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Article

Parents' Challenges and Academic Performance of Deaf and Hard of Hearing Learners in Modular Distance Learning During Covid 19 Pandemic

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Abstract: This study examines the challenges faced by parents of Deaf and Hard of Hearing (D/HH) learners in implementing modular distance learning (MDL) during the COVID-19 pandemic and explores the relationship between these challenges and the learners' academic performance. Utilizing a descriptive-correlational design, the research surveyed parents of D/HH learners from different educational levels, focusing on three key areas of challenge: management, content, and instruction. Findings indicate that parents encountered moderate challenges in instructional aspects, including limited sign language knowledge, time constraints, and difficulty maintaining student engagement. Content and management-related challenges were generally minimal. The statistical analysis revealed no significant correlation between parental challenges and the academic performance of D/HH learners, as all students maintained a "Satisfactory" performance level. These results suggest that, while parents experience obstacles in supporting MDL, these challenges do not significantly affect the academic outcomes of their children, possibly due to the structured nature of MDL materials. The study underscores the need for targeted support and accessible resources for parents to enhance instructional support, aiming to improve academic outcomes further. Recommendations include more tailored MDL resources, improved communication with teachers, and specialized training to better support the unique needs of D/HH learners.

Keywords: Deaf and Hard of Hearing (D/HH) learners, modular distance learning (MDL), parental challenges, academic performance, COVID-19 pandemic,

Introduction

The COVID-19 pandemic has profoundly impacted global education systems, disrupting traditional classroom learning worldwide. Schools and

universities were forced to close, affecting over 1.6 billion students at the peak of the pandemic (UNESCO, 2020). The sudden shift emphasized the need for flexible and remote education solutions to ensure continuity. Distance learning became a global response, adapting technologies to support virtual instruction in unprecedented ways (Dhawan, 2020). For many students, this transition presented challenges related to access, engagement, and adaptability in unfamiliar online platforms (Mishra et al., 2020). Particularly in lower-income regions, educational inequality widened as remote learning resources were limited (OECD, 2021). The lack of in-person interaction and the digital divide significantly impacted students' learning experience and engagement (Zhao, 2020). Furthermore, teachers had to adapt to new instructional methodologies without adequate training, resulting in varied learning outcomes (Daniel, 2020). Although distance learning helped mitigate educational disruptions, the transition highlighted critical gaps in accessibility and digital readiness (Aristovnik et al., 2020). The pandemic also underscored the need for new pedagogical approaches suited to virtual learning environments (König et al., 2020).

In regions with limited internet connectivity, modular distance learning emerged as a key strategy to maintain educational continuity. Unlike online learning, modular distance learning uses printed modules, worksheets, and other offline resources to support learning without a stable internet connection (Alvarez, 2020). This approach allowed schools to reach students in remote areas, reducing dependency on digital technology. Many countries adapted modular learning to accommodate students with limited or no access to internet-based platforms, enabling equitable access to education (Tria, 2020). Teachers and administrators collaborated to develop and distribute modular packets, often delivering them to students' homes or nearby drop-off points (Crawford et al., 2020). However, the effectiveness of modular learning heavily depended on parental involvement and students' self-discipline, as the format lacked immediate teacher feedback (Baticulon et al., 2021). Additionally, modular learning highlighted disparities in the quality of resources provided to students from different socioeconomic backgrounds (Nugroho et al., 2020). This approach aimed to minimize learning loss, though many students struggled to keep up without regular teacher support (Agaton & Cueto, 2021). Modular distance learning underscored the resilience of educational systems while also revealing limitations in content engagement and student motivation (Bernardo, 2021). The format has proved especially beneficial in maintaining academic engagement despite infrastructural challenges (Dangle & Sumaoang, 2020).

Deaf and Hard of Hearing (DHH) students face distinct challenges in modular distance learning, which is often not designed with their unique needs in

mind (Luckner & Muir, 2020). These students rely on visual communication, making learning through text-based modules especially difficult (Strassman et al., 2020). The lack of real-time communication deprives DHH learners of critical interactive support, which is essential for understanding complex content (Johnson, 2021). Unlike synchronous online classes, modular formats cannot offer sign language interpretation, hindering DHH students' comprehension (Moores, 2021). Furthermore, the absence of visual aids and interactive materials in modular resources limits the engagement and retention of DHH learners (Marschark & Hauser, 2020). Parental involvement becomes critical, yet many parents lack the skills needed to support DHH learning effectively at home (Guardino & Cannon, 2020). These students also face challenges in developing language and literacy skills, which require specialized teaching approaches typically unavailable in modular learning (Knoors & Marschark, 2020). Modular learning poses significant barriers to equitable education for DHH learners, highlighting a lack of accessibility adaptations (Beal-Alvarez & Cannon, 2021). Overall, DHH students' educational needs are often overlooked in the development of modular learning materials (Knoors & Marschark, 2021). Ensuring accessibility and tailored support in distance education remains an ongoing challenge for DHH education (Foster, 2020).

Parents play a vital role in supporting children's education during distance learning, especially for DHH learners (Rogers et al., 2020). With the shift to modular formats, parents have taken on additional responsibilities, acting as facilitators and interpreters of educational content (Agaton & Cueto, 2021). This is particularly demanding for parents of DHH children, who may lack the knowledge and skills needed for effective support (Guardino & Cannon, 2020). Parental involvement directly influences student engagement and learning outcomes, as parents help establish a conducive learning environment (Poon et al., 2021). In many cases, parents must adjust their work schedules to assist their children with assignments and understand lesson modules (Lau & Lee, 2021). Parents' roles extend to managing students' focus, motivation, and emotional well-being during distance education (Russell & Bray, 2021). This shift has led to increased stress for parents, who may lack access to necessary resources and support (Strassman et al., 2020). Moreover, parents of DHH learners often face communication barriers, impacting their ability to provide effective academic assistance (Beal-Alvarez & Cannon, 2021). Without institutional support, parents struggle to address the unique educational needs of DHH students (Marschark & Hauser, 2021). Parental involvement

is thus essential but often insufficient without additional educational resources and guidance (Moores, 2021).

Parental support is crucial for promoting academic engagement and success among DHH students, particularly in modular distance learning (Guardino & Cannon, 2020). With limited access to teachers, DHH learners rely heavily on parents to clarify instructions, encourage engagement, and facilitate learning (Russell & Bray, 2021). Parental involvement helps bridge the gap between students and inaccessible educational content, fostering a supportive environment conducive to learning (Johnson, 2021). Studies have shown that students with active parental support exhibit higher motivation and a greater sense of academic responsibility (Lau & Lee, 2021). For DHH students, parental encouragement plays a significant role in language acquisition and literacy skills, which are fundamental to academic progress (Knoors & Marschark, 2020). Parents also provide emotional support, helping DHH learners navigate the frustrations and challenges of modular learning (Poon et al., 2021). The active role of parents in reinforcing learning material enhances the overall effectiveness of modular education (Agaton & Cueto, 2021). Without parental involvement, DHH students are more likely to encounter difficulties in comprehension and engagement (Strassman et al., 2020). Parents' understanding of their child's needs can significantly impact their ability to support learning effectively (Moores, 2021). Thus, parental support is instrumental in compensating for the limitations of modular education, contributing to better learning outcomes for DHH students (Beal-Alvarez & Cannon, 2021).

While research has highlighted the challenges of modular distance learning, specific insights into the challenges faced by parents of DHH learners are limited. Studies have yet to fully address the extent of parental challenges in terms of quality of management, content, and instruction within modular learning contexts (Foster, 2020). There is limited understanding of how these factors impact the delivery and effectiveness of modular education for DHH students (Guardino & Cannon, 2021). Existing research largely overlooks how these challenges vary by context, particularly in areas with limited resources (Knoors & Marschark, 2021). There is also a gap in measuring the **quality of content** provided in modular education, which may lack adaptations for DHH students (Johnson, 2021). Moreover, studies have yet to evaluate the quality of **instructional methods** that parents are expected to adopt without training (Beal-Alvarez & Cannon, 2021). Additionally, the **management quality** of modular distance learning, including material distribution and support structures, remains underexplored (Poon et al., 2021). Furthermore, the

current research does not adequately assess the **academic performance** levels of DHH learners in modular settings compared to traditional learning environments (Marschark & Hauser, 2021). Addressing these gaps is essential for understanding the barriers DHH students face in modular education and for developing targeted interventions to improve educational outcomes (Strassman et al., 2020).

This study will contribute to the body of knowledge by identifying specific challenges and needs of DHH learners in modular distance learning, thereby informing the design of more inclusive educational resources. Exploring parental roles and their impacts on DHH students' academic success, the study can provide insights for enhancing parental support systems. Findings from this research could assist educational policymakers in developing targeted strategies to improve accessibility in distance learning formats.

Methodology

The study utilized a universal convenience sampling method to select respondents, targeting parents of Deaf and Hard of Hearing (D/HH) learners from various educational levels and institutions in Mandaue City. The sample included parents of D/HH learners from grades 1 to 6 at Mandaue City Central SPED School, parents of grade 7 to 10 learners at Mandaue City SPED Center High School, and parents of D/HH vocational trainees from the Area Vocational Rehabilitation Center II (AVRC). Data collection was conducted using a structured questionnaire divided into two main parts. Part I gathered demographic information about the respondents, including age, gender, number of children, educational attainment, employment status, and sign language proficiency. Part II focused on the extent of challenges parents encountered in the implementation of Modular Distance Learning (MDL) for D/HH learners, specifically in three key areas: management, content, and instruction. This section used a Likert scale to capture responses, with scoring options ranging from 1 (strongly disagree) to 4 (strongly agree), where each response provided insight into the degree of challenge experienced. For scoring, a numerical rating scale was employed to classify the levels of challenges encountered by parents. A score range of 3.25-4.00 indicated an "Extreme" level of challenges, meaning respondents strongly agreed they faced significant challenges in MDL implementation. Scores between 2.50-3.24 represented a "Moderate" level of challenges, while 1.75-2.49 suggested "Minimal" challenges, and 1.00-1.74 indicated "Very Minimal" challenges. To examine the relationship between parents' challenges and the academic performance of D/HH learners, the study used Pearson's Product-Moment Correlation, using the second quarter grades of the learners to determine the potential influence of parental challenges on academic outcomes.

Results and Discussion

Table 1. Extent of Challenges Encountered by the Parents of D/HH Learners in the Implementation of the Modular Distance Learning in terms of Management

S/N	Indicators	WM	Verbal Description
1	The schedule of the distribution of self-learning module is not fit to your available time.	1.46	Very Minimal
2	The Distribution of self-learning modules is not systematized.	1.31	Very Minimal
3	The sped teacher does not give an orientation on what and how to utilize and answer the self-learning modules.	1.38	Very Minimal
4	The sped teacher does not inform us with the schedule as to when to answer the modules and when to submit.	1.38	Very Minimal
5	The sped teacher does not give us with options on how to contact him or her when we have questions about the modules.	1.38	Very Minimal
6	The schedule for the retrieval of the self-learning module is not suited to your available time.	1.92	Minimal
7	There are no available boxes/trays in the school where to submit the modules.	1.85	Minimal
8	In case the parents/guardians cannot not pass the modules in the school, we are not told to give it to the focal person assigned to our area.	1.69	Very Minimal
9	The sped teacher does not give an ample time to answer and accomplish the self- learning modules.	1.77	Minimal
10	The retrieval of the modules is not well- organized.	2.08	Minimal
Aggregate Weighted Mean		1.62	Very Minimal

The data presented in Table 1 reflects the extent of challenges encountered by parents of Deaf and Hard of Hearing (D/HH) learners in implementing modular distance learning (MDL), specifically in terms of management-related issues. The aggregate weighted mean (WM) for all indicators is 1.62, categorized as "Very Minimal," indicating that parents overall faced low levels of difficulty with management aspects in the MDL process. Individual indicators reveal that several areas posed slight challenges but were still minimal. For instance, parents reported a "Minimal" challenge with the retrieval of self-learning modules, with a WM of 2.08, and the scheduling of module retrieval was rated similarly at 1.92. However, specific issues such as the unsystematic distribution of self-learning modules (WM of 1.31) and the lack of orientation from SPED teachers on module usage (WM of 1.38) were rated as "Very Minimal" challenges. Similarly, the scheduling of module distribution not fitting the parents' available time received a WM of 1.46, suggesting limited inconvenience. Although there were minor challenges in areas such as module submission logistics and communication with teachers, these were

not perceived as significant barriers by parents. Overall, the data suggests that, while there are areas for improvement in MDL management, the challenges were generally minimal, indicating a reasonably smooth process for parents in this aspect of distance learning.

Table 2. Extent of Challenges Encountered by the Parents of D/HH Learners in the Implementation of the Modular Distance Learning in terms of Content

S/N	Indicators	WM	Verbal Description
1	The activities are not fit to your child's level of understanding.	1.62	Very Minimal
2	The learning activities are not enjoyable or interactive (has puzzles or games etc.)	1.54	Very Minimal
3	The learning activities are realistic.	1.46	Very Minimal
4	The activities given are not appropriate or doable by your child.	1.54	Very Minimal
5	The activities are not enough for your child to learn the new lesson.	1.85	Minimal
6	The activities in the module are not well-organized.	1.54	Very Minimal
7	The activities have no clear instructions.	1.77	Minimal
8	The module does not use clear images that your child can easily see and identify.	2.00	Minimal
9	The texts being used in the module is not readable.	2.00	Minimal
10	The words being used in the learning activities are not appropriate to the level of your child.	2.23	Minimal
Aggregate Weighted Mean		1.75	Minimal

The data in Table 2 illustrates the extent of content-related challenges that parents of Deaf and Hard of Hearing (D/HH) learners encountered in the implementation of modular distance learning (MDL). The aggregate weighted mean (WM) for content challenges is 1.75, which falls into the "Minimal" category. This suggests that, overall, parents found the content of the learning modules only mildly challenging. Among the indicators, the highest challenges reported by parents included the readability of text (WM of 2.00), the clarity and appropriateness of images (WM of 2.00), and the use of language that is appropriate for the child's comprehension level (WM of 2.23), all rated as "Minimal" challenges. These results indicate some areas where content could be made more accessible for D/HH learners. Conversely, several indicators were rated as "Very Minimal" challenges, such as the alignment of activities with the child's understanding level (WM of 1.62), the interactive nature of activities (WM of 1.54), and the organization of activities within the module (WM of 1.54). These findings suggest that, while the modules could benefit from enhanced readability and clarity, the majority of parents did not find the activities themselves or their organization to be major barriers. The minimal level of challenge overall reflects that, while there are some improvements needed in terms of content accessibility and appropriateness, the content was generally manageable for parents supporting their D/HH learners in MDL.

Table 3. Extent of Challenges Encountered by the Parents of D/HH Learners in the Implementation of the Modular Distance Learning in terms of Instruction

S/N	Indicators	WM	Verbal Description
1	Lack of time in helping the child in answering the module due to conflict of responsibilities as parents (household chores, work)	3.50	Extreme
2	Less or no knowledge about sign language as a way of communicating to our learners.	3.42	Extreme
3	Parents has limited knowledge on the content of the lesson	3.08	Moderate
4	Absence of person to guide/teach the guide	2.92	Moderate
5	Difficulty in getting the student's attention and focus in answering the modules due to distractions around like gadgets and social media	3.33	Extreme
6	Difficulty in independent learning	3.33	Extreme
7	Lack of interest of child towards studying	3.17	Moderate
8	Health factors	3.00	Moderate
9	Difficulty in communicating with the sped teacher due to unavailability of gadgets.	3.17	Moderate
10	No/Late response of the sped teacher when asking about the lesson.	2.75	Moderate
Aggregate Weighted Mean		3.17	Moderate

The data in Table 3 presents the extent of instructional challenges faced by parents of Deaf and Hard of Hearing (D/HH) learners in implementing modular distance learning (MDL). The aggregate weighted mean (WM) for instructional challenges is 3.17, categorized as "Moderate," indicating that parents encountered significant difficulties in supporting their children's learning due to instructional barriers. Among the indicators, the most severe challenges reported include the lack of time for assisting children due to conflicting responsibilities, such as work and household duties, with a WM of 3.50, rated as "Extreme." Additionally, the lack of sign language knowledge (WM of 3.42) and difficulty in maintaining the child's attention amidst distractions (WM of 3.33) were also rated as "Extreme," underscoring critical gaps in parental capacity to provide effective instructional support. Other notable challenges include limited knowledge of the lesson content (WM of 3.08) and the lack of a person to guide the child in learning (WM of 2.92), both rated as "Moderate." Parents also reported moderate challenges related to their child's lack of interest in studying (WM of 3.17), health issues affecting learning (WM of 3.00), and communication difficulties with SPED teachers, either due to a lack of gadgets or delayed responses from teachers (WM of 3.17 and 2.75, respectively). These findings suggest that while some instructional challenges are manageable, others, particularly those related to communication, time constraints, and knowledge gaps, significantly hinder the ability of parents to support their D/HH learners in MDL. Overall, the "Moderate" level of challenges highlights the

need for targeted support to improve instructional guidance, communication

Table 4. Level of Academic Performance of the Learners

Level	Numerical Range	f	%
Outstanding	90 – 100	0	0.00
Very Satisfactory	85 – 89	0	0.00
Satisfactory	80 – 84	12	100.00
Fairly Satisfactory	75 – 79	0	0.00
Did not meet the Expectations	Below 75	0	0.00
Total		12	100.00
Mean		82.00	
St. Dev.		0.823	

tools, and resources for parents aiding their children in modular learning contexts.

The data in Table 4 illustrates the academic performance levels of Deaf and Hard of Hearing (D/HH) learners engaged in modular distance learning (MDL). Based on the provided scores, all 12 learners (100%) fell within the "Satisfactory" performance range, with scores between 80 and 84. There were no learners in the "Outstanding" (90–100) or "Very Satisfactory" (85–89) categories, nor did any learners fall below the "Satisfactory" level. This consistent performance indicates that while learners are meeting basic academic expectations, they are not reaching higher levels of achievement within this learning model. The mean score for the group was 82.00, with a standard deviation of 0.823, suggesting that academic performance scores were tightly clustered around the mean, indicating minimal variation among students' grades.

Table 5. Test of Significant Relationship between the Parents' Challenges and the Academic Performance of the Learners

Variables	r-value	Strength of Correlation	p - value	Decision	Result
Management and Academic Performance	-0.098	Negligible Negative	0.762	Do not reject Ho	Not Significant
Content and Academic Performance	-0.151	Negligible Negative	0.640	Do not reject Ho	Not Significant
Instruction and Academic Performance	0.231	Negligible Positive	0.470	Do not reject Ho	Not Significant

*significant at p<0.05 (two-tailed)

Table 5 presents the test results for the significant relationship between the challenges faced by parents of Deaf and Hard of Hearing (D/HH) learners in modular distance learning and the academic performance of their children. The analysis examines three key variables: management, content, and instruction, in relation to academic performance. The correlation between management

challenges and academic performance yielded an r-value of -0.098, indicating a negligible negative correlation. With a p-value of 0.762, this relationship was found to be statistically non-significant, leading to the decision to "Do not reject Ho" (the null hypothesis), which implies no meaningful association between management-related challenges and academic outcomes. Similarly, the content-related challenges had a negligible negative correlation with academic performance, evidenced by an r-value of -0.151 and a p-value of 0.640. This result also failed to reach statistical significance, resulting in the decision to "Do not reject Ho." This suggests that content-related challenges encountered by parents do not have a significant impact on the academic performance of D/HH learners in this study. Lastly, the instructional challenges showed a negligible positive correlation with an r-value of 0.231 and a p-value of 0.470. This relationship was also non-significant, leading to a similar decision to "Do not reject Ho." This finding indicates that instructional challenges, despite showing a slight positive trend, do not significantly influence the academic performance of the learners. Overall, none of the three parental challenges—management, content, or instruction—demonstrated a statistically significant relationship with the academic performance of D/HH learners in modular distance learning, as all p-values exceeded the 0.05 significance threshold. These results suggest that while parents face various challenges in supporting modular distance learning, these challenges do not appear to have a measurable impact on the academic performance of the learners in this study.

Discussion

Based on the findings, this study highlights the limited impact of parental challenges management, content, and instruction—on the academic performance of Deaf and Hard of Hearing (D/HH) learners in modular distance learning (MDL). While parents reported challenges in all three areas, the statistical analysis indicated that these difficulties did not significantly affect their children's academic outcomes. This finding aligns with previous research suggesting that academic performance may be influenced more by students' intrinsic factors, such as motivation and self-regulation, rather than external support challenges faced by parents (Karabenick & Zusho, 2017). For instance, even though parents experienced difficulty with instructional support and communication with teachers, the consistency in student performance (with all students falling within the "Satisfactory" range) implies that these learners may be able to maintain a baseline level of performance independent of parental challenges (Lynch, 2018). Additionally, the standardization and simplicity of MDL content may have allowed learners to engage with materials in ways that minimized dependency on additional parental guidance, as observed in other studies focusing on distance learning for students with disabilities (Black et al., 2021).

The negligible correlation found in this study suggests that while parental challenges exist, they do not substantially hinder D/HH learners from meeting academic expectations. However, it is crucial to recognize that the "Satisfactory" performance level observed across the sample does not imply academic excellence. Prior studies indicate that while MDL can ensure educational continuity, it often fails to foster high levels of achievement due to limitations in engagement and tailored support (Schuck & Lambert, 2020). The moderate instructional challenges faced by parents, such as lack of time, knowledge gaps in content, and limited sign language proficiency, reflect systemic barriers in supporting D/HH students' unique needs, a common concern in special education contexts (García & Weiss, 2020). Addressing these challenges through accessible resources, teacher-parent communication frameworks, and training in instructional strategies specific to D/HH learners could better support not only satisfactory but also higher levels of academic achievement in MDL settings.

Conclusion

In conclusion, this study sheds light on the extent and impact of parental challenges in supporting Deaf and Hard of Hearing (D/HH) learners in modular distance learning (MDL) during the COVID-19 pandemic. Despite parents facing moderate to minimal challenges in the areas of management, content, and instruction, these difficulties did not show a significant correlation with the academic performance of their children, which remained at a satisfactory level. This suggests that while parents play an important supportive role, the structured nature of MDL may have allowed D/HH learners to maintain baseline academic performance even in the face of external challenges. However, the findings also underscore a need for further enhancements in MDL resources, particularly in providing instructional support tailored to the needs of D/HH learners. Addressing barriers such as limited sign language communication, instructional guidance, and clearer content could improve educational outcomes beyond the satisfactory level and foster greater academic success. Therefore, educational policymakers and schools should consider implementing targeted strategies to support both D/HH learners and their parents, ensuring that distance learning environments are more inclusive and effective.

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