



Strategies to Develop Communication Skills of a Child with Autism Spectrum Disorder: A Case Study

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ABSTRACT

This study examined the strategies used by the teachers in the classroom teaching to improve the communication skills of a child with Autism Spectrum Disorder (ASD). A qualitative case study was conducted using interviews from two credentialed special education teachers and two mainstream teachers who worked with a child with ASD for a minimum of six years in the school. In addition, a parent was also involved in this study. This resulted in an in-depth knowledge of the child with ASD, as well as the teaching methods used by teachers and how they affect a child's communication abilities. The open-ended questions were asked, and the data were gathered through interviews, document analysis, and observations. This study sought to comprehend the effects of communication tactics for the child with ASD, which required in-depth study in a real-life setting. Hence, the philosophical paradigm adopted for this research is constructivism to get rich data on communication skills. Coding and thematic analysis of data from interviews, observations, and document analysis were done using William and Moser's art of coding theory as a framework. The overall findings of the research showed that teachers' perspectives of conditions needed for successful implementation of communication strategies were the need of additional material resources, human knowledge, and skills. Furthermore, results also indicated a wide variety of effective strategies that addressed communication needs for the child with. To encourage the child with ASD to learn more effectively, the teachers need to enhance their knowledge and skills through the provision of various training, workshop, and professional development on regular basis. Teachers teaching a child with ASD in special education classes were found to be more knowledgeable than teachers who teach the child with ASD in the mainstream classroom.

Keywords: Autism Spectrum Disorder (ASD), Communication Skills, Picture Exchange Communication System (PECS), Special Education Needs (SEN), Prepare Offer Wait Response (POWR)

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Introduction

"The US Centers for Disease Control and Prevention has most recently reported an increase in the ASD prevalence at 1 in 59 children from that at 1 in 68 children in its previous report" (Saito et al., 2020, p. 2). In Bhutan, the national housing and population census report 2.1 percent of the population (15,567 people) is with disability (National Statistics Bureau, 2018). Furthermore, the Two-Stage Disability Study (2010-2011) discovers that at least 21.7 percent of Bhutanese children aged two to nine years have been identified to have mild to severe disability. This implies that there is more than one in every five children with disability. However, the study done by Hossain et al. (2017), reveal that the prevalence rate of autism could not be determined in Bhutan due to the absence of study. This indicates that there have been no studies carried out on the prevalence of autism. Autism is a developmental disability that affects how a person communicates with and relates to other people, as well as how that person experiences the world around them (Ozerk & Cardinal, 2020). Similarly, Autism, as defined

by the Individuals with Disabilities Education Act (Special Education Guide, n.d, p. 1), refers to “a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a child’s educational performance.” The IDEA postulates that children with a variety of disabilities, including autism, are eligible for early intervention and special education services ([Autism Speaks, n.d.](#)). In addition, Bhutan has official guidelines such as Bhutan Education Blueprint 2014-2024 ([MoE, 2014](#)), and National Policy for Persons with Disabilities (2019), which accentuate rights to education. For instance, it states “Education is a basic socio-economic human right, and all children, including those with disabilities, have a right to education” ([GNHC, 2019, p. 7](#)). Despite these, the Bhutanese education system is fundamentally not furnished to address the needs of children with autism and autism remains generally unknown among the Bhutanese teachers, policymakers, and parents ([Dorji, 2015](#)). It is obvious from the study conducted by Jigyelet al. (2020) that the majority of parents were also not aware of educational rights and policies and had less knowledge related to the education of their children. Though there is a dearth of empirical research done on children with SEN including Autism in Bhutan, there are studies conducted in other countries that provide insights on autism in general ([Drukpa, 2015; Dorji, 2015; Drukpa et al., 2021](#)). Nonetheless, Jigyel et al. (2018) argue that the findings in other countries cannot be applicable to the Bhutanese settings. Due to the shortage of literature, it is difficult to understand the right interventions practiced in Bhutan. Therefore, further examination is required to understand: What methods are being used to enhance communication skills (CS) and how is it practiced in the classroom? What might be the barriers while implementing communication strategies?

The education of children with autism is still an emerging field in Bhutan. Since autism is so complicated, there is no such thing as a “one-size-fits-all” educational plan. Although the number of children diagnosed with autism has increased significantly, no studies on the communication strategies have been done to educate children with autism or the quality of these programs have been conducted. Children with ASD have a harder time expressing their needs, which causes communication problems between parents, children, and the community. This is evident from the study conducted by Autism speaks (2017) in other countries that approximately one-third of individuals with autism remain nonverbal throughout their lives. Autistic children’s deficit in language abilities is set apart from other nonverbal language disorders because of their restrictive/repetitive behaviors, interests, or activities—which means that the language barriers of ASD need to be studied separately ([Cornoldi et al., 2016](#)). So, there are a lot of things that need to be looked into when it comes to catering to the needs of students with ASD in the classroom. Due to the increasing number of ASD diagnoses in Bhutan and the complicated nature and severity of ASD, educators must be acquainted with techniques to enrich children’s lives and improve their communication strategies and academic performance. On the contrary, no specific trained professionals are working with ASD children in Bhutan to meet the needs of children with autism ([Dorji, 2015; Drukpa, 2015](#)). In such circumstances, it is undetermined how the needs are met in the classroom. There are children with various kinds of autism in the school and it is a matter of great concern that the diverse needs of the children have remained unidentified and unaddressed. Therefore, this study aimed to explore how communication strategies and skills are used by teachers in classroom teaching to reach out to the diverse needs of the child with ASD.

Literature Review

Autism was first described by Kanner (1943) as a neurodevelopmental disorder characterized by repetitive, stereotypical behaviors and impaired expressive communication, which has since been folded into the broader classification of ASD ([American Psychiatric Association, 2013](#)). According to Hus (2017, p.1), “autism, a complex and chronic neurodevelopmental condition, is to a great extent the children’s failure or difficulty in acquiring social interaction and communication, and language to support these abilities.” Similarly, Al-Qaryoutiet al. (2017, p. 804) mention that:

Autism is a complex neurological disorder that affects the functioning of the brain. It is a pervasive developmental disorder that is characterized by impairment in communication, both verbal and nonverbal, and deficient social interaction, causing significant functional impairment and having an adverse effect on the child’s educational performance.

Specifically, individuals with ASD often exhibit different language development, social development, repetitive behaviors, problem behavior, sensory and motor disorders ([Turnbull et al., 2012](#)). It has been observed that these children may have limited verbal skills or be completely nonverbal, making communication difficult. According to Sikiti (1998, p. 1) “Communication is a purposeful process of expressing, receiving and understanding messages containing factual information, feelings, ideas, and needs by two or more individuals through common symbols.” The CS course enables students to have

knowledge or the ability to use the requisite skills to communicate properly. Like all other courses run in schools and tertiary institutions, it is relevant and has the added importance of equipping students with proper language skills to assist them in their studies. Communication might occur through eye gaze, pointing, gestures, facial expressions, sign language, picture symbols, and speech-generating devices. Further, students with ASD often use multiple modes to communicate, so any means that the student might use should be prepared and accepted during the activity (Douglas & Gerde, 2019).

According to Zager and Wehmeyer (2019, p. 1) "Many students with ASD benefit from the general curriculum and can achieve at a high academic level, yet their CS challenges and behavioral difficulties often hinder their successful inclusion in general education classrooms". Numerous children with autism have been successful in mainstream classrooms and some require additional supports, such as an aide that stays with the student, helps them transition from one task to the next (Wright, 2011). In addition, the benefits of mainstreaming will help in preparing students for life outside of school, including colleges and work. In these areas, children interact with many different people, both with and without disabilities. This is consistent that many proponents of inclusion also point out that for children with autism, interacting with neurotypical peers is essential to their growth and allows for friendships with children without disabilities that provide a model for appropriate social interaction, an area where children with autism have difficulty (Wright, 2011). One of the commonly followed teaching strategies is PECS. PECS is communication systems where children with autism are taught spontaneous CS through the use of cards that have symbols and pictures to represent the items. Frost and Bondy (2001) admit that PECS helps children with ASD, who either do not speak or do so with limited effectiveness, to rapidly acquire functional communication skills. Further, they posit that the approach was originally designed for young children with ASD; it has been effectively used with children and people with a variety of communication and developmental issues. The study carried out by Bondy and Frost (1994, p. 89) on the use of PECS with a 36-month-old boy found that:

The progress from displaying no functional CS to using over 100 pictures to obtain reinforces and comment about the environment using simple sentences and who gradually shifted communicative modality over to speech in less than a year.

Charlop-Christy et al. (2002) postulate two single-subject experimental designs involving children with ASD were used to test PECS research. Both the studies showed an immediate increase in spoken communication in PECS training sessions or in probe sessions that were extremely similar to PECS training sessions. When treatments are compared, one treatment may work better for some children while the other may work better for others (Yoder & Compton, 2004). The study indicates that all children with ASD learn differently through different strategies because the needs are different for every individual. Schopler, et al. (1995) suggests that the highly visual nature of PECS may make it particularly well-suited for use with learners with ASD, who are more likely to be highly visual learners. Further, the highly concrete and static presentation of the PECS symbols may make a particularly good choice for individuals with ASD, who tend to prefer highly concrete, consistent objects and stimuli (Ogletree et al., 2007). Additionally, PECS symbols have a one-to-one relationship with objects, persons, and concepts, minimizing ambiguity and facilitating recognition of meaning rather than recollection (Van Rie & Heflin, 2009). The finding of the above studies revealed that PECS could improve the students' CS and has shown an effective means of improvement in CS in many individuals with ASD. This is obvious that there is general empirical evidence to support PECS as an effective means of increasing communication in learners with ASD (Flippin et al., 2010). According to Dorji (2015) PECS strategy was found to be one of the successful strategies for children with autism in the SEN setting than those teachers who taught children in a mainstream classroom in the UK. However, the conclusion cannot be generalized in the Bhutanese context. Therefore, an in-depth study is needed to get a deeper understanding of using PECS in developing CS for children with ASD in the practical realities of classroom teaching.

Methodology

Research Paradigm

The goal of this study was to acquire a better understanding of the dynamics of classroom communication strategies for the child with autism (Niewenhuis, 2012). The study in particular attempted to understand the impacts of communication strategies used by the child's teachers and the child's parent. Therefore, the paradigm adopted was constructivism with a qualitative case study approach (Creswell & Creswell, 2018; Yin, 2018). The research was positioned closer to the constructivist paradigm that aimed "to make sense of (or interpret) the meanings others have about the world. Rather than starting with a theory (as in post-positivism), inquirers generate or inductively develop a theory or pattern of meaning" (Creswell & Creswell, 2018, p. 56). For instance, participants had developed subjective meanings of their own experiences (Creswell & Creswell, 2018; Yin, 2018) in using Picture Exchange Communication System and Prepare Offer Wait Respond strategies. This study relied on participants' views, open-ended questions, and focused on how a child with ASD enhanced communication skills (CS). Creswell and Creswell (2018) assert that when the questions are broad and general, the participants can create meaning of a scenario, which is usually forged through conversation with others. Therefore, this study

required an in-depth investigation of the teachers to understand classroom communication strategies practiced specifically to the child with ASD. Furthermore, incorporation of the qualitative methods provides a better, broader and in-depth understanding of the complex phenomenon and enhances confidence, improves accuracy and completeness, and contributes to the overall validity (Hennink et al., 2020; McKim, 2016).

Case Study Design

Yin, (2018) indicates that in a case study, the researcher's interest is to understand the real-life phenomenon and the in-depth context of the situation. Since, this study focused on the communication strategies for the child with ASD, a case study design was the most appropriate choice. A case study is based on knowledge of people's daily lives to answer the how and why component of a question about a current collection of circumstances over which the investigator has little or no control (Yin, 2018). The case study technique was chosen because it is useful to apply when there is a need to gain an in-depth grasp of an issue, event, or phenomenon of interest in its natural real-life setting (Crowe et al., 2011).

More specifically, this research is a qualitative descriptive case study with a single-embedded unit of analysis that explored the development of CS of the child with ASD within its context using a variety of data sources (Yin, 2018). This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood (Baxter & Jack, 2008). Dyer and Wilkins (1991) claim that for creating high-quality concepts, single case studies are better than multiple cases because it produces extra and better theory. Existing literature indicates that if the researcher only wants to study one single thing or a single group, a single case study is the best choice (Yin, 2018). Further, Yin (2018) posits that "the single case can represent a significant contribution to knowledge and theory building by confirming, challenging, or extending the theory, the study can even help to refocus future investigations in an entire field" (p. 85). Subsequently, this case study required field observation, documentation, and interview with the key informants to collect data. The focus of attention for this study was to specifically look at how teachers and parents boost CS to support the child with autism in the classroom.

Sampling

Creswell (2007 as cited in Dorji, 2015) argues that purposeful sampling offers the opportunity to gather information-rich enough to purposefully inform an in-depth understanding of the research problem and the central phenomenon or the case in the study. Therefore, purposive sampling was employed as per the nature of the case since the data required had to be gathered from six participants. The goal of purposeful sampling is to select participants that will provide the richest and the most detailed information to help answer the research question (Lodico, et al., 2010).

In this inquiry, four teachers teaching the child with ASD, and the child's parent were involved. The case child was observed daily to see the use of CS. In total, five participants were interviewed, and class observations of the teachers were done daily for six weeks. The teacher participants had the experience of teaching children with autism in general classrooms as well as in Special Education Needs (SEN) classes.

Data Collection Tools

Yin (2018) suggests six sources of evidence most commonly used in doing case study research: "documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts" (p.105). This study employed semi-structured interviews, direct observations, and field notes as tools to collect data from multiple sources that were expected to be knowledgeable about the child. This is apparent from Yin (2018) that a carefully conducted case study benefits from having multiple sources of evidence, which ensures that the study is as robust as possible. Triangulation of data was used to ensure credibility (Tracy, 2010) and triangulation occurred throughout the study to provide the clearest and most meaningful picture of the case possible (Stake, 2010). The framework for triangulation in this study used methodological triangulation, and from individual informants against another informant to compare the information. This helped increase confidence through the use of multiple methods of data collection such as interviews, document reviews, and observations (Stake, 2010).

Reliability and validity

According to Middleton (2019), reliability and validity are concepts used to evaluate the quality of research. It indicates how well methods such as interviews, observations, and documents measure reliability and validity. Reliability refers to "the consistency and repeatability of producing a case study's findings" over similar conditions (Yin, 2018, p. 353). For instance, rather than focusing on replicated results, the aim would be to verify that the results are consistent within the data collected (Yin, 2018). As Yin (2018) suggests, this study collected multiple sources of data such as semi-structured interviews, observations, and documents including the use of participant quotes to enhance the trustworthiness of the study.

Validations, according to Hakim (2012), are strengths of a case study gathered by considerable time spent in the field, thorough descriptive descriptions, and the researcher's proximity to studying participants, all of which add to the value or accuracy of a study. Furthermore, Creswell and Creswell (2018) recommend the use of multiple sources, which must enhance the researcher's ability to assess the accuracy of findings as well as convince readers of that accuracy. In this study, validity was strengthened by using multiple sources of evidence through data triangulation. The sources of evidence could include multiple viewpoints within and across the data sources to avoid observer bias. Consequently, the study was conducted with appropriate research tools (interview, observation, and documentation) involving multiple informants (teachers and the child's parent) to ensure validity and reliability. An important advantage of using multiple informants is that the validity of the information provided by the child's parent was compared against the information provided by the teacher participants (Glick et al., 1990). Creswell and Creswell (2018) postulate that reliability can be enhanced if the researchers obtain detailed insight and thoughts by utilizing a good-quality tape for audio record and by transcribing it. Recording of the interviews was done cautiously and all the data from different sources were analyzed simultaneously for triangulation to strengthen reliability as well as internal validity. The data were examined to see whether the different sources corroborated with each other or not.

Data Analysis and Findings

The data were collected from three different sources, namely interview, classroom observation, student observation (during classroom teaching, Health and Physical Education class, and recess), and documentation review of the lesson plan and child's IEP. According to Creswell and Creswell (2018,p.308) "data analysis in qualitative research consists of preparing and organizing the data for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in the figure, tables or discussions." All audio-recorded interviews were carefully transcribed and reviewed several times based on the records maintained during the time of the interview. The transcriptions were read thoroughly and segregated into various categories and themes for analysis. From each transcript, significant phrases or sentences that pertain directly to the lived experiences of the participants were identified. Meanings were formulated from statements and phrases. The formulated meanings were clustered into themes allowing for the emergence of the themes common to all the participants' transcripts. Finally, all the transcribed data, class observation, child observation forms, and documents have complied for in-depth analysis. As recommended by Creswell and Creswell (2018), the transcripts were read time and again to obtain the overall meaning of the data.

To make data-driven decisions and to derive the relevant themes, the three-step coding process: open, axial, and selective coding were employed (Williams & Moser, 2019). They also suggest open, axial, and selective coding of collected data results in the creation of theory, leading the researcher to construct deeper theoretical meaning. Researchers can have nuanced access to study informants' thoughts, perspectives, and reactions to study topics using these techniques of coding. The first level was the 'open coding', the coding of themes was done using the same color based on similar ideas, concepts, keywords, and repeated ideas. The second level of coding was 'axial coding' to identify the relationships between open codes and develop similar core codes. The axial coding focused on detecting emergent themes and further refine and categorize the themes. Through this approach, the researcher can deeply engage in the text, and, in turn, recognize and codify nuances and discrete thematic connectivity with other themes (Williams & Moser, 2019). The third level was 'selective coding' that enabled the researcher to choose and combine categories of ordered data from axial coding into coherent and meaning-filled phrases. According to Flick (2009 as cited in Williams & Moser, 2019, p. 52) "selective coding continues the axial coding at a higher level of abstraction through actions that lead to an elaboration or formulation of the story of the case." The above-mentioned series of coding made it easier to compare, identify the patterns to come up with the main themes and the sub-themes after the in-depth analysis. The themes drawn are presented below. While presenting the data, pseudonyms are used to maintain anonymity. The Special Education Needs (SEN) teacher participants are referred to as ST1 and ST2, mainstream teachers as MT1 and MT2. The parent participant was coded as P.

Presentation of Themes

This study discovered four main themes and subthemes including teacher understanding of ASD, effective communication strategies used by the teacher participants and its benefits, factors affecting the communication strategies, and challenges. Each of these is discussed with exemplar quotes

Theme 1: Teacher understanding of ASD

When asked, four teacher participants mentioned their understanding of ASD. For instance, ST1 specifically said, “Children with ASD have a communication problem; this is so because children with such problem lack social skills which are required for their day-to-day interaction in the society.” She supplemented that, “inevitably, communication and social skills are the main factors required in the society and environment they live in.” Similarly, ST2 supported that, “most of the children with ASD that I have dealt with and taught till now neither spoke nor responded, they were non-verbal, even if they speak also, it was just a mere mumbling that I could not understand anything.” She further said, “even now I do not have any children who are verbal.” Additionally, MT2 stated that children with ASD have limited interest in interacting and are least bothered about the environment around them. In the statement of MT1, children with “ASD have limited ability or interest in communicating and interacting with others. They remain in their own world most of the time.” So, each participant had a similar view in terms of their understanding of ASD. The parent expressed concerns about her child:

Although he can walk, eat, and sit like any other normal child, when he plays with his friends he lacks eye contact, expressions and even he will not cry when we beat him. He does not utter even a single word when we try to beat and scold him.

Similarly, in a conversation with one of the parents who attends the class regularly described as mentioned: “Wangchen was trying to say something that we cannot understand. What he says was not very clear.” ([S. Chador, personal communication, August 27, 2021](#)). All the participants in this study highlighted and shared their understanding and experiences with the child with ASD.

Theme 2: Effective Communication Strategies and its Benefits

The existing literature indicated that there are several successful teaching strategies for teachers to use in working with the child on the autism spectrum. Teachers must recognize students’ abilities and know-how to best assist them in participating in meaningful ways for the children to succeed in the classroom. Some of the key teaching strategies used by the teachers to enhance communication skills (CS) for the child.

Picture Exchange Communication System (PECS)

The participants were interviewed to talk about the variety of teaching strategies they employed in their classroom teaching. The teachers stated that PECS makes learning easy and helps children understand the language and enhance communication skills using visuals.

Visual cues

Visual cues were another teaching strategy that appeared to be commonly followed by teachers to teach the child with ASD. All teachers in this study found visual cues is extremely effective in teaching a child with ASD. MT1 expressed, “in mathematics, I used pattern blocks and number cards for teaching patterns and number patterns; counters for teaching numbers, currency notes, real objects, counters and picture cards for teaching addition and subtraction.”

Video modeling

Video modeling (VM) was identified as one of the sub-themes under effective communication strategy because one of the participants explicitly mentioned that VM is about helping those children with non-verbal do the task. ST1 expressed: VM is an assistive technology that we are using every day to teach the child with ASD, it has been our daily means of teaching aids. Without this, we would otherwise be like a farmer in the field without any farming tools.

Circle time

Circle time (CT) is one of the common practices followed in a self-contained class. Teachers in the SEU believed that CT helps the child with ASD to learn socialization and CS. ST2 explained the importance of CT for the child with ASD to socialize and enhance communication, “I use picture communication which is put under the CT schedule, activity schedule to maintain the environment and visual support in the CT.” Furthermore, this is evident from the lesson observed where a series of activities were laid under the CT to have a continuous flow of the teaching which was in a structured manner. ST1 commented, “through the schedule of CT, I teach the child with ASD both academic [focused on subject areas] and non-academic [focused on daily living skills] in the classroom.” Correspondingly, both

academic and non-academic lessons were reflected in lesson plans based on the child's IEP with varying goals, objectives, and activities.

Theme 3: Factor Affecting Communication Strategies

Many factors influenced the effectiveness of teaching communication strategies in the classroom. The participants have their perspectives and shared similar views. The following is the most prominent factors that affect the improvement of communication strategies.

Collaboration

Collaboration is a creative partnership that can be used by teachers and parents to achieve inclusion within a regular classroom by their understanding about SEN, willingness to communicate in matters about SEN, perceived roles in implementing SEN, and expectations of each other's role in implementing SEN. Most of the participants expressed that those children with ASD needed special support. The child's parent shared: "Yes, whatever is taught in the self-contained [classes], I used to revise at home. And when he could recollect a few, it gives me more hope and encouragement." ST1 expressed, "we advise parent to follow the instructions given by the teachers only to avoid confusion. Parent must follow the instructions of teachers so they can help them learn better at home to consolidate on what they have learned in the class." MT2 suggested that to enhance communication of a child with ASD all "friends, family, teachers and parents" should create an environment to speak. She further added: "success of the child depends upon a parent who can understand the strategies that work for sensory regulation, improve communication, and implement them at home." Parents-teacher collaboration is crucial for the educational success of the child with ASD.

Theme 4: Challenges

The theme of challenges emerged as one of the significant themes that justify special attention for the success of implementing communication strategies to the child with ASD. The challenges include teachers' knowledge and resources.

Lack of Knowledge and Resources

This part highlights some challenges that teachers experienced when teaching the child with ASD in the class. Lack of teacher's knowledge on how to teach the child with ASD is one of the main issues in many schools with SEN programs (ST2). She affirmed "I did not have any knowledge. I just learned from here and there and from the experts who come here. I find it difficult to teach them. I do not know what to teach also because every autistic child is different from each other." She further voiced "as of now, teachers are blindly given the children and we do not know how to teach, we ask each other and seek help among ourselves. But I think expert has to teach us how to go on with it." Similarly, MT2 admitted:

I am not a trained teacher, whatever I learn and teach is through the knowledge I have sought from my colleagues during the School-Based In-service Program. I also attended few days' workshops, I felt the duration was short where we covered few teaching strategies at the surface level, to deal with the child with ASD, we must do in-depth study for successful implementation of teaching strategies.

MT1 and MT2 shared, "dealing with ASD kids with very limited skill in communication and comprehension in itself is a great challenge for a teacher like me with limited exposure." MT1 further voiced, "due to lack of knowledge in teaching on analyzing their tasks, we get stuck that leads to frustration." This statement was supported by ST1, "what I have in my mind is mainstream teachers are not trained like us, but they are dealing with a large number of students."

The child's parent shared the differences between the teacher who had training and the one who did not. She stated that some teachers do not know what they are doing, as the following quotes suggested, "I feel, the teachers in the mainstream do not have the knowledge in teaching the child with disabilities. There is no differentiation done in the mainstream class." During the child observation in the mainstream classroom teaching, it was found out that there was no differentiation carried out for the child with ASD. This barrier could be due to the lack of training and skills, whereby teachers in the mainstream are unable to provide individualized strategies for the child with ASD. Lack of resources is another issue that impedes in developing teaching-learning materials to enhance communication strategies. This was mentioned as one of the problems faced by both teachers and a parent participant. According to ST2, "there is nothing in the school, for each child, we need specific resources such as sensory for ASD and it is difficult to get. Lack of materials to prepare picture communication, especially facilities like a printer are not readily available." Another challenge is the lack of facilities for the severe child (ST1). Similarly, teachers and a parent were concerned about the need for adequate teaching-learning resources in the school with SEN program to cater

to the needs of the child with disabilities (MT1, MT2, & P). However, teacher and parent participants expressed their hope and wish to execute better and stay committed to various reforms and initiatives put forward by the Ministry of Education.

Discussion

This study revealed several key findings such as conceptualization on ASD, most prominent strategies to teach the child with ASD, factors affecting the communication skills (CS), and challenges faced by the teachers in teaching communication strategies for the child with ASD. Each of these key findings are discussed in the following sections. Firstly, findings from the study confirmed that a child with ASD has a limited ability or interest in socialization and CS, possess behavior issues, lack eye contact, lack comprehension, do not have the potential to concentrate, and are non-verbal. The ability to communicate depends on the severity of ASD. As a result, the child with ASD has problems with social interaction, communication difficulties, repetitive and stereotyped behaviors, and unusual interest in the objects. The findings of this study corroborate with that of the existing literature that communication difficulties and stereotyped behaviors are widespread among children with ASD because this is a basic symptom of the disorder (APA, 2013). Furthermore, as found by earlier studies, ASD is a complex developmental disability that typically affects social interaction and CS, the behavior of varying degrees of people (Dorji, 2015; Jiguel, 2014). This study concludes that the child with ASD normally shows difficulties in verbal and non-verbal communication, social interaction, and leisure activities. The child with ASD is impaired in one way or another. For instance, a child who is verbal also has impaired communication, understanding, social cues and has temper tantrums with behavior issues. The child with ASD who can speak would say things that have no meaning or that seem out of context in conversations with others. David son et al. (2017) highlight that those children with ASD have difficulty developing a comprehensive understanding of what other people may be thinking or feeling, they have impairment in the flexibility of thinking, imagination, and expressive language. Therefore, educators must understand that the child with ASD is unique in nature and differ in severity of cognitive levels. The classroom program should be well structured to benefit the communication needs of the learner.

Secondly, the findings from this study indicate that there are varieties of strategies used in the classroom with the child with ASD, especially at the case study school. Evidence from the current study revealed that communication strategies used with the child with ASD were consistently used as a tool to assist teachers to communicate from diverse angles. A total of four strategies were used: Picture Exchange Communication System (PECS), visual support cues, video modeling (VM), and circle time (CT). These are presented in the following sections. PECS was one of the prominent strategies that emerged compared to other strategies. The teachers who used PECS for communication stated that PECS makes communication easier and help the child understand and pick up the language and communication using pictures. Teachers in the Special Education Unit (SEU) found out that PECS has an impact on child's learning. The study revealed that teachers used pictures as a main supporting tool and media for communication with the child with ASD. Through the use of PECS, teachers could control the disruptive behavior of the child with ASD. Moreover, teachers linked whatever they taught through PECS to videos to make the lesson interesting and could manage the disruptive behavior of the child. The above statement is supported by the study done by Doherty et al. (2018) and Beukelman and Mirenda (2013) who claimed that children with ASD need a clear and effective way to communicate to reduce frustration and replace challenging or unacceptable behaviors. Additionally, all the participants in this study had identified pictures as the effective strategy that enhances CS when interacting with the child with ASD in the classroom as well as at home. This was evident from the classroom observations where picture communication aid board, picture books, charts, and picture cards were maintained. Further, storybooks with pictures, picture cards, and charts with pictures were dominant in both the self-contained classes and skills classes where the child's work samples such as drawings produced by the child were displayed.

The findings were coherent with the concept of the Zone of Proximal Development and scaffolding because the teacher took the learner from unknown to the known, guiding and supporting the performance of the task throughout the lesson. Findings showed that teachers used pictures and gestures to facilitate communication that promotes active interaction between the child and the teacher. Moreover, the focus and shift were more on the child because he has to master the task of using pictures to communicate. The findings of this study confirmed with that of existing literature that PECS is an especially promising system that has enabled hundreds of individuals effectively to express their wants, needs, and observations (Sulzer-Azaroff et al., 2009). Additionally, they report that though not directly designed to teach speech or to reduce aggression, several individuals who used PECS have begun to speak and/or to diminish maladaptive behaviors. All participants in this study highlighted that they used gestural prompts together with PECS which included touches and demonstrations. These are coherent with the concept of the notion which is being learner-centered and based on active interaction (Donald et al., 2010). From this study, it is reasonable to note that, there is abundant literature that demonstrates a picture-based approach that is widely used to assist

communication with the child with autism. This study also found the popularity of PECS among the teacher teaching the child with ASD in the SEN setting than those teachers teaching in a mainstream class. The use of PECS was clearly evident from the lesson plans, lesson observations, classroom displays, and the record of individualized Education Plans teachers had documented for the child. Also, the teachers teaching mainstream class used pictures to communicate with children as seen during the observation. Visual cues were another communication strategy that appeared to be common practice among the ST1, ST2, MT1, MT2, &P. The participants believed that visual cues such as manipulative, toys, pictures, concrete objects, symbols, and written words were effective to overcome disruptive behaviors. These results are consistent with those of Klein et al. (2009) who used mechanical toys to teach children with ASD to follow the gaze of an adult, in the process matching the intent of the gaze with an object. Otero et al. (2015) described the use of toys, for example, as an evidence-based strategy rooted in behavioral therapy.

Furthermore, the report from all the participants found that the benefits of using visual support cues, as the child with ASD experienced smoother transitions, gained a better understanding of social cues, and enhanced their CS, which led to a decrease in deviant behaviors ([Vyshedskiy et al., 2018](#)). Correspondingly, during the observation conducted on the process of the teaching, it was observed that the child with ASD showed a quick understanding of things presented visually and amazingly could follow the instructions and perfectly copy things the child saw visually. Also, the child could respond to questions in English prompted using pictures and easily capture the pictures and objects visually. So, visual aids appeared to be an essential tool in teaching and dealing with the child with autism on a daily basis. When visual schedules were used consistently and in the same routine every day, the child was able to gain independence in the transitions. The use of visual aids such as picture schedules enhanced communication and facilitated the routine of the child with ASD. The more independent the student could be in the schedules, the less likely misbehaviors occurred during transitions. In addition, the more consistent visual cues were used throughout the school day, the more predictable the child's day had become. When the daily schedules change, teachers should consider adopting a routine. This finding confirmed with the study done by Dettmer et al. (2000) that visual schedules help to make a student's day predictable, and when there is a change in the student's schedule having a routine established will help to ensure the student's daily schedule can remain predictable. The current study showed that all participants in the SEU were highly knowledgeable and had a vast amount of experience with the use of visual aids within the classroom. Unlike the participants from the mainstream who had little or no experience with visual aids in classroom teaching. The findings of this study concur with Dettermer et al. (2000) who assert that visual support is widely used in schools by teachers to facilitate communication with learners with autism. The findings from this study revealed that teachers teaching SEN students preferred the VM strategy. The reason propounded was that VM is about helping the child with non-verbal do the task. Additionally, the teachers in the SEU appeared to have VM in all their lessons and this was confirmed from the lesson observations done on daily basis. It was also clearly mentioned in the lesson plans and the IEPs teachers have documented for the child with ASD. Teachers engaged the child in the classroom by implementing VM strategies as a technology to explain and demonstrate the lessons. After learning through VM in classroom settings, the child has shown improvements in communication and academic performance as well as decreased inappropriate behavior. These results are consistent with those of Park et al. (2018) that one of the popular and effective technology-based interventions is VM intervention. They further elaborate that VM is an evidence-based practice for teaching a variety of skills, such as social and communication behaviors for children with ASD. VM intervention involves showing a video display of an individual performing a specific behavior related to the same behavior to the target student for teaching the target behavior to the child ([Plavnick et al., 2015](#)). The common element shared by all the participants of this study was the active role that the child with ASD plays in their own learning. The use of VM in teaching assisted the child with ASD in initiating verbal communication. Moreover, the interesting thing observed was that the child could do the clean-up activity without missing a procedure, which indicated that the communication took place with him through VM. The extent of the use of VM was manifested in the presentation of videos during the classroom teaching in the self-contained class. Therefore, VM appeared as beneficial for teaching a variety of skills to the child with ASD including vocalization and communication. The evidence of the use of VM was minimal in the mainstream class due to the large class strength, size of the classroom, and lack of resources.

The CT strategy was the common practice followed by the teachers in the SEU. Teachers in the SEU believed that circle time helps children with ASD to learn socialization and CS. The importance of CT for the child with ASD was to socialize, create a conducive environment and enhance communication. For communication to happen, teacher participants in this study used pictures, activity schedules to keep the child on task, and visual support to communicate the needs and make sense of the world around it. The above-mentioned strategies were placed under the CT schedule as a daily routine for the child with ASD. This practice was in accordance with what McCartney and Lanphar (2015) advised that the most effective, CT needs to take place within the normal daily routine of the learning environment rather than an occasional event. In addition, other strategies such as activity schedule and Prepare Offer Wait Response (POWR) were placed under the CT to teach CS to the child in the school. Although these strategies were named differently, they looked similar and serve the same purposes in their actual application to teaching. For instance, activity schedules can enhance the independence of the child with ASD in a variety of settings. It is a set of pictures or written words which are used to enable children with ASD to engage in activities with greater

independence (Banda et al., 2009). The findings of the study agreed with those of Drukpa et al. (2021) who reported structure and visual schedule (activity schedule) approaches as the most common strategies used by teachers to include students on the autism spectrum in schools over many countries and also benefit all students in regular schools. Correspondingly, visual schedules are indications that let the child know what activities are taking place and in what order, according to the teacher participants of this study.

The POWR strategy can be used by educators, family members, and peers to effectively enhance the communication development of students with ASD. The POWR strategy helps communication partners: teachers, family members, and peers, support the social communication of the child with ASD through four steps. These steps include preparing the learning experience, offering opportunities, Waiting, and responding to communication (Douglas et al. (2018)). From the findings of the current research, it is reasonable to clarify that the child with ASD can communicate well using pictures or gestures effectively when given the opportunity. Educators need to create an environment where the child is likely to communicate frequently. Offering opportunities can encourage the child to become an active participant. This study found out a wide range of opportunities was given to the child to communicate, waiting for the child to respond. Teachers in the SEU used multiple methods to respond to student communication every day. Whereas participants from the mainstream did not use this strategy because of lack of knowledge, training, and large class size. They stated that it is not at all possible to give them due attention in a class with a large number of students.

Thirdly, the findings suggest that teachers' interaction and collaboration with various resources (human and non-human) have a large influence on the ways of facilitating effective communication with the child on the spectrum. The current study has employed two spheres of Epstein's theory of overlapping namely family and the school. Collaborating with the teachers and the parent in the school and positioning teachers as agents in facilitating communication strategies is key to identifying important issues. These could be the best communication strategies aimed at the child with ASD. The success and failure of a child with ASDs' educational learning greatly depended on how far collaboration as a creative partnership can be used by teachers, and parents. The creative partnership had influenced the behavior of the child and impacted learning CS. This finding showed that understanding every person's needs and perceptions is a major task for inclusive organizations and educators are better armed psychologically about teaching and learning (Fallon & Zhang, 2013). Effective collaboration skills are essential for special educators and professionals in any field. However, professionals and families of children with ASD must collaborate effectively to meet the diverse needs of families and provide effective support systems (Fallon & Zhang, 2013).

The child's parent is invited in the class during teaching and be part of the intervention of the child's educational program since some programs are required to be carried over and have to monitor at home. Also, the values of involving the parent were expressed by the teacher participants "we work with the parent most of the time," "we let parent explain the behavior of the learner." The findings certainly demonstrated the significance of involving the parent to improve communication strategies with the child. There is abundant literature demonstrating that children with autism have increased parents' involvement and participation in learning (Lemmer et al., 2010; Leach & Duffy, 2009). This study has verified that the parent became better consumers of intervention methods for the child with ASD for deciding the suitability of various intervention options. Moreover, the parent appreciated teachers' efforts and showed gratitude for the services teachers provided in teaching communication strategies. The parent also acknowledged the effort rendered by teachers in guiding and educating the child. The teacher and parent worked together, to prepare the child's IEP learning goals and objectives based on the needs collaboratively. Research confirms this finding by exhibiting that where understanding and good relations have been established; sharing of ideas and problems would be more possible, thus avoiding any disagreement (Serpell & Mashburn, 2012). The findings of the present study showed that when the parent was involved in the learners' education, particularly, the child with ASD, the parent was able to complement or improve communication strategies with the child. Additionally, the findings in the present study confirmed that the parent has an opportunity to discuss the child's issues with the teachers. The involvement of the parent and support showed great coordination between home and regular school. The result from this study to a large extends affirms that the child with ASD in the ZMSS who has received constant support from the parent and teachers is motivated. The child with ASD portrayed better in using communication strategies as well as improved academic learning and interaction skills. This is obvious from the study conducted by Allen worth et al. (2009) that, parents who were interested in their children's academic lives had a significant impact on their ability to learn and helped inculcate in them a lifelong appreciation for learning. All the participants in this study shared the positive impacts in communication and educational outcomes of the child with ASD in learning by integrating parents. It has shown that parent is effective agents of change and plays key roles in facilitating the generalization of learning from the school to the home community. The parent and the teachers should possess a good understanding of the child's present condition since parent-teacher collaboration is important in the intervention program. This study correlates to the interaction between the parents of children with ASD which aligns with Epstein's (2010) collaboration with the parents. It also corroborates that the support from school and family accumulates important guidance and encouragement to a child with ASD in the educational environment. Therefore, the child's parent realized that sharing a common goal with the professionals had positive impacts on the child in learning CS.

While professional's emphasized collaboration as the coordination of services and a multidisciplinary team that included parental involvement. However, a collaborative effort among the stakeholders within the school and relevant stakeholders from outside would play a significant role in realizing these safety measures in teaching CS for the child with ASD. Further, it is vital for collaborating among the parent and school administration to effectively meet the needs of the child and could facilitate greater success. However, a collaborative effort amongst the stakeholders would play a significant role in realizing these safety measures.

Therefore, collaboration was found out to be an important factor in the implementation of communication strategies for the child with ASD. The present study and many others emphasized the importance of ensuring that strategies and practices are kept in unison between the home and school environment. Finally, the data proclaimed that the lack of relevant facilities, knowledge, and materials is a major obstacle to the implementation of effective teaching of communication strategies to the child with ASD. In addition, the study showed that insufficient knowledge of the intervention was one of the most challenging factors in the implementation of communication strategies. The SEN teachers and the mainstream teachers in this study were not qualified and trained; this indicated that they need training related to pedagogy to support the child with ASD.

The findings from the current study showed, to be a qualified special education teacher, one must process knowledge in how to select suitable teaching strategies for each student ([Wei & Yasin, 2017](#)). All the teachers who participated in this study worked in the field were either without any knowledge or with only some basic training. None of the teacher participants had a certified degree in special education and the disability field. This reflects the typical scenario of teachers working in the field of special education in Bhutan to educate children with ASD and other disabilities as found in [Drukpa, 2015](#). The current study discovered the need for teachers with relevant backgrounds in special education and disability. It also conveyed the need to further increase and improve professional development and training for those who are already working with the child with ASD. The parent believed that teachers dealing with her child have proper training and emphasized the importance of giving more training to them. Further, they expressed a desire for a national policy that would protect all children with autism and ensure that they were receiving the necessary services.

Teacher participants reported that a lack of skills to effectively teach the child with ASD and a lack of resources to accommodate individual differences as major challenges since the child with ASD has different needs. The results on the requirement to advance professional development and training of teachers are consistent with the mandate of Article 24 of the Convention on the Rights of Person with Disabilities. Article 24 of the Convention on the Rights of Persons with Disabilities ([United Nation, 2006](#)) states that professionals and staff must be trained to work at least all levels of education and that "such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities" ([United Nation, 2006, Article 24, p. 4](#)). Similarly in compliance with National Policy for Persons with Disability ([GNHC, 2019, p. 53](#)) section 20.1.1 states that "The GNHCS shall coordinate, cooperate and collaborate for the development of human resources and capacity towards providing quality and effective services to the person with disabilities". The findings also reiterated the statement made about the Ministry of Education and non-government organizations not being able to make much progress in training teachers in special education ([Drukpa, 2015](#)). When teaching the child with ASD, a teacher's ability to function well in the classroom is affected by a lack of knowledge. This study revealed that the lack of adequate resources such as teaching materials in the school deterred teachers from using a variety of CS. This means the child with ASD in the classroom did not get the individualized service that is necessary to enhance communication. This resulted in the mere physical presence of the child in the class. The teacher participants explained that to implement the strategies effectively they need relevant resources to teach the child with ASD. The findings of this study corroborate with those of Smith et al. (2017) who emphasize that having a variety of hands-on manipulative and classroom technological devices will make it easier for the teacher to accommodate the child with ASD successfully. Generally, these factors have become a common issue in all schools, and it has affected the teachers in employing the strategies. Nevertheless, there is still room for teachers to adapt their strategies with the available resources.

Conclusion and Recommendation

The primary aim of this study was to identify classroom teaching strategies for facilitating communication with the child with autism. This study showed that teachers have been demonstrating responsiveness towards educational needs and holistic development of the child with ASD, to varying degrees and in different ways. The strategies described in this study add to the shared understanding of the dynamic communication strategies in the classrooms of the child. Significantly, mainstream teachers sought assistance from other members of the school who knows about teaching the child to facilitate effective

classroom communication strategies. As indicated in the response of participants, teaching the child with autism is embedded in the rich ecology of the school context. Some of the collaborators facilitating towards effective communication with ASD include a parent as the immediate priority both in the self-contained class and the mainstream class, colleagues, heads of the school who create opportunities for staff development. Teachers teaching the child with ASD were aware of the approaches such as differentiation, use of visual aids, and strategies as evidenced from the interview and results. It was evident from this study that, although the teachers in the mainstream did not know about teaching the child, they learned from others who had the knowledge on communication strategies, and they practiced in the classroom teaching. The study provides a tremendous amount of insights into classroom practices and their impact on students. However, future researchers are recommended to explore factors that influence teachers 'classroom practices and its' relationship with their professional life for comprehensive understanding.

Implications

The findings from this study have significant implications in the context of Bhutan. As found from the study, the journey towards teaching communication strategies for the child with ASD and skills is at its emerging stage. Many professionals and teachers are still at the stage where they are just beginning to grasp the ideology and rationale behind teaching the child with ASD. The findings from this study have provided the insight that the child with ASD learns best through video modeling (VM), Picture Exchange Communication system (PECS), visual supports, and circle time. The findings consent with and provide both theoretical and practical implications for those who are in the field of teaching communication strategies to the child with ASD. The implications are as follows:

- Implications for the concerned stakeholders: Some of the most prominent findings from this study regarding practical challenges were teachers' lack of knowledge and skills. These have a major impact on teaching the child with ASD in communication strategies. As a source of inspiration, and to enhance knowledge and skills in teaching the child with ASD, those teachers who are working with the child on the spectrum need to be trained on special education background. PECS, circle time, and VM are new in the Bhutanese education setting, and there are not many educators who adapt to using these strategies. It is feasible that with more training and professional development opportunities, the teachers and parents will be more likely to integrate all the strategies to enhance communication skills (CS).
- Due to the lack of resources in the form of teaching-learning materials, and sensory materials, there were signs of frustration caused for teachers teaching the child with ASD at the SEN school. So, no development efforts would be successful without the necessary resources in place. It is possible if the resources are in place.
- Implication for parents: Parent collaboration and responsibility was considered as a vital part of the child's development. Taking an active part in the school as well as ongoing with the same activity with similar strategy at home has an advantage to the positive and explicit outcome. Therefore, parents must be actively involved and collaborate in the learning process of the child in the school and at home.
- Implication for teachers: The findings of this study indicated that learning CS through numerous strategies are more influential to exhibit the presence of learning in an individual with ASD. The videos to teach on both academic and non-academic can be shared on the child's tablets and later can be used at home to revise what is being taught in the classroom teaching. Furthermore, resources on activity schedules, picture cards or PECS also can be shared with the child's parent and can be conveniently carried along to guide communication at home to reinforce learning that has taken place. Thus, it would help the child become more independent and reduce the burden to the parents and teachers.

Implication for policy: Although the National Policy for Persons with Disabilities (NPPD) is in place, it has been indicated from this study that this policy is not implemented properly and there are gaps between policy and practice, this has ramifications for policy (Sherab et al., 2015). The NPPD (GNHC, 2019) mentioned the human resources and capacity building to provide quality and effective services to persons with disabilities but in practice, the school does not have even a single trained teacher to teach a child with ASD. Moreover, the teachers teaching the child, especially the mainstream teachers did not receive adequate training. Therefore, the SEN department under the Ministry of Education (MoE) and concerned stakeholders should look into the matter closely and the issue needs to be addressed at the earliest as possible.

Recommendations

As the evidence showed in this study, teachers at the selected school are making every effort to improve communication for the child with ASD, but some recommendations are considered based on the findings. These recommendations are presented subject-wise.

Teacher Training: There is no one-size-fits-all treatment for all children with ASD. However, to come up with the most suitable intervention plan, the teachers in SEN schools require adequate training and education or trained teachers in communication strategies. The government should either provide adequate training to the teachers or provide trained and specialized teachers to teach a student with ASD, focused on skills-based teaching. This could help the child learn the skills to communicate with people around them and become independent.

Furthermore, professional development and support for in-service teachers is necessary and must be planned, implemented, flexible, and context-based. Each school must be provided with such information annually at the beginning of each academic year. Teacher training should focus on enhancing teachers' understanding of diversity and differentiation that is evident among persons on the autism spectrum. The settings of many interventions and training were given only in special education classrooms and SEN teachers respectively. Equal opportunities for training need to be given to both mainstream teachers and SEN teachers. Therefore, the MoE should emphasize offering more courses and training to teachers to deal with the child of ASD and equip them with knowledge and skills to effectively teach the child. As an incentive, the MoE could arrange to subsidize additional qualification courses for teachers who want to upgrade their knowledge and qualifications in this field.

Collaboration: One of the conditions required for effective implementation of the communication strategies is collaboration. There should be good collaboration among relevant stakeholders in teaching social and CS. Thus, to implement effective communication strategies for a child with ASD it is critical for school staff, all the concerned stakeholders to collaborate to promote successful learning skills. Also, the schools could find opportunities for parents to be involved in events that will promote parent-school collaboration such as parents' nights, sports days, concerts, and exhibitions.

Resources: Funding for the educational sector is essential in providing more resources and meeting the demand for extra support within the classroom and beyond. Positive changes in the child and classroom can also be accomplished when a concerned office provides resources. When the resources constraint on teachers is alleviated interventions can be delivered more effectively.

Future Research

This study identified only four teaching strategies that have been used by the SEN teachers and mainstream teachers at Zhenphen Middle Secondary School. Therefore, the study leaves room for future researchers to focus more on effective teaching strategies that enhance the CS of a child with ASD. The current research was focused on four teachers and child's parent of only one urban school, for further studies, a similar kind of such research can be conducted to bigger sample size with both urban and rural settings to gain general school consensus. More data samples from many schools would be crucial to determine the use of effective skills and communication strategies necessary for maximizing a child with ASD in learning CS. Moreover, it was a small-scale study, and findings were based on the views of five participants. Therefore, the findings cannot be generalized to all the teachers in Bhutan, and it may not be the best presentation of the scenario. The findings of the study could also be made more representative of the reality in the field if a large-scale study in a similar area could be carried out involving children, stakeholders from relevant ministry, and policymakers as participants. This study did not look at the attitude of mainstream teachers towards children with ASD, therefore future researchers should take care of this point. The four interventions strategies are used prominently and practically by teachers who teach a child with ASD to enhance CS in the selected school were identified. Teachers who are aware of the various tactics or interventions can use them in their classrooms to suit the needs of children with ASD.

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