The Challenges of Online Learning among Autism Students During COVID-19 Pandemic: Teacher's Perspectives

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Abstract
The COVID-19 pandemic has significantly disrupted educational systems globally, necessitating a swift transition to online learning formats. This abrupt shift posed unique challenges for students with special needs, their families, and educators, particularly in addressing the diverse requirements of students with autism. This study aims to ensure that the needs of each category of students are prioritized by offering strategic guidance and support, with a specific focus on autism spectrum students. Through qualitative research methods, including narrative descriptive analysis, this study explores the perspectives of teachers on the challenges faced by autism students during online learning amidst the pandemic. Key areas examined include the impact of the learning environment, behaviours related to hyperactivity and inattentiveness, the role of parental involvement, and technical difficulties like network connectivity. The findings highlight critical issues and offer insights for improving support systems for autism students in virtual learning settings.
Keywords: Covid-19, Special Needs, Autism, Online Learning, Teacher Perspectives, Parental Involvement

Introduction
The COVID-19 pandemic has uniquely affected the educational process for teachers working with children with special needs in exceptional schools. These children, often referred to as children with special needs (CSN) or exceptional children, are identified due to various special disorders (Ishmi, 2021; Rani & Jauhari, 2018; Sijabat, 2018; Thompson, 2017). Notably, children with autism, when identified early and provided with appropriate support and interventions, often achieve positive social communication and educational outcomes (Dimian, Symons, & Wolff, 2021; Fuller & Jaiser, 2018).

The pandemic has exacerbated changes in family dynamics, impacting individuals with autism spectrum disorder (ASD), who may experience the pandemic as a traumatic event. One significant consequence of the pandemic has been the widening digital divide, highlighting socio-economic disparities in access to information and communication technologies. Educational methods adopted during the pandemic have further accentuated these disparities. Variations in household spending on education have also become more pronounced (Zerr, 2020).

This study aims to assess how parents of children with ASD have adapted and balanced their educational needs during the pandemic. Current literature lacks comprehensive information on the challenges and requirements faced by families with children with ASD during this period (Bozkurt et al., 2020; Stankovic et al., 2020). Understanding parents' perspectives on their children's evolving needs and challenges is crucial for addressing these issues effectively.

Online learning, defined as educational environments that leverage the internet to connect students from diverse backgrounds (NurHaiza & NurNaddia, 2020), has experienced rapid growth, particularly as the pandemic necessitated a shift to remote operations. This shift has significantly increased the demand for online education. Ilker (2020), had previously projected that the online education market would reach $350 billion by 2025. Given the accelerated growth driven by the pandemic, these projections may have been surpassed. In this study, online learning specifically refers to the experiences of students with autism engaging in online education during the COVID-19 pandemic. Autism, or autism spectrum disorder (ASD), is a developmental disorder marked by variations in brain development and information processing (Doni, 2020). This condition often results in substantial behavioral, social, and communication challenges. Although there is no known cure, early intervention and tailored therapies, including behavioral, educational, speech, and occupational therapies, can support children's development (Doni, 2020). Autistic students may exhibit heightened frustration and behaviors in response to specific stimuli, struggle with verbal communication, display limited emotional responses, require additional time for assignments and tests, or need accommodations such as separate testing environments (Doni, 2020). In this study, autistic students are defined as those in special education settings whose behaviors and attitudes are monitored by their teachers.

Empathy and social-emotional learning are vital for teachers, particularly those working with autistic students (Bolourian et al., 2021). Teachers who adopt a perspective-oriented approach can enhance their self-management, self-awareness, and interactions with students. Effective teaching requires recognizing that autistic students need different strategies compared to neurotypical peers. For example, maintaining a consistent routine is beneficial, as many autistic students thrive in structured environments. Bolourian et al (2021), emphasize that adhering to daily schedules and allowing adequate time for transitions can mitigate behavioral challenges and frustrations. Visual aids and demonstrations also improve learning outcomes for these students. Teachers should provide visual and written instructions rather than lengthy verbal directions and focus on limiting distractions and rewarding positive behavior.

The COVID-19 pandemic has profoundly disrupted education, forcing a sudden and unprepared transition to online learning. This shift has altered the dynamics between

students and teachers (Graham & Pasi, 2020). Research has revealed that teachers faced significant challenges during online classes, including technical issues, reduced student engagement, and difficulties in distinguishing between genuine and fabricated student excuses (Yusnilita, 2020). The pandemic has underscored deficiencies in resources and support for marginalized students and highlighted the limitations of online learning platforms, which often lack the interactive and tactile elements of traditional classrooms (Crawford, Butler-Henderson, Rudolph, & Glowatz, 2020; Zhong, 2020; Britt, 2006). Recent studies have begun to explore the challenges and opportunities associated with e-learning during the pandemic (Mailizar et al., 2020). Future research should focus on understanding students' perspectives on online learning to address their challenges and evaluate the quality of online education (Basilaia & Kvavadze, 2020).

Constructivism is a theoretical perspective that emphasizes the active role of students in constructing their own knowledge through interaction with their environment (Reid-Martinez & Grooms, 2019). First articulated by Barlet (1932), this theory asserts that learning is an active process of building upon existing knowledge and experiences. Constructivism addresses the limitations of behaviorist learning theories, which often focus excessively on teacher cantered approaches, by promoting methods that support self-motivated and individualized learning (Barlet, 1932). Constructivism integrates with cognitive theory by emphasizing how students mentally construct meaning from their surroundings. It can be divided into two categories (Barlet, 1932):

1. Cognitive Constructivism: Proposed by Piaget, this theory posits that knowledge must be actively constructed and is closely related to an individual's existing cognitive structure. Learning activities are designed to enhance individual skills and understanding (Barlet, 1932).
2. Sociocultural Constructivism: This theory emphasizes the role of social interactions and relationships in knowledge construction. Learning activities aim to enhance social skills through cooperative learning and group problem-solving (Barlet, 1932).
3.

Constructivist learning environments (CLEs) are designed to leverage cognitive and social foundations to support knowledge construction. Dynamic constructivism encourages students to use imagination and critical thinking to interpret knowledge contextually (Reid-Martinez & Grooms, 2019). This approach promotes active student involvement, critical expression of ideas, and collaborative learning, which can lead to deeper understanding and achievement (Reid-Martinez & Grooms, 2019).

Problem Statement
The COVID-19 pandemic has profoundly impacted the world, and Malaysia has faced its own set of challenges. The shift to online teaching and learning was implemented swiftly across all student groups, including those with special needs. This transition has presented significant difficulties for teachers, parents, and students alike. The Ministry of Education's (MOE) Guideline No. 8 of 2016, titled "Guidelines for Disaster Management and Learning," issued on July 21, 2016, is deemed too general and does not differentiate between teaching methods for regular students and those with special needs. Consequently, this study aims to identify the challenges faced by special education teachers in adapting online teaching and learning methods for students with special needs. Specifically, it seeks to understand the obstacles

encountered by students with autism during the rapid transition to online learning in the COVID-19 pandemic, from the perspective of their teachers.

Research Objective

The primary objective of this study is to analyse teachers' perspectives on educating special needs students during the COVID-19 pandemic. This structured approach aims to provide a comprehensive understanding of the impact of the pandemic on the education of students with autism and the role of teachers in navigating these challenges.

To address this main objective and answer the research questions, the study focuses on the following aspects.

1. To investigate how teachers perceive the effectiveness and challenges of online learning environments for students with autism during the COVID-19 pandemic.
2. To identify strategies to encourage and support autism students in engaging with online learning platforms during the pandemic.
3. To examine the technical and internet-related challenges faced by autism students in online learning, from the perspective of their teachers during the pandemic.
4. To assess how teachers address and mitigate the difficulties experienced by autism students in online learning environments during the pandemic.

Methodology

This study employs qualitative research with a narrative-descriptive approach. Creswell (2009), identifies three fundamental characteristics of qualitative research. First, it is conducted in a natural setting, allowing for an authentic context. Second, data collection methods include interviews, observations, documents, and audio-visual materials, providing a rich and diverse data source beyond simple numerical data. Third, qualitative research is deeply rooted in the meanings and experiences of participants. Yin (2009) notes that qualitative studies do not adhere to rigid rules regarding sample size; however, a larger participant pool can yield more comprehensive and convincing data. In this study, the population comprises six experienced teachers who will participate in semi-structured face-to-face interviews. This method allows respondents to express their views freely, facilitating a more nuanced understanding of the subject matter (Tirgueros, Juan, & Sandoval, 2017).

Instrument

The selection of research instruments is crucial for obtaining reliable results and must align with the study's methodology and objectives. This study utilizes semi-structured interviews, which are implemented with careful planning. The first stage involves ensuring that the interview questions are directly aligned with the research questions (Milagros, 2016). This alignment is essential to address the study's objectives effectively and to elicit accurate and relevant responses from participants (Milagros, 2016). The second stage focuses on designing questions that are clear and accessible. Interview questions should be phrased in a friendly and comprehensible manner, ensuring that respondents fully understand and can provide precise answers (Milagros, 2016). The third stage is the development of an interview protocol. This involves organizing the structure of the interview session, including how questions will be presented and how responses will be recorded. During the actual interview sessions, selected respondents will be asked questions, and their responses will be documented either in writing or through audio recordings (Milagros, 2016). This methodical approach ensures that the interviews are conducted systematically, providing valuable and accurate data for the

study. The data that has been collected is being analysed to conclude what are the types of anxiety and that dominate the most and strategies to alleviate the anxiety.

