

Article

Students with Intellectual Disabilities' Challenges in Online Classes Amidst Covid-19 Pandemic

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Abstract:

This study examined the challenges associated with online learning among students with varying levels of intellectual disabilities. The investigation incorporated diverse perspectives, drawing upon the experiences of teachers, parents, and the students themselves. The study population was characteristically diverse, including male and female teachers and parents from a range of age groups, marital statuses, and educational backgrounds. The students' profiles also varied, predominantly focusing on males within the 13-16 age range with a moderate level of intellectual disability. Key aspects such as technical issues/computer literacy, self-motivation, functional academic skills, and overall challenges were studied to ascertain the unique difficulties encountered in an online learning environment. Quantitative statistical analysis indicated no significant differences in the challenges faced in relation to the level of intellectual disability, except for the self-motivation domain. Parents consistently reported higher mean scores than teachers, indicating a higher level of agreement with the proposed challenges. These findings suggest that while the level of intellectual disability might not drastically alter the challenges faced in online learning, self-motivation significantly influences the online learning experience. Further, discrepancies in perceptions between teachers and parents highlighted the need for improved collaboration and communication. The study concludes with the recommendation for focused interventions to boost self-motivation, and for the provision of robust technical support and resources to enhance the online learning experiences for students with intellectual disabilities.

Keywords: Online Learning, Intellectual Disabilities, Special Education

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Introduction

Since the global spread of the Covid-19 virus began, online education has exploded in popularity. All public and private institutions are compelled to switch to online or any other

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kind of distant learning in order to help restrict the spread of the virus, reduce the number of new infections, and save as many lives as possible (Jiang et al., 2020). Singh & Thurman (2019) emphasized that the term "online learning" refers to any form of education delivered through a digital medium. Rapanta et al. (2020) as more and more learning take place online, educators are challenged to find new ways to incorporate interactive technology into their lessons to reach all students and accommodate their unique learning styles, regardless of physical proximity.

Virtual conference rooms are the primary strategy and tool they have employed to cultivate a sense of community and collaboration in the online learning environment (Berry, 2019). The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has compiled a list of free educational platforms and tools that can be utilized for online learning, according to the needs of each educational institution and to promote social connection and care during school closures (Koya & Chowdhury, 2020). However, it depends on the current technology being used and the subject being taught; consequently, there is no universal strategy for teaching with technology. Incorporating technology and a learners' management system (LMS) provides additional considerations alongside teaching pedagogy, construction of learning experiences and assessment, types and extent of students' abilities, disabilities, socioeconomic status, collaboration, and stakeholder support in order to increase the likelihood of a successful implementation of online learning (Stahl et al., 2006; Moore, 2013; Seale, 2013; Karam et al., 2021).

Experts and policymakers have focused the most attention on the fact that socially disadvantaged groups have difficulty meeting the prerequisites for online learning (Dwivedi et al., 2022). Therefore, extra consideration must be given to the "unique needs of students with impairments" in online or remote learning, as they are among those most adversely affected by the shift in educational approach, as their condition requires in-person instruction by their teachers and other supporting professionals to strengthen their weaknesses, achieve progress, and assist them in meaningfully and inclusively integrating into society (Edyburn, 2013; Smith & Jones, 2016; Kent, 2015).

As a consequence of the pandemic, the number of specialists like special education teachers, speech and language therapists, and psychologists who provide support services for

students with special needs has decreased significantly (Asbury et al., 2021). Regular TV lessons were challenging to follow for students with special needs, many of them did not participate in online courses, and their teachers did not offer performance feedback (Hebebe et al., 2020). As SPED teachers working with students with special needs, it has been observed that students with special needs receive less support in education services and that there is less communication and cooperation between instructors, students, and their families. Both the students and their parents were reluctant to adopt distance education. There were also issues with parents' and students' technical knowledge and skills, as well as delayed and costly Internet connections. Students with special needs or disadvantages are a significant threat because distance education is the only method that can meet their educational requirements. Distance education for students with intellectual disabilities.

Numerous studies indicate that active support and collaboration with guardians and teachers are essential in the administration of online classes, given that the distance and intervening barriers are more likely to exacerbate the difficulties of learners with intellectual disabilities and difficulties in cognitive processes, as well as their language development, which may include lexical, morphosyntactic, phonological, and pragmatic ones. Because of their limited vocabulary, inability to comprehend the interlocutor's messages, and location in each reality, there are numerous communication breakdowns. It can be deduced that online instructions, classes, and materials for autonomous reading or listening must be tailored and simplified appropriately. While the COVID-19 pandemic has prompted a significant shift towards online education worldwide, little research has been conducted specifically addressing the challenges faced by students with intellectual disabilities in this new learning environment. Although some studies have explored the broader implications of remote learning for students with disabilities, the unique needs and difficulties experienced by students with intellectual disabilities have not been thoroughly examined. Consequently, there is a notable research gap regarding the specific challenges these students encounter during online classes amidst the COVID-19 pandemic. Understanding these challenges is crucial for the development of effective interventions and accommodations that can support the educational success and well-being of students with intellectual disabilities in the virtual learning context.

Methodology

This study utilized quantitative research design for it attempted to determine the level of challenges faced by the students with intellectual disabilities in online classes amidst Covid-19 pandemic as perceived by the parents and teachers through a 4-point Likert scale and then test whether there would be a significant difference between the parents' and teachers' perceptions. Descriptive design attempts to create a snapshot of the current situation (Rahmati et al., 2018), which in this case refers to the challenges faced by the students with intellectual disabilities in online classes amidst Covid19 pandemic. Meanwhile, the correlation assesses the relationships between and among two or more variables (Rahmati et al., 2018), and this pertains to the test of significant difference between the parents' and teachers' perceptions in this study. This study would use an adapted survey questionnaire from Baticulon et al. (2021). It contained five (5) indicators per challenge category -- Technical Issues and Computer Literacy, Self-Motivation, Functional Academic Skills – measured with 4-point Likert scale to quantify the teacher and parent respondents' views on the challenges encountered by the students with Intellectual disabilities in online learning during the pandemic period. In this research, Act of 2012 is "An Act Protecting Individual Personal Information in Information and Communications Systems in the Government and the Private Sector, Creating for this purpose a National Privacy Commission, and for Other Purposes" (R.A. No. 10173).

Results and Discussion

Table 1. Profile of Teachers Respondents

Age and Gender	Frequency	Percentage
21-30	7	23.33
31-40	10	33.33
41-50	13	43.33
Gender		
Female	21	70.00
Male	9	30.00
Marital Status		
Single	9	30.00
Married	21	70.00
Years in Teaching		
1-5	15	50.00
6-10	11	36.67

11-15	0	0.00
More than 15	4	13.33
Highest Educational Attainment		
College Graduate	1	3.33
Masters Level	0	0.00
Masters Graduate	23	76.67
Doctoral Level	3	10.00
Doctoral Graduate	3	10.00
Number of Learners with ID in Online Class		
1 - 10	2	6.67
11 - 20	28	93.33
Specialization		
English	7	23.33
Mathematics	8	26.67
Special Education	15	50.00

Table 1 presents the profile of teachers who participated in the study. The majority of the respondents were between the ages of 31-50, with the highest percentage being in the 41-50 age range (43.33%). In terms of gender, 70% of the teachers were female, while 30% were male. The majority of the teachers were married (70%) compared to being single (30%). Regarding their years of teaching experience, 50% had 1-5 years of experience, 36.67% had 6-10 years, and only a small percentage (13.33%) had more than 15 years of experience. The highest educational attainment was a Master's degree, with 76.67% of the teachers having a Master's level education, while 10% had a Doctoral level education. When it comes to the number of learners with intellectual disabilities (ID) in their online classes, the majority of teachers (93.33%) had 11-20 students with ID. In terms of specialization, 50% of the teachers had a background in Special Education, while English and Mathematics were the specializations of 23.33% and 26.67% of the teachers, respectively. The implications of these findings suggest that the study involved a diverse group of teachers with varying levels of experience and educational backgrounds. This diversity can contribute to a comprehensive understanding of the challenges faced by students with intellectual disabilities in online classes during the COVID-19 pandemic. The high representation of teachers specializing in Special Education

indicates a potential expertise in addressing the unique needs of students with ID in the virtual learning environment. However, the concentration of teachers with limited years of experience and the absence of teachers with 11-15 years of experience highlight a potential gap in understanding the long-term impact of online learning on students with ID. Further research could explore the relationship between teacher experience and their ability to effectively support students with ID in online classes. Additionally, considering the predominance of female teachers, future studies could investigate any potential gender-related differences in teaching practices and the provision of accommodations for students with ID in virtual learning settings.

Table 2. Profile of Parents Respondents

Age and Gender	Frequency	Percentage
21-30	0	0.00
31-40	17	56.67
41-50	13	43.33
Gender		
Female	26	86.67
Male	4	13.33
Marital Status		
Single	4	13.33
Married	26	86.67
Highest Educational Attainment		
High School Graduate	22	73.33
College Graduate	8	26.67
Number of Children		
1 - 3	29	96.67
4 - 6	1	3.33
Employment Status		
Full-time	12	40.00
Part-time	13	43.33
Seasonal	5	16.67
Economic Status [in USD]		
Less than 32,047 [Poor]	20	66.67
32,048 - 53,413 [Lower Middle Class]	8	26.67
53,414 - 106,826 [Middle Class]	2	6.67

Table 2 provides the profile of parent respondents in the study. The majority of parents fell within the age range of 31-50, with 43.33% being between 41-50 years old and 56.67% between 31-40 years old. In terms of gender, 86.67% of the respondents were

female, while 13.33% were male. The majority of parents were married (86.67%) compared to being single (13.33%). When it comes to educational attainment, 73.33% of parents had a high school education, while 26.67% were college graduates. In terms of the number of children, the vast majority (96.67%) had 1-3 children, with only 3.33% having 4-6 children. In terms of employment status, 40% of parents were employed full-time, 43.33% were employed part-time, and 16.67% had seasonal employment. Regarding economic status, 66.67% of parents fell into the category of "less than 32,047 USD" (poor), 26.67% fell into the category of "32,048 - 53,413 USD" (lower middle class), and only 6.67% fell into the category of "53,414 - 106,826 USD" (middle class). The implications of these findings suggest that the study involved a diverse group of parents with varying socioeconomic backgrounds and educational levels. The majority of parents had a high school education, indicating that there may be varying levels of familiarity and comfort with navigating online learning platforms and supporting their child's education in a virtual setting.

The high percentage of parents who were employed, either full-time or part-time, suggests that they may face time constraints and additional responsibilities while juggling their child's education during the pandemic. The predominance of parents in the lower economic status category highlights the potential financial challenges they may face in terms of accessing necessary resources and technology for effective online learning. Understanding the specific needs and circumstances of parents from diverse socioeconomic backgrounds is crucial for policymakers and educators to develop targeted interventions and support systems that address the unique challenges faced by families in low-income or economically disadvantaged situations. Additionally, the absence of parent respondents in the 21-30 age range indicates a potential gap in understanding the perspectives and experiences of younger parents in navigating online education for their children with intellectual disabilities.

Table 3. Profile of Students with Disability

Age in Years	Frequency	Percentage
13-14	13	43.33
15-16	15	50.00
17-18	2	6.67
Gender		
Female	4	13.33
Male	26	86.67
Level of Intellectual Disability		
Mild	4	13.33
Moderate	26	86.67

Table 3 presents the profile of students with disabilities who participated in the study. The majority of the students fell within the age range of 13-16 years, with 43.33% being 13-14 years old and 50% being 15-16 years old. A small percentage (6.67%) of the students were in the 17-18 age group. In terms of gender, the majority of the students were male (86.67%), while only 13.33% were female. When considering the level of intellectual disability, 86.67% of the students had a moderate level of intellectual disability, while only 13.33% had a mild level of intellectual disability.

Moreover, the age distribution suggests that the majority of students with disabilities in the sample were in the early to mid-adolescent years. Understanding the developmental and educational needs of students with disabilities in this age range is crucial for designing appropriate interventions and support systems. The higher representation of male students indicates a potential gender disparity in the identification and participation of students with disabilities in the study. Further research could explore the factors contributing to this gender disparity and investigate any potential differences in educational outcomes and support needs between male and female students with disabilities. The significant majority of students having a moderate level of intellectual disability suggests that the study primarily focused on students with moderate intellectual disabilities. It is important to recognize the unique challenges faced by students with different levels of intellectual disabilities and tailor educational approaches accordingly.

Table 4. Technical Issues and Computer Literacy

Indicators	Teachers		Parents		Overall	
	Mean	Int	Mean	Int	Mean	Int
Lack of devices or limited access to the gadget	1.70	NP	3.23	P	2.47	LP
Have unreliable, slow, or no internet access	3.13	P	3.40	HP	3.27	HP
Have difficulty operating the online platform	2.87	P	3.63	HP	3.25	HP
Have costly monthly internet and gadget maintenance	2.80	P	3.93	HP	3.37	HP
Lack of technical training in handling students with intellectual disabilities during online class	3.43	HP	3.40	HP	3.42	HP
Aggregate Mean	2.79	P	3.52	HP	3.15	P

Table 4 presents the responses of teachers and parents regarding technical issues and computer literacy in the context of online classes for students with disabilities. The indicators assessed include the lack of devices or limited access to gadgets, unreliable or slow internet access, difficulty operating the online platform, costly monthly internet and gadget maintenance, and the lack of technical training in handling students with intellectual disabilities during online classes. The table displays the mean scores for each indicator for teachers, parents, and an overall aggregate mean. The findings indicate that both teachers and parents experienced various technical issues and challenges. Teachers reported a mean score of 2.79, indicating moderate agreement with the mentioned indicators. Parents, on the other hand, reported a higher mean score of 3.52, suggesting a higher level of agreement with the challenges. The overall aggregate mean score was 3.15, indicating a moderate level of agreement with the technical issues and computer literacy challenges faced by both teachers and parents. These findings have several implications. Firstly, they highlight the significance of addressing the technical barriers and limitations that hinder effective online learning for students with disabilities. Lack of access to devices, unreliable internet, and difficulty operating online platforms can significantly impede students' ability to engage in virtual classes. Efforts should be made to provide necessary devices and ensure

reliable internet access to students with disabilities and their families. Secondly, the high mean score reported by parents indicates the importance of understanding and supporting parents in overcoming technical challenges. Providing parents with training and resources to enhance their computer literacy skills can empower them to better support their child's online learning experience.

Additionally, the moderate agreement regarding the lack of technical training in handling students with intellectual disabilities suggests a need for specialized training and professional development opportunities for both teachers and parents. It is crucial to equip educators and parents with the necessary skills and knowledge to effectively support students with disabilities in the online learning environment. Overall, addressing the technical issues and computer literacy challenges identified in this study is essential for creating an inclusive and accessible online learning environment for students with disabilities. Collaborative efforts between educational institutions, policymakers, and technology providers are required to ensure equitable access to devices, reliable internet, technical support, and training opportunities for teachers and parents.

Table 5. Self-Motivation

Indicators	Teachers		Parents		Overall	
	Mean	Int	Mean	Int	Mean	Int
Low income	2.80	P	3.87	HP	3.34	HP
Not got the technical know-how to deal with students with intellectual disabilities	3.40	HP	3.47	HP	3.44	HP
Been anxious during online classes due to distorted communication	2.90	P	3.53	HP	3.22	P
Been dissatisfied with student's performance	3.60	HP	3.23	P	3.42	HP
Not got support mechanism to reinforce the online teaching process	3.23	P	2.83	P	3.03	P
Aggregate Mean	3.19	P	3.39	HP	3.29	HP

Table 5 presents the responses of teachers and parents regarding self-motivation in the context of online classes for students with

disabilities. The indicators assessed include low income, lack of technical know-how in dealing with students with intellectual disabilities, anxiety during online classes due to distorted communication, dissatisfaction with student performance, and the absence of support mechanisms to reinforce the online teaching process. The table displays the mean scores for each indicator for teachers, parents, and an overall aggregate mean. The findings suggest that both teachers and parents face challenges related to self-motivation in the online learning environment. Teachers reported a mean score of 3.19, indicating a moderate level of agreement with the mentioned indicators, while parents reported a higher mean score of 3.39, indicating a higher level of agreement with these challenges. The overall aggregate mean score was 3.29, suggesting a moderate level of agreement with the self-motivation challenges faced by both teachers and parents.

In addition, the higher mean score reported by parents regarding low income highlights the potential financial strain experienced by families in supporting their child's online learning. Addressing the economic challenges faced by families is crucial to ensure equitable access to necessary resources and support systems. Secondly, the moderate level of agreement regarding the lack of technical know-how and anxiety during online classes suggests the need for targeted training and support for teachers and parents in effectively navigating the online learning environment. Providing professional development opportunities and resources can enhance their confidence and skills in addressing the specific needs of students with disabilities in the virtual setting. Additionally, the higher mean score reported by teachers regarding dissatisfaction with student performance indicates the importance of monitoring and addressing individual student progress and providing appropriate interventions and support. Collaboration between teachers, parents, and support personnel is essential to ensure that students receive the necessary guidance and assistance to achieve their academic goals. Moreover, the moderate agreement regarding the absence of support mechanisms underscores the

need to establish a robust support system that reinforces the online teaching process.

Table 6. Functional Academic Skills

Indicators	Teachers		Parents		Overall	
	Mean	Int	Mean	Int	Mean	Int
Difficulty administering reading-related activities	3.13	P	3.23	P	3.18	P
Difficulty administering writing-related tasks	3.23	P	3.23	P	3.23	P
Difficulty teaching simple-mathematical equations	2.97	P	3.27	HP	3.12	P
Difficulty instructing the students with ID to perform self-help skills	3.20	P	2.70	P	2.95	P
Difficulty teaching the students with ID to communicate effectively	3.37	HP	2.33	LP	2.85	P
Aggregate Mean	3.18	P	2.95	P	3.07	P

Table 6 presents the responses of teachers and parents regarding functional academic skills in the context of online classes for students with disabilities. The indicators assessed include difficulty administering reading-related activities, difficulty administering writing-related tasks, difficulty teaching simple mathematical equations, difficulty instructing students with intellectual disabilities (ID) to perform self-help skills, and difficulty teaching students with ID to communicate effectively. The table displays the mean scores for each indicator for teachers, parents, and an overall aggregate mean. The findings suggest that both teachers and parents face challenges related to functional academic skills in the online learning environment. Teachers reported a mean score of 3.18, indicating a moderate level of agreement with the mentioned indicators, while parents reported a slightly lower mean score of 2.95, suggesting a lower level of agreement with these challenges. The overall aggregate mean score was 3.07, indicating a moderate level of agreement with the functional academic skills challenges faced by both teachers and parents. These findings have several implications. Firstly, the moderate agreement regarding the difficulty in administering reading-related activities and writing-related tasks highlights the specific challenges faced by teachers and parents in facilitating literacy skills development in the online environment. It is important to explore innovative and interactive approaches to

support reading and writing instruction and provide teachers and parents with the necessary tools and resources to effectively administer these activities. Secondly, the difficulty reported in teaching simple mathematical equations suggests the need for targeted strategies and instructional methods to enhance mathematical learning for students with disabilities in the virtual setting. Providing teachers and parents with appropriate training and resources can support their ability to effectively teach mathematical concepts and promote students' mathematical skills development. Additionally, the challenges reported in instructing students with ID to perform self-help skills and communicate effectively emphasize the importance of fostering independence and communication skills. Specialized training and support are needed for teachers and parents to address these specific areas and provide individualized guidance to students with disabilities. Moreover, the lower mean score reported by parents regarding difficulty in teaching students with ID to communicate effectively indicates a potential gap in their understanding or involvement in promoting effective communication strategies.

Table 7. Test of Significant Difference

Grouped by its Level of Intellectual Disability	F-Value	P-Value	Significance	Result
Technical Issues/Computer Literacy	0.83	0.370	Not Significant	Ho Accepted
Self-Motivation	6.30	0.018	Significant	Ho Rejected
Functional Academic Skills	3.35	0.078	Not Significant	Ho Accepted
Overall Challenges	1.06	0.312	Not Significant	Ho Accepted

The study explored the potential differences among groups characterized by different levels of intellectual disability in relation to several aspects, including technical issues/computer literacy, self-motivation, functional academic skills, and overall challenges. The statistical analysis revealed no significant difference among the groups regarding technical issues/computer literacy, functional academic skills, and overall challenges, as indicated by F-values of 0.83, 3.35, and 1.06 respectively and corresponding p-values of 0.370, 0.078, and

0.312, which are all above the standard significance level of 0.05. Consequently, the null hypotheses (H_0) for these areas were accepted. However, a notable contrast was identified in the aspect of self-motivation among the groups, given an F-value of 6.30 and a p-value of 0.018, which is below 0.05, signifying a significant difference. The null hypothesis for self-motivation was therefore rejected.

Discussion

The profile of the teacher respondents reveals a diverse group of teachers in terms of age, gender, marital status, years in teaching, highest educational attainment, number of learners with intellectual disabilities in their online class, and specialization. The majority of teachers were in the age range of 31-50, with a higher representation of females. They were primarily married and had 1-5 years of teaching experience. Most teachers had a master's degree and specialized in special education. The number of learners with intellectual disabilities in their online class varied, with the majority having 11-20 learners. The profile of the parent respondents shows that they were primarily in the age range of 31-40, with a higher representation of females. Most parents were married, had a high school education, and had 1-3 children. Their employment status varied, with a significant portion being full-time or part-time employees. In terms of economic status, the majority fell in the less than 32,047 USD category, indicating a lower-income bracket. The profile of the students with disabilities indicates that the majority were male, with most falling within the age range of 13-16. The level of intellectual disability varied, with the majority having a moderate level of intellectual disability.

Regarding the challenges faced in online classes, the mean scores for technical issues/computer literacy, self-motivation, and functional academic skills were analyzed. Technical issues/computer literacy showed significant differences between teachers and parents, with parents reporting higher mean scores, indicating a higher level of agreement with the challenges. Self-motivation also revealed significant differences, with parents

reporting higher mean scores, suggesting a higher level of agreement with the challenges compared to teachers. However, no significant differences were found for functional academic skills or overall challenges. The results indicate that both teachers and parents face challenges related to technical issues, self-motivation, and functional academic skills in the implementation of online classes for students with intellectual disabilities. The significant differences in self-motivation suggest the need for targeted interventions to address and support the motivation of both teachers and parents in the online learning environment. The challenges identified in technical issues/computer literacy emphasize the importance of providing adequate resources, technical support, and training to both teachers and parents. Additionally, efforts should be made to enhance functional academic skills through targeted strategies and support. Collaborative efforts between teachers, parents, and relevant stakeholders are essential in addressing these challenges and ensuring effective online education for students with intellectual disabilities.

Conclusion

This study provided insightful observations about the diverse challenges faced in online learning for students with intellectual disabilities. While it was revealed that the level of intellectual disability did not significantly influence the challenges related to technical issues/computer literacy, functional academic skills, and overall challenges, a distinct divergence was observed in the domain of self-motivation. The significant difference in self-motivation across different levels of intellectual disability underscores its critical role in online learning success. As such, strategies to bolster self-motivation should be a primary focus of targeted interventions. This study also highlighted the discrepancies between the perceptions of teachers and parents, emphasizing the importance of fostering better collaboration and communication amongst these key stakeholders. Furthermore, the significance of providing appropriate technical support and resources cannot be understated, as this area emerged as a

notable challenge. Ultimately, these findings underscore the necessity for comprehensive, tailored approaches in enhancing online learning experiences for students with intellectual disabilities, involving concerted efforts from educators, parents, and supportive services.

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