The Teaching Of ESL Reading Comprehension To Autistic Students: Challenges And Enablers

Puteri Zarina Megat Khalid[1*], Haddi Junaidi Kussin[2], Noraini Zulkepli[3], Sarah Wahidah Mohd Khalid[4]

[1*,2,3,4]Department of English Language & Literature, Faculty of Languages and Communication, Universiti Pendidikan Sultan Idris Tanjong Malim 35900 Perak Malaysia. *Email: puteri.zarina@fbk.upsi.edu.my, [2]Email: haddi@fbk.upsi.edu.my,
[3]Email: noraini@fbk.upsi.edu.my, [4]Email: d095287@siswa.upsi.edu.my

ARTICLE INFO	ABSTRACT
	This article investigates the discrete challenges faced by teachers while teaching their students diagnosed with autism reading comprehension in English as a second language (ESL). Visible characteristics of Autism Spectrum Disorder (ASD) are unique challenges in social communication and interaction, which also affect the intellectual activities of individuals with autism such as their reading comprehension ability. The paper presents a review of existing literature to identify the obstacles faced by teachers while dealing with their students with autism during their reading comprehension lessons. These obstacles include challenges in communication, sensory processing, abstract thinking, and language structural deficiencies. The study also highlights the availability of effective enablers that facilitate teachers in improving their students' reading comprehension skills development such as a whole-school approach and immersion in research learning communities focusing on the use of visual support, scaffolding, and multisensory approaches. Additionally, a supportive environment for developing teachers' capabilities can be fostered through the implementation of a whole-school management approach and team collaboration. Engagement with current research and development through participation in structured opportunities such as research learning communities can also help teachers develop themselves. The paper implies that enabling inclusive education demands ongoing commitment to professional growth, emphasizing contextual learning and social practice-based learning.

Index Terms— ASD, challenges, ESL, reading comprehension, teachers |

I. INTRODUCTION

Autism spectrum disorder (ASD) is a neurodevelopmental condition which is characterized by one's disabilities in social communication and interaction. The American Psychiatric Association (2013) described a person with ASD as having normally restricted and repetitive patterns of behaviour, interests, and activities [1]. Teaching reading comprehension in English as a second language (ESL) to students with autism has gained an increasing interest among educators in recent years. With the diagnoses of autism and their implications in education seeing a significant rise globally, the focus on reading comprehension in ESL is also gaining equal momentum. However, teaching ESL reading comprehension to autistic students poses various challenges for teachers. Cheney et al. (2023) listed communicative difficulties, sensory processing issues, abstract thinking difficulties, and language structure deficits as challenging for such students in the acquisition of reading comprehension skills [2]. In spite of all these challenges, there are several facilitators that teachers can use to help them improve their students' reading comprehension. Among the essential facilitators to help improve the reading comprehension of students with autism which have been identified by Zhang (2023) are the incorporation of visual aids, structured learning environments, technology, and personalization of reading materials [3]. Other effective teaching strategies include integrating sensory activities, scaffolding, peer-mediated learning, self-management, and task analysis techniques [4]. By understanding these obstacles and enablers, teachers can establish an all-encompassing educational setting for students with autism, guaranteeing that they acquire an equivalent standard of educational opportunities their peers.

Hogge (2022) posits that the teaching of ESL reading comprehension to autistic students presents exceptional challenges and requires distinct considerations [5]. Individuals who are diagnosed with Autism Spectrum Disorder (ASD) commonly have complications in social interactions and academic attainment, particularly in tasks relating to the comprehension of narrative texts. These complications are attributed to the struggles that these individuals faced in accurately assessing the thoughts and feelings of others for This is mostly due to their struggle in accurately perceiving the thoughts and emotions of others, which is crucial for effective engagement [6]. Teaching students diagnosed with autism spectrum disorder (ASD) can pose significant challenges for educators, especially in the realm of reading comprehension. ASD students exhibit a diverse array of learning needs, making it difficult for teachers to address them effectively. Reading comprehension, being a multifaceted process that demands the simultaneous application of diverse skills and knowledge, frequently presents hurdles for ASD students. Consequently, they often perform markedly lower on comprehension assessments compared to both typically developing peers and those with other disabilities. Regrettably, there is a dearth of research exploring the instructional strategies employed by teachers to enhance the comprehension abilities of ASD students in classroom settings [7]. Thus, the primary purpose of this study was to identify the challenges faced by the ESL teachers in teaching reading to their autistic students. In addition, this study was also directed at determining the facilitating elements that ESL teachers employed or were presented to them in overcoming the hurdles.

II. DIFFICULTIES ENCOUNTERED BY TEACHERS TEACHING ESL READING COMPREHENSION TO AUTISTIC STUDENTS

A. Communication Challenges
Instructing autistic students in ESL reading comprehension poses significant challenges for teachers. Autistic individuals often struggle with communication and social interaction, hindering their ability to grasp and retain reading material. This complexity is amplified for ESL instructors, tasked with teaching comprehension in a language foreign to the students. A primary hurdle faced by educators in this context revolves around communication barriers [8]. Tuna (2023) emphasizes that communication deficiencies are intrinsic to autism and impede learning in conventional classroom settings [9]. Autistic learners may grapple with language comprehension and expression, hampering their comprehension of written text.

Furthermore, teachers must adapt their pedagogical approaches to accommodate the unique requirements of autistic students [10]. Hassan et al. (2022) suggest that autistic learners may benefit from increased visual aids and interactive learning experiences to comprehend reading materials [11]. Implementing a more structured instructional framework can also enhance engagement and attentiveness among autistic students. Aside from communication barriers and instructional adaptations, educators face assessment and evaluation challenges. Herdlein (2022) notes that conventional evaluation methods may not accurately gauge the understanding of autistic students due to their communication and social limitations [12]. Thus, educators must devise alternative assessment strategies tailored to the needs of autistic learners.

Moreover, integrating technology into ESL reading instruction presents its own set of challenges for autistic students. Rakap et al. (2023) highlight the potential of technology as a teaching aid but caution that its suitability varies among autistic individuals [13]. Some may struggle with technology use or become overwhelmed by sensory stimuli. Teachers must carefully assess the appropriateness of technology and provide necessary support to ensure its effective utilization. Communication challenges, adaptive teaching methodologies, assessment complexities, and technology integration represent just a few of the multifaceted issues confronting educators working with autistic students. Nevertheless, with the implementation of appropriate strategies and support systems, teachers can facilitate the enhancement of reading comprehension skills among autistic learners, fostering academic success.

B. Difficulty with abstract concepts
Individuals diagnosed with ASD encounter obstacles in multiple domains of academic learning, such as reading comprehension, writing, and mathematics. These issues arise from their intrinsic impairments in abstract thinking and problem-solving abilities [14]. Consequently, individuals with autism sometimes have difficulties when engaging in academic endeavours that necessitate the comprehension and application of abstract concepts or logical reasoning, such as mathematical word problems.
Abstract notions are characterised by their lack of concreteness, observability, and tangibility, necessitating the capacity to deduce, interpret, and utilise pre-existing knowledge and experiences. Autistic children frequently encounter difficulties in comprehending and applying complex concepts, which might offer problems for their learning process. According to Findley (2023), a significant proportion of pupils diagnosed with autism have Individualised Education Programme (IEP) goals that pertain to the development of abstract thinking and problem-solving skills [15]. Honan et al. (2023) propounded that individuals with Autism Spectrum Disorder (ASD) often have challenges when it comes to generalisation and abstraction [16]. These individuals struggle to grasp the notion that concepts may be applied across many contexts. Hence, it is vital to

ascertain efficacious tactics that will bolster the academic proficiency of individuals with autism, enabling them to attain abstract knowledge on par with their neurotypical counterparts.

The utilisation of tangible materials and visual aids that are compliant is a frequently employed approach to enhance the educational achievements of individuals with Autism Spectrum Disorder (ASD). For example, the utilisation of manipulatives in the context of mathematics training promotