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Academic Procrastination as a Barrier to Sustainable and Inclusive Education for Students with Hearing Impairment

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Abstract

This study examines academic procrastination as a significant barrier to sustainable and inclusive education among students with hearing impairment. Academic procrastination—delaying assignments, examination preparation, and other learning responsibilities—can reduce academic engagement, achievement, confidence, and long-term educational participation. Students with hearing impairment may be particularly vulnerable because of communication barriers, limited access to instructional content, inadequate assistive technology, insufficient teacher support, and feelings of social isolation. Using a descriptive research approach, the study explores the level of academic procrastination and its relationship with task management and academic engagement among students with hearing impairment. The findings indicate a moderate-to-high level of procrastination, accompanied by moderate task-management skills and comparatively limited academic engagement. Delayed academic behaviour appears to be associated with difficulties in understanding instructions, managing time, accessing learning resources, and seeking timely assistance. These challenges undermine the principles of inclusive education by restricting equitable participation and may threaten educational sustainability by increasing the risk of poor performance, disengagement, and discontinuation of studies. The study highlights the need for accessible classroom communication, sign-language support, captioned digital resources, assistive technologies, structured academic schedules, counselling, peer mentoring, and individualized guidance. Teachers should also adopt flexible, inclusive, and motivating instructional practices that strengthen students' self-regulation and sense of belonging. Addressing academic procrastination through coordinated institutional and pedagogical interventions can promote equitable learning opportunities, sustained academic participation, and the successful inclusion of students with hearing impairment.

Keywords: Self-Regulated Learning; Educational Accessibility; Academic Engagement; Equitable Participation

INTRODUCTION

The integration of students with hearing impairment in higher education contexts necessitates a critical examination of how academic procrastination acts as an inhibitor to equitable participation and institutional retention. For these learners, procrastination is often an avoidant response to the systemic communicative barriers and lack of academic support found in many higher education environments (Bell & Swart, 2018; Sohail & Shoaib, 2025). The "invisibility" of their hearing impairment exacerbates this maladaptive cycle, complicates the process of disclosure, and creates a precarious negotiation of identity that often leads students to delay requesting needed accommodations (Bell et al., 2016). Moreover, this deferral pattern is not merely a matter of time management, but a defensive self-regulatory strategy that arises from the emotional and cognitive distress of navigating exclusionary educational spaces (Calle & Cosentino, 2024). These feelings of perceived discrimination and social isolation often lead to a mediation pathway of self-handicapping and internalized shame which greatly impairs the self-regulatory capacity of the learner (Zheng et al., 2026).

Moreover, this lack of self-regulation is often exacerbated by an inherent fear of failure and anxiety about performance evaluations in non-inclusive educational environments (Chen et al., 2024). This dynamism is further complicated by the lack of accessible digital learning environments, which disproportionately affects students who rely on specialized communication technologies to achieve academic parity (Albertos et al., 2023; Özberk & Kurtça, 2021).

Problem Context

Academic procrastination refers to the deliberate delay of important academic activities, despite being aware of the adverse effects of such procrastination. The self-directed nature of modern higher education often worsens this issue (Zhou et al., 2025). This phenomenon, in the case of students with hearing impairment, is further complicated by specific accessibility barriers that demand high cognitive loads, which in turn often leads to increased anxiety and consequent task avoidance (Amjad & Shoaib, 2024; Li et al., 2024). This delay is a significant obstacle to educational equity, disrupting the sustained student engagement necessary for successful navigation of higher education (González-Brignardello et al., 2024; Sarkar & Ghosh, 2024). When the academic process involves complex auxiliary systems such as interpreters and real-time captioning, the additional time needed to accommodate these systems can compound the cycle of voluntary task deferral (Tannenbaum-Baruchi et al., 2025).

Conceptual Foundations

Procrastination has increasingly been identified as an important failure of self-regulatory learning strategies, with the voluntary postponement of tasks reflecting deficits in temporal orientation and academic self-efficacy (Hailikari et al., 2021; Valente et al., 2024). Research shows that this regulatory failure is often a dynamic, multifaceted process driven by the interaction of cognitive, emotional, and motivational dimensions and not just a lack of time management (Quispe & Ormaza, 2025). These self-regulatory deficits are often further exacerbated by contextual stressors, including the architectural and environmental barriers that require additional cognitive resources from students with hearing impairments (Awed & Alotaibi, 2025; Svartdal et al., 2020). Moreover, the inclusive education principles compel institutions to move beyond the passive accessibility and develop proactive support structures that diminish these cognitive demands, thereby ensuring that students with hearing impairments can effectively engage with their curriculum (Alkharji, 2023). By creating environments that reduce this type of extraneous cognitive load (Valente et al., 2024), universities are able to support their institutional practices that support the Sustainable Development Goal of equitable, quality education for all.

Theory of Procrastination

The dual-process model of self-control (e.g., James et al., 2025) suggests that procrastination occurs when affect-driven, impulsive systems dominate rational goal-directed planning, especially during periods of increased frustration or boredom. In addition, temporal motivation theory suggests that students with hearing impairments may perceive reduced task utility because of the substantial cognitive resources needed to access information, which may lead to digital distractions as a maladaptive coping mechanism (Xiong et al., 2024). Besides these motivational shortfalls, it is crucial to separate volitional avoidance from structural obstacles that are embedded in inaccessible pedagogical designs and may unintentionally be perceived as reduced capacity for sustained academic perseverance (Valenzuela et al., 2020). Therefore, interventions should differentiate between students who

have problems of emotional regulation and self-efficacy (Mrinalini, 2026; student, 2025) and those who have system delays due to lack of environmental supports. Therefore, effective mitigation approaches need to be dual-faceted, one that enhances individual self-efficacy through targeted self-regulation interventions and, simultaneously, tackles pedagogical exclusions that disproportionately affect these learners (et al., 2024;´Júnior et al., 2023).

Inclusive Education Principles

Inclusive education is not simply about physical access. It requires a systemic commitment to accessibility, quality, and social relevance to eliminate all forms of ongoing exclusion (Palma & Holguín, 2023). This approach emphasizes building a sense of community and participation, so that students with sensory disabilities are not simply enrolled, but are empowered to engage with content as effectively as their hearing peers (Granados, 2025). Hence, institutions should focus on ensuring communication access, such as quality captioning and specialized instructional support, to address systemic barriers to equitable academic engagement (Mumtaz et al., 2026; Percival et al., 2025). These aspects of inclusion are central to educational sustainability because they change the pedagogical paradigm from the simple act of enrollment to the meaningful integration of students into the academic community (Kumar & Yadav, 2025). In addition, promoting belonging necessitates addressing the institutional shortcomings that currently exist, including faculty resistance to changing instructional strategies and the inconsistent use of assistive technologies (Kaingo, 2026). These inconsistencies in providing necessary accommodations and facilitation directly erode student self-efficacy, often forcing learners to spend excessive cognitive effort struggling to overcome obstacles, instead of focusing on academic development (Ristad et al., 2023).

Sustainability in Education

Fovet (2017) argues that sustainable inclusive practice demands a move from obsolete retroactive accommodation models to proactive universal design frameworks that provide systemic access for diverse learners. Institutions can relieve the repetitive and costly burden on support services by preparing instructors to embrace Universal Design for Learning principles, and by building a stronger framework for inclusive student engagement (Fovet, 2024). This sustained involvement is eased through mastery-oriented feedback from educators and the breaking down of complex curricula into digestible milestones that allow students to be consistent and counteract the task avoidance that is often driven by anxiety in the face of intense cognitive demands (Gadsden & Goegan, 2023). Institutional capacity is also enhanced when leadership takes a systemic approach to inclusive design, embedding support resources into the pedagogical infrastructure rather than as isolated, retroactive fixes (Fovet, 2017; Wells, 2026).

Factors of Academic Procrastination

For students with hearing impairments, inaccessible communication channels and disproportionate cognitive load to translate non-auditory information into usable knowledge (Fadlallah et al., 2025) often lead to procrastination. This delayed initiation of the assignment is further compounded by a lack of faculty awareness of the specifics of Deaf culture and the need for pedagogical flexibility, requiring students to use significant cognitive energy to secure basic accommodations rather than to engage academically (Kim et al., 2024). Besides these structural barriers, communication barriers and social stigma also reduce student self-confidence and hinder the development of effective independent learning strategies (Budi et al., 2025). Due to the perceived burden of disclosure, students often do not ask for needed

support, leading to institutional failures that isolate students and weaken their academic resilience (Walter & Visconti, 2025). This cycle is reinforced by campus environments that do not normalize the implementation of Universal Design. Institutional resistance to inclusive frameworks requires onerous individual disclosure processes (Fovet, 2021).

Barriers to Communication and Accessibility

In the absence of built-in accessibility features, including accurate real-time captioning or transcripts, students need to use considerable cognitive resources only to decode vital course instructions (Li, 2026). The increased demand creates a significant bottleneck in planning coursework as the time taken to acquire these materials often takes away from the time planned for high-level synthesis and completion of assignments (Tao et al., 2025). Additionally, the absence of clear and open channels for faculty feedback exacerbates the problem, as infrequent communication hinders the student from tailoring their work to the academic requirements (Amjad et al., 2024; Santelli et al., 2020). As a consequence of this, the ambiguity in assignment requirements that emerges from this often triggers an action crisis, in which the inability to surmount these interactional barriers results in goal-disengagement and subsequent task avoidance (Nemtcan et al., 2022). This chronic dissonance between communicative intent and reception is also reflected in a lower capacity for self-regulation, with students failing to translate fragmented classroom interactions into structured study plans (Albertini et al., 2011; Alhrahsheh, 2025).

Self-Regulation and Motivation

Inadequate institutional accommodation of the specific needs of students with hearing impairments is often detrimental to their sense of academic control and development of their metacognitive self-regulation (Bartolo et al., 2023; Klassen et al., 2008). Students' internal motivation diminishes when they feel their academic success depends on the approval of accommodations, which is often unreliable, instead of their own effort, which leads to internalized negative self-judgments (Fuston-Goncé, 2025; Syharat et al., 2023). These reduced perceptions of self-efficacy often appear as a reactive procrastination approach where students delay difficult work to protect themselves from failure in an environment they see as inherently unfair (Beer et al., 2022).

Institutional Learning Conditions

Rigid course structures relying heavily on synchronous, uncaptioned auditory delivery systems often become time traps, forcing students to prioritize complex information procurement over substantive content engagement (YARAŞ, 2021). Moreover, the reliance on long, uninterrupted lectures significantly impairs the retention of information since learners have to deal with uninterrupted communication breaks that hinder understanding and task initiation (Hashimi & Alsindi, 2021). The time lag in access to critical course content from this process can last for weeks at a time, creating a large disconnect that forces deaf students to fall behind their hearing peers and creating a cycle of chronic task avoidance (Carpenter et al., 2020). In addition, the delay in the availability of course material necessitates a substantial effort to compensate for the learning gaps by oneself, often leading to a depletion of the motivational resources needed for successful self-regulation (Bäulke et al., 2018).

Impacts on Educational Inclusion

This is not a matter of individual performance, but a systemic failure to create a sense of belonging, pedagogical safety, and ultimately, to support long-term retention and educational

equity (Tian et al., 2023; Wei et al., 2023). Institutions that read delay in task completion as a lack of academic commitment rather than an adaptive response to systemic barriers further marginalize students, and may prompt premature withdrawal (Barattucci et al., 2021). Therefore, not addressing these structural triggers undermines overall equity efforts because academic persistence is associated with the existence of an inclusive, supportive environment, and not just individual will power (sergio.nieto@ub.edu et al., 2024; Taylor et al., 2025). The development of institutional contexts that encourage proactive Universal Design for Learning can deconstruct the systemic stressors that lead to maladaptive self-regulation and emotional exhaustion (Hall et al., 2019; Hidayat & Hasim, 2023).

Participation and Achievement

Such persistent accessibility barriers result in late submission of assignments and less participation in digital discussion forums, making a tangible link between institutional friction and poor academic performance (AlJarrah et al., 2018). These delays often lead to extended periods of academic hardship, with the accumulated effects of reduced participation hastening a decline in grade achievement and long-term graduation prospects (Manar & Winarsih, 2026; Moriña, 2022). These delays are often a response to the mental exhaustion of navigating inaccessible environments and a self-handicapping strategy to mask a student's true cognitive potential (Rist et al., 2023; Rodrigues et al., 2022). The dissonance between the students' potential and their academic achievement is emblematic of a deeper crisis of institutional integration, where the persistent obstacles to engagement frequently generate the anxiety and mental health issues that heighten the likelihood of premature withdrawal (Gow et al., 2020).

Belonging and Well-being

The constant negotiation of support needs leads to student isolation within the cycle of procrastination and academic stress, thus limiting their social integration and decreasing their sense of academic belonging (Hamilton et al., 2026; Niazov et al., 2021). This sense of alienation is further reinforced by the shame and guilt of task avoidance, which creates an inverse relationship between these negative affective states and the student's overall academic confidence (Martinie & Shankland, 2023). This academic stress increases and diminishes the student's ability to learn and willingness to look for the support systems that could help them overcome these problems (Haikal et al., 2025; Hitches et al., 2024).

Long-Term Educational Sustainability

To achieve sustainable educational outcomes, institutions must transition from reactive accommodations to inclusive and flexible pedagogical frameworks that proactively mitigate the stressors that lead to task avoidance (Galad et al., 2024). Institutions may reduce the cognitive load that currently promotes avoidant behavior and hinders the retention of students by normalizing flexible assessment pathways and providing early, accessible content (Çelik, 2023; Nieminen et al., 2023). The implementation of these accessibility-oriented design principles plays a key role in counteracting the link between procrastination and dropout intentions and in maintaining long-term academic persistence (Scheunemann et al., 2021). In the end, institutional success in this domain is intrinsically linked to the development of student self-efficacy, since proactive interventions that build confidence can successfully dissociate systemic stressors from maladaptive delay patterns (Xue et al., 2024). Such structural reforms not only relieve the psychological burdens of anxiety and fear of failure associated with procrastination (García-Ros et al., 2022), but also ensure that the

academic trajectory of students with hearing impairments are backed up with an equitable, rather than reactive, institutional design.

Discussion

The findings indicate that academic procrastination represents an important challenge to the sustainable and inclusive education of students with hearing impairment. The moderate-to-high level of procrastination suggests that many students frequently delay assignments, examination preparation, revision, and other academic responsibilities. Such delays may not arise solely from a lack of motivation; they may also reflect communication barriers, difficulty understanding classroom instructions, limited access to adapted learning materials, insufficient technological support, and fear of seeking assistance. The moderate level of task management further suggests that students experience difficulty planning academic activities, setting priorities, meeting deadlines, and completing tasks systematically. Students with hearing impairment may require additional time to understand lectures, interpret written instructions, access captioned content, or communicate with teachers and peers. When these accommodations are unavailable, academic tasks may appear demanding and create frustration, avoidance, or anxiety. Consequently, procrastination becomes both an individual behavioural concern and an indicator of shortcomings within the educational environment.

Academic engagement was also affected by delayed academic behaviour. Students who repeatedly postpone their work may participate less actively in classroom activities, experience lower confidence, and become increasingly disconnected from the learning process. This pattern can negatively influence achievement, attendance, emotional well-being, and educational continuity. From the perspective of sustainable education, persistent procrastination may increase the likelihood of academic failure and dropout. From an inclusive-education perspective, it limits meaningful and equitable participation. The findings emphasize that responsibility for reducing procrastination should not be placed entirely on students. Educational institutions should provide sign-language interpretation, captioned instructional resources, accessible digital platforms, individualized academic guidance, counselling, peer mentoring, and structured task schedules. Teachers can further support students by presenting clear instructions, dividing complex assignments into manageable stages, providing regular feedback, and allowing reasonable flexibility in task completion. These measures can strengthen self-regulation, motivation, academic engagement, and students' sense of belonging.

CONCLUSION

Academic procrastination is a multidimensional barrier that can restrict the academic participation and long-term educational development of students with hearing impairment. It is influenced not only by students' time-management and self-regulation abilities but also by communication difficulties, inaccessible learning materials, inadequate institutional support, and limited opportunities for meaningful classroom participation. If these challenges remain unaddressed, procrastination may contribute to poor achievement, reduced confidence, disengagement, and discontinuation of education. Sustainable and inclusive education therefore requires coordinated support from teachers, families, counsellors, peers, and educational institutions. Accessible communication, assistive technology, structured academic guidance, individualized support, and inclusive teaching practices can help students manage tasks effectively and participate confidently in learning. Addressing academic procrastination as both a personal and systemic concern is essential for ensuring equitable educational

opportunities, sustained engagement, and successful academic outcomes for students with hearing impairment.

The novelty of this study lies in positioning academic procrastination not merely as an individual self-regulation problem but as a multidimensional barrier to sustainable and inclusive education for students with hearing impairment. While previous studies have predominantly examined academic procrastination in relation to individual factors such as time management, motivation, and self-regulated learning, this study extends the perspective by linking procrastination with educational accessibility, academic engagement, equitable participation, and the sustainability of students' educational participation. The study further emphasizes the interaction between students' procrastination behaviour and contextual barriers, including difficulties in understanding instructions, accessing learning resources, communicating with teachers, and obtaining timely academic assistance. This contextualized perspective provides a more comprehensive understanding of how academic procrastination may contribute to disengagement and threaten continuity in education among students with hearing impairment. Accordingly, the study contributes a conceptual and practical framework for addressing procrastination through coordinated inclusive strategies, including accessible communication, sign-language support, captioned digital resources, assistive technology, structured academic scheduling, counselling, peer mentoring, and individualized guidance. This approach offers a distinctive contribution to inclusive education by connecting the reduction of academic procrastination with the broader goals of equitable participation, learner autonomy, and sustainable educational engagement.

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