Result

The respondent demographic that will be discussed in the study will be based on two items which are gender and age. Table 1.0 presents the categories of informants interviewed, categorized by gender and age. The data indicates that individuals within this age range typically have over 10 years of teaching experience, with a particular focus on students with autism spectrum disorder (ASD).

Table 1.0
Respondents' demographics

Respondents	Gender	Age Range
6	Female	40-55

Modifying the learning environment can help mitigate behavioural outbursts in students. To create a conducive atmosphere, extend successful elements such as positive interactions, suitable locations, and beneficial opportunities, while adjusting or avoiding situations that may trigger problematic behaviour. Implement strategies to reduce irritation and anxiety and enhance understanding. During the COVID-19 lockdown, parents faced significant challenges in caring for children with autism spectrum disorders (ASDs). The closure of daycare facilities required parents to provide continuous care. As one respondent noted: "Some parents and teachers really need training to effectively use technology and gadgets. Many are unfamiliar with using even basic tools like laptops." There is a need to evaluate the feasibility and effectiveness of delivering caregiver training entirely online, especially for families in remote areas. It is crucial to assess whether these families have access to necessary technology, such as smartphones, computers, webcams, and reliable Internet, as well as clinical sites equipped with video-conferencing tools. Feedback from some parents who discontinued the course suggests that online training should not be viewed as a complete replacement for in-person daycare services. Instead, the aim is to provide a viable alternative while addressing parents' concerns about meeting the rehabilitation and educational needs of children with ASD in a safe and supportive environment. Based on the results, communicating in person or online, it is essential to be transparent about your rules, expectations, and learning objectives. Many autistic students are detail-oriented and will carefully review any information provided to them. Clear communication helps ensure they understand and adhere to the guidelines set. Often, support for students with autism focuses predominantly on their challenges and limitations. Instead, identify and emphasize their strengths and how these can be leveraged to overcome academic difficulties. For instance, skills such as attention to detail and a strong work ethic can be valuable assets, especially in collaborative projects where time and resource management are crucial. Autistic students can be easily overwhelmed or distracted by sensory stimuli. When organizing lessons or meetings, minimize visual and auditory distractions to help students focus. Before the class begins, ask students about any specific sensory issues or distractions they encounter, and adjust accordingly. When determining appropriate accommodations or special arrangements, consider options that can be extended to all students. This approach allows each student to choose the method that best supports their learning and demonstrates their abilities. Such inclusivity helps bridge the gap without singling out students with autism. Adopt a positive attitude towards accommodations or tools that

help students manage their anxiety during educational activities. This might include allowing them to sit in the same spot each session, wear hats, hoodies, or tinted glasses indoors, or use stress balls. Make it clear that these accommodations are available to all students and reassure them that they can leave the class if they feel overwhelmed without facing punishment or criticism. Encourage students to engage with the material in ways that best suit their individual learning styles. Be open to flexible approaches regarding deadlines, coursework, and study methods. Experiment with unconventional techniques to discover what helps students concentrate more effectively on the course material.

Conclusion

Students on the autism spectrum face distinct challenges when engaging in online learning, yet there are instructional strategies and practices that can help mitigate these barriers. To foster effective online learning environments for students with autism, it is crucial to adhere to sound design principles and understand how course design impacts students' ability to meet academic demands. Factors such as communication difficulties and feelings of disorientation caused by an overwhelming number of options must be considered. Students with autism have the potential to excel academically, but if their strengths and challenges are overlooked, misunderstood, or undervalued, they may feel excluded and marginalized. Regardless of the approach, improving the academic process for autistic students inherently benefits all students by creating a more inclusive and supportive learning environment. In an online learning setting, students who face learning challenges or other difficulties risk becoming invisible. Teachers must proactively design online learning environments that are considerate of, and ideally supportive of, the diverse needs and profiles of students on the spectrum. This effort helps to reduce the elevated risk of academic and personal failure associated with the varied skills, abilities, and needs of autistic students, as well as the generally low rate of diagnosis disclosure.

This study utilizes constructivism theory, integrating both cognitive and sociocultural perspectives, to explore how online learning environments can benefit students with autism. Cognitive constructivism emphasizes the role of self-confidence, self-knowledge, and motivation in enhancing the engagement of autism students in online learning. Meanwhile, sociocultural constructivism highlights the importance of teacher-student interaction in overcoming technical and internet challenges. Together, these approaches show that through active involvement and social collaboration, students with autism can effectively engage in and overcome the difficulties of online learning environments.

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