining how their systems have supported or have shortcomings within them, it is difficult to fully grasp how gender plays a role for students, specifically in this study. For future studies, it would be beneficial to have more students of diverse sexes and genders to allow for a deeper analysis of how gender plays a role in experiences.

3.   Gaps in existing literature:

There is limited existing research on the academic and social experiences of students with hearing or visual impairments within university settings in Taiwan. Much of the current literature on disability in the region tends to emphasize medical or institutional frameworks, rather than the lived experiences of students navigating academic environments. While this gap highlights the importance of the present study, it also means fewer direct reference points to support the analysis.

Despite these challenges, efforts were made to mitigate their effects. Recruitment was extended over several weeks, and alternative communication methods (e.g., text-based messages, interpreter support when needed) were offered. I also relied on the guidance of local scholars and support services to ensure that the study remained respectful and grounded in the local context. Doing so has allowed me to complete this study to the best of my ability, and within the following section, I will highlight some recommendations for future studies

as international researchers continue to work with students who have diverse sensory impairments.

4.   The Study Scope
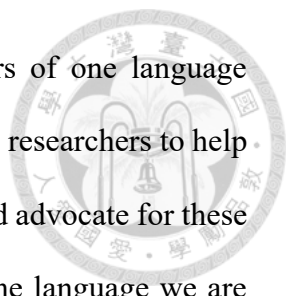
It was previously acknowledged that many student participants within this study are from NTU. While their insights were incredibly valuable, NTU is a very prestigious university with more resources and support systems than many other institutions in Taiwan. Because of this, the experiences shared in this study might not reflect what students with visual or hearing impairments go through at other universities, especially those with fewer resources or in more rural areas. This makes it harder to generalize the findings across all of Taiwan's higher education system.

Given this information, I want to be careful not to overstate what this study can say about all students with sensory impairments. The experiences discussed here are important, but they represent just one part of a much larger picture. Future research that includes students from a wider range of universities would be helpful for getting a more complete understanding of how support, or the lack of it, impacts students across different settings.

5.3 Recommendations for future researchers

1.   Understanding the effects of linguistic imperialism on research:

While it is sometimes difficult to learn a specific language, we must do our best as English researchers to try and understand the languages of the people that we are interviewing, even a little bit, when including interpreters and interviewing. I would like to echo the recommendations of Squires but in a Taiwanese context, in regard to having a greater awareness of the linguistic imperialism imposed upon the non-English speaking research

participant (Squires 2008). Linguistic imperialism means that speakers of one language expect all others they interact with to learn their language. It is our job as researchers to help the community that we work with, as well as to do our best to support and advocate for these individuals. The best way to do that is to try and learn some parts of the language we are interviewing our participants with, not expect people to speak our language and be humble while conducting our research. We must truly learn about the communities we work with, and be respectful along the process.

2.   Start early when dealing with transcultural recruitment.

While I believe that I began preparing my IRB proposal and reaching out to potential participants early in the research process, I found that building trust and genuine relationships with students takes time, particularly as an international student researcher.

In hindsight, starting these connections even earlier would have likely facilitated smoother recruitment.

Most participants were also recruited through in-person interactions and informal conversations at club events or the disability center on campus. This aligns with findings by Eide and Allen, who emphasize the importance of building community ties and cultural trust when recruiting across cultural contexts (Eide et al. 2005). After completing this study, I wholeheartedly echo their conclusion: trust-building through presence and authenticity is often more effective than traditional recruitment strategies.

3.   Expand Research Beyond Urban-Centered and Public Institutions.

Due to the availability of participants, the research was conducted solely at NTU and NTNU, which are public universities in Northern Taiwan. Future researchers should include

students in rural or under-resourced institutions as well as private institutions to better understand disparities in support and accessibility.

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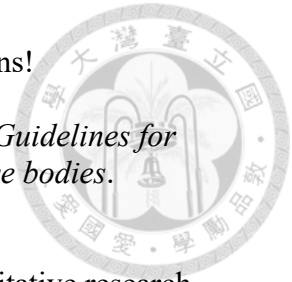
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7. Appendix

徵求研究參與者!

多元感官能力學生的高等教育經驗及其對健康之影響：台灣北部的質性研究

本研究為一調查關於具備不同感官能力障礙學生經驗之質性研究。其經驗包含社會健康及學業表現之影響。

尋找具備以下條件之參與者
*符合1或2之中任一項＋符合3-5的都可以報名喔!

1. 有聽力或視力障礙之大專院校學生
2. 曾經從事以下工作經驗之教師/工作人員:
    ○ 特殊教育教師
    ○ 輔導員
    ○ 身障服務協調人員
3. 18歲以上
4. 必須講英文或中文
5. 不限任何性別或性別認同

報名請掃下方 QR Code!

表單連結:
https://forms.gle/X9GCHgJ32N1KE33e8

研究參與者將獲得額度之禮卷以感謝您的參與!

欲了解更多資訊，敬請聯繫:
名字: Jade Gabbidon
國立臺灣大學全球衛生學程碩士生
電子郵件: jade.s.gabbidon@gmail.com

RESEARCH PARTICIPANTS WANTED!

The Experiences in Higher Education of Students with Diverse Sensory Abilities and Their Health Impact: A Qualitative Study in Northern Taiwan

This study is a survey of people with different sensory impairments
A qualitative study of student experience. Its experience includes social health
and the impact on academic performance.

Looking for participants who meet the following criteria:
1. College students with hearing or visual impairments
   2. Teachers/staff who have had the following work experience:
      - Special Education Teacher
      - counselor
      - Disability Services Coordinator
3. Must be 18+
4. Must speak English or Chinese
5. All sex or gender identities welcome

Please scan the QR Code below to register!

SCAN ME

Study participants will receive a gift voucher as a thank you for participating!

For more information, please contact::
Name：Jade Gabbidon
Master's student in Global Health Program at
National Taiwan University
E-mail：jade.s.gabbidon@gmail.com

中文學習問題:

一對一面試:

1. 您能描述一下您作為(視覺障礙者)/(聽覺障礙者)學生在高等教育中的整體經 驗嗎？
2. 過渡到大學生活時(在進入到大學前)，您遇到的最大挑戰是什麼？
3. 您如何描述您可以獲得的學術(課/學業)支援(支持)水平(程度)？
4. 您能分享一個具體的支持服務範例(例如課業輔導、輔助科技、導師計畫或學術適應措施)，並說明它如何對您的學業成功產生正面影響嗎？
5. 您在獲取課程材(資)料或上課時遇到任何障礙嗎？如果是這樣(有)，您能詳細 說明一下嗎？
6. 科技在您的學術旅程大學生涯中發揮了什麼作用？
7. 你在校園裡的社交經驗如何？你覺得自己與同儕融為一體嗎？
8. 您能分享一下您的(障礙)如何影響您參與社交或課外活動的能力嗎？
9. 學校裡是否有任何人(老師、工作人員或同學)讓您感到更自在或更(被)社交支 持？
10. 當您在社交場合需要幫助時，您覺得尋求幫助是容易還是困難？為什麼？
11. 您的學校如何幫助您感受到融入社交活動的感覺(建立社交歸屬感)？
12. 您如何評估貴機構(單位)殘障服務辦公室(資源教室/資源中心)的成效？
13. 您是否希望建立或改進某些特定的支援系統(例如學術住宿、無障礙資源、同儕指導、諮詢服務、經濟援助、輔助技術或教師培訓計劃)，以便更好地支持您？
14. 您認為您收到(或未收到)的支持會在哪些方面影響您的整體學業成績？
15. 展望未來，您認為您的高等教育經驗將如何影響您未來的職業或個人目標？

One-on-one Interview

1. Can you describe your overall experience in higher education as a blind/deaf student?
2. What were some of your biggest challenges when transitioning to university life?
3. How would you describe the level of academic support available to you?
4. Can you share a specific example of a support service (such as tutoring, assistive technology, mentorship, or academic accommodations) that has positively impacted your academic success?
5. Have you encountered any barriers in accessing course materials or attending classes? If so, can you elaborate?
6. What role has technology played in your academic journey, and do you feel you have adequate access to the necessary tools?
7. How has your social experience been on campus? Do you feel integrated with your peers?
8. Can you share how your disability has affected your ability to participate in social or extracurricular activities?
9. Are there any people at the university (teachers, staff, or classmates) who make you feel more comfortable or supported socially?
10. Do you find it easy or difficult to ask for help when you need it in social situations? Why?
11. How does your university help you feel included in social activities?
12. How would you evaluate the effectiveness of your institution's disability services office?
13. Are there any specific support systems (such as academic accommodations, accessibility resources, peer mentoring, counseling services, financial aid, assistive technology, or faculty training programs) that you wish were in place or improved to better support you?
14. In what ways do you think the support you receive (or don't receive) impacts your overall academic performance?
15. Looking ahead, how do you think your experiences in higher education will influence your future career or personal goals?

教師/員工面試：
1. 您能否描述一下您的班級或學校為有視覺或聽覺障礙的學生提供的具體支援類型（例如輔具、設備、環境、人力）？
2. 您認為這種支持如何影響學生參與課外活動的能力？
3. 在接受服務、資源後，您是否注意到學生的學業成績有任何變化？如果有的話，請 具體描述。
4. 就您觀察，有聽覺或視覺障礙的學生在社交場合與同儕互動的方式是什麼？
5. 您認為他們獲得的支持會影響他們建立和維持友誼的能力嗎？為何如此？
6. 是否有特定的計劃或策略可以有效地促進這些學生的共融和正向的社會關係？
7. 有視覺或聽覺障礙的學生在學業上是否表現出與同儕不同的特定優勢或挑戰？
8. 根據您的經驗，量身訂製的支援對於幫助有視覺或聽覺障礙的學生實現學業目標有 多什麼正面、負面的影響？
9. 能分享一些例子來說明情緒支持如何影響學生在學校的參與或表現嗎？

Teacher/ Staff Interview
1. Can you describe the specific types of support (e.g., tools, accommodations, personnel) provided to students with sensory impairments in your classroom or university?
2. How do you think this support affects the student's ability to participate in academic activities?
3. Have you noticed any changes in students' academic performance after receiving specific support or accommodations? If so, what were they?
4. In what ways do students with sensory impairments interact with their peers in social settings?
5. Do you feel that the support they receive influences their ability to build and maintain friendships? How so?
6. Are there particular programs or strategies that have been effective in fostering inclusion and positive social relationships for these students?
7. Do students with sensory impairments show specific strengths or challenges academically that differ from their peers?
8. In your experience, how important is tailored support in helping students with sensory impairments reach their academic goals?
9. Can you share examples of how emotional support has impacted a student's engagement or performance while in university?

知情同意書 - 參與質性研究

研究對象: 具有多元感官能力的學生，包括聽覺障礙或視覺障礙者。

邀請: 參與此質性研究 - "北台灣多元感官能力學生在高等教育的體驗及其健康影響：質 性研究"。

知情同意書 - 參與質性研究

主要負責研究人員: 高玉婕 (Jade Gabbidon)、李柏翰

機構/組織: 國立臺灣大學 (National Taiwan University)

協同主持人: 副教授

聯絡方式: r12853003@ntu.edu.tw & jade.s.gabbidon@gmail.com
資金來源: 本研究由台灣大學全球健康計畫全額贊助。

第一部分：資訊表

前言

您好，我是 Jade Gabbidon，目前正在與國立台灣大學公共衛生學院合作進行碩士論文研究。。我們的研 究重點著重於探討支持系統對視覺或聽覺障礙學生的社會福祉和學業成就之影響。請仔細 閱讀此份同意書，如有任何問題或疑慮，請隨時與本研究主要研究人員聯繫。感謝您！

研究目的:

。 本研究旨在探討台灣高等教育體系中身心障礙學生所遭遇的體制與制度障礙。這些障礙可能包括設施的可及性、支援服務的可用性和社會態度等挑戰。該研究旨在定性分析這些因素如何影響學生的社會福祉和學業進步，目的是找到促進更具包容性和支持性的教育環境的策略。

符合資格

1. 有視覺或聽覺障礙，並已獲得相關醫療或專業評估認證。
2. 目前就讀於高等教育機構（不限學校或科系）。
3. 年滿 18 歲，性別與性別認同皆不受限制。
4. 包括相關專業人員，例如特殊教育老師、學校輔導員或殘障資源中心的協調人員。

不符合資格

1. 沒有感官障礙的人士。

2.僅有其他類型障礙（例如肢體、心理、自閉症等）的學生。

3.非目前就讀學生或相關教育人員。

研究流程:

若您同意參與此研究，您將進行以下流程：

1. 參與約 40-70 分鐘的訪談。
2. 回答有關社會健康和學業成功相關之問題。
3. 允許訪談被進行錄音（若研究參與者同意予以錄音）。

在面試期間，我將與您和一位翻譯人員一起在校園內舒適的地方坐下。如果您覺得以線上　進行之方式更為方便，面試可以在線上進行。如果您在面試期間有任何不想回答的問　題，您可以告知我與翻譯人員，我會繼續進行下一個問題。訪談進行期間，除了我和翻譯人員之外，沒有其他人員會在場，除非您希望其他人也在場。所有訪談記錄的資訊皆會進　行保密，除我本人、翻譯人員和我的指導教授李博翰教授之外，沒有其他人可以取得您訪　談期間記錄的所有資訊。整個訪談期間將進行錄音，但錄音中將不會提及任何人的姓名。錄音將由國立臺灣大學公共衛生學院 Jade Gabbidon保存。所記錄的資訊也將進行保密，除我本人、翻譯　人員和我的指導教授李博翰教授之外，沒有其他人可以存取錄音。

您的參與完全是出於自願，您可自由決定是否參加本研究，研究過程中您可以隨時拒絕回 答任何問題或退出研究，若您拒絕參加或退出，將不會損及您的任何權利。

參與同意方式

考量到參與者的便利性與需求，提供以下多種同意方式：

1.口頭同意：如因身體不便無法簽署書面文件，可在見證人協助下，透過口頭方式表達同意，並由見證人確認並簽署。

2.電子簽名：透過專為視障人士設計的電子平台進行數位簽署，方便快速完成程序。

3.語音解說：如有需要，可提供同意書的錄音版本，幫助參與者更清楚理解內容。

保密:

您提供的資訊將被充分保密。您個人隱私之資料也不會在任何報告或出版物中被透露。錄　音（若您同意進行錄音）將被安全地存儲，並且只有研究團隊可以取得。最終分析處　　理將刪除所有得以識別您的個人資訊以保護您的匿名性。我們從這項研究中獲得的知識將　　在廣泛提供給給大眾之前將先與您分享。每位研究參與者將收到一份統整之研究結果。

資料保存與銷毀

保存期間

- 保存期限：所有訪談錄音、文字紀錄及研究相關數據，將安全保存至 2025 年 12 月 31 日。

<div align="right">同意書版本2025/02/20/Version2</div>

- 保存方式：研究資料將儲存在受密碼保護的數位儲存系統中，且僅限授權人員存取。

研究效益與對研究參與者之益處：

研究完成後，您將被贈予一張新台幣 額度之禮券。您參與本研究將有助於我們在 未來能透過適當的政策實施及倡導，為校內具有不同感官能力的學生制定未來的援助。這 也有助於我們更好地了解相關的支持和資源，並有助於未來在這個領域的研究發展。

如果您選擇退出研究，您的訪談相關的所有錄音和檔案將立即刪除。

風險：

您的參與無涉及預期的風險。然而，如果過程中有任何問題讓您感到不適，您可以選擇不 回答。您也不必給我們任何不回答問題或拒絕參與訪談的理由。

心理支持與協助
如果您在訪談過程中感到任何不適，請立即通知研究人員，我將協助安排校內心理諮商部門提供支援。
此外，研究結束後，研究人也會主動進行後續聯繫，確認您是否需要進一步協助。

自願參與：

您的參與本研究完全是自願的。您有權隨時退出，不會有任何相關之後果必須承擔，或失 去您享有的權利。

聯絡方式：

如果您對研究或您作為參與者的權利有任何疑問，請聯繫本研究主要負責人高玉婕 (Jade Gabbidon)。
聯絡方式: r12853003@ntu.edu.tw & jade.s.gabbidon@gmail.com

電話：0905925982

本研究提案已獲得國立臺灣大學研究倫理委員會的審查和批准，該委員會負責確保研究參與者免於受到傷害。如果您對研究的倫理方面有任何疑問或想要了解更多關於審核流程的信息，您可以參考上面的聯絡方式。

資料銷毀
•銷毀日期：**2025 年 12 月 31 日**，研究數據將依以下方式進行徹底銷毀：
1. 數位資料：使用專業軟體永久刪除，確保無法復原。
2. 紙本資料：所有文件將以碎紙機銷毀，並妥善處理回收。
•匿名化處理：任何包含個人資訊的數據，將在轉錄和分析後立即匿名化，確保參與者的隱私安全。

所有數位記錄都將從儲存裝置中永久刪除，並將使用安全刪除軟體刪除文件，以確保無法復原資料。任何印刷或手寫材料將按照安全文件銷毀協議進行粉碎和處理。為了進一步確保參與者的機密性，任何包含可識別資訊的數據將在轉錄和分析後立即匿名化。

同意書版本2025/02/20/Version02

同意書:

簽署此同意書即表示您確認已閱讀上述資訊或我方已向您宣讀。您也承認曾有
機會詢問我 方研究相關的問題,並且您詢問所的有問題都已得到滿意的回
覆。

參與者姓名（正楷姓名）:＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

參與者簽名:＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期:＿＿＿＿＿＿＿＿ （年 / 月 / 日）

我是研究參與者的法定代理人/助手。我完全了解上述研究方法以及所涉及的潛在風險和利
益。我對這個研究計畫的疑問已經得到了詳細的解答和解釋。我同意研究參與者參與此研究
計畫。

法定代理人/助理簽名:＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期: ＿＿＿＿＿＿＿＿   /   /

供研究人員使用:

我確認參與者有機會詢問有關研究的問題,並且參與者提出的所有問題都已得到正確且盡我
所能的回答。

我確認個人未被強迫給予同意,並且同意是自由且自願的。一份 已提供給參與者。

研究人員/取得同意書之人姓名（正楷姓名）＿＿＿＿＿＿＿＿＿＿＿＿＿

研究人員/取得同意書之人簽名＿＿＿＿＿＿＿＿＿＿＿＿＿

日期: ＿＿＿＿＿＿＿＿   /   /

> Informed Consent Form for "Experiences in Higher Education for Students with Diverse Sensory Abilities and its Health Impact: A Qualitative Study in Northern Taiwan."

Thank you for participating in this study! This informed consent form is for a master's thesis project discussing students with diverse sensory abilities, including individuals with hearing or visual impairments. These students are invited to participate in this qualitative study, "Experiences in Higher Education for Students with Diverse Sensory Abilities and its Health Impact: A Qualitative Study in Northern Taiwan."

Consent Form for Participation in a Qualitative Study

Principal Investigator : Jade Gabbidon（高玉婕）

Advisor: Dr. Po-Han Lee (   ),
          Associate Director at National Taiwan University

Institution/Organization: National Taiwan University (台大）和   (Global Health Program)

Any Funding will be provided by the Global Health Program at National Taiwan University

Contact Information: jade.s.gabbidon@gmail.com & R128553003@ntu.edu.tw

Phone number: 0905925982

Part 1: Information Sheet

Introduction

My name is Jade Gabbidon and I am conducting research with the School of Public Health at National Taiwan University. Our research focuses on examining the influence of support systems on the social well-being and academic achievement of students with visual or hearing impairments. Please read through this consent form thoroughly, and do not hesitate to email the principal investigator with any questions or concerns! Thank you!

Purpose of the Study:

This study aims to explore the systemic and institutional barriers encountered by students with disabilities in Taiwan's higher education system. These barriers may include challenges such as accessibility of facilities, availability of support services, and societal attitudes. The research seeks to qualitatively analyze how these factors influence students' social well-being and academic progress, with the goal of identifying strategies to foster a more inclusive and supportive educational environment.
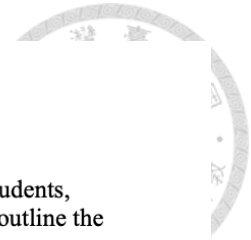
Research Objectives:
The primary objective is to identify opportunities to enhance support systems for these students, thereby improving their future academic success and social health. The following points outline the specific aims of this study:

1. Investigate how support systems within higher education impact the social health and academic success of students with diverse sensory abilities, specifically hearing and sensory impairments.
2. Investigate student's perceptions/ opinions towards the implemented policies and their effect on their social health and academic success.
3. Explore potential future objectives for people with diverse sensory abilities through policy implementation and analysis.
4. Understand students' experiences with diverse sensory abilities in higher education to identify opportunities to enhance their inclusion in these environments.

Research Participation Criteria and Restrictions:
To participate in this study, you must meet the following criteria.
Study Population (Inclusion Criteria):
1. Students who identify as having visual or hearing impairments
2. Students must also have an official assessment of their disability
3. Students currently in higher education
4. Can be of any sex or gender identity
5. Ages 18+
6. Speaks Chinese or English
7. Relevant staff members (e.g, special education teachers, counselors, or disability services coordinators) to provide additional perspectives

Exclusion Criteria:
1. Non-disabled individuals
2. Students who identify with disabilities outside of sensory impairments (i.e., physical, mental, learning, autism, etc.)
3. Non-students
4. Non- Relevant staff members

Procedures:
If you agree to participate, you will be asked to take part in the following activities:

1. Participate in an interview lasting approximately 40 - 70 minutes.
2. Answer questions related to social health and academic success.
3. Allow the interview to be audio-recorded (if applicable).

If you agree, you will participate in a one-on-one or group interview to discuss your social experiences at school. The group interview will include 5-7 students. The interview will focus on your interactions with peers, feelings of inclusion, and how support services have affected you. It will last about 40-70 minutes and will be scheduled at a convenient time.

With your permission, the interview will be audio-recorded for accuracy. Your name and identifying details will be kept confidential, and all responses will be anonymized. You can skip any questions or stop the interview at any time. Participation is voluntary, and there will be no impact on your relationship with the school or services you receive, regardless of your decision.
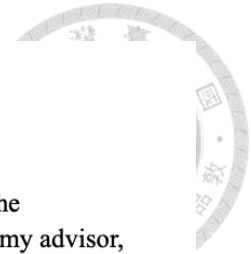
If you have any questions, please contact the researcher.

The tape will be kept by the College of Public Health at National Taiwan University. The information recorded is confidential, and no one else except myself, the translator, and my advisor, Dr. Po-Han Lee, will have access to the tapes.

Your participation is completely voluntary, and you may decline to answer any questions or withdraw from the study at any time without penalty.
If you choose to withdraw from the study, your information and any interview questions you have already completed will be deleted from the results.
Other Consent Options:
For participants who are physically unable to provide written consent, verbal consent may be obtained in the presence of an impartial witness. The witness will then sign to confirm that the participant has informed consent. Additionally, electronic signatures can be utilized as an accessible platform with features designed for individuals with visual impairments, allowing for digital signing. Finally an audio recording of the consent form can also be provided to verbally explain the content if requested by potential participants.

Confidentiality:
The information you provide will be kept confidential. Your identity will also not be revealed in any reports or publications. Audio recordings (if applicable) will be securely stored and only accessed by the research team at National Taiwan University. The final analysis will remove any identifying information to protect your anonymity. All files will also be encrypted and password- protected requiring multi-factor authentication to ensure the safety of the information. The knowledge that we get from this research will be shared with you before it is made widely available to the public. Each participant will receive a summary of the results.

Retention Period: All research data, including audio recordings, interview transcripts, and analyzed documents, will be securely stored until **December 31, 2025**.

Compensation:
Upon completion of the study, you will receive a voucher. Your participation in this study will help us determine future aid for students with diverse sensory abilities on your campus through proper policy implementation and advocacy. It will also help us better understand the support and resources available to students with diverse sensory abilities and help contribute to future research in this area.

Risks:
There are no anticipated risks associated with your participation. However, if any question makes you uncomfortable, you may choose not to answer. You also do not have to give us any reason for not responding to questions or refusing to participate in the interview.
        Additionally, on-site relief may be provided through each school's therapy department in case of any psychological discomfort during the interview. Students will also receive follow-up relief checks after the interview from the Primary Investigator if they have any discomfort during the interview to make sure they get the care they need.

Consent:

By signing this consent form, you confirm that you have read the above information or that we have read it to you. You also acknowledge that you have had the opportunity to ask us questions related to the Research and that all of your questions have been answered satisfactorily.

Participant's Name (Print Name): _____

Participant Signature：_____

Date： _____ （Year/ Month / Day）

I am the legal representative/assistant of the research participant. I fully understand the research methods described above and the potential risks and benefits involved. My questions regarding this research project have been answered and explained in detail. I consent to being a research participant in this research project.

Signature of Legal Representative/Assistant:_____

Date： _____   Year / Month / Day

For researchers:

I confirm that participants had the opportunity to ask questions about the research and that all questions asked by participants were answered correctly and to the best of my ability.

I confirm that the individual was not coerced into giving consent and that consent was free and voluntary. A copy was provided to participants.

Name of researcher/person obtaining consent (print name）_____

Signature of researcher/person obtaining consent_____

Date： _____ （Year / Month / Day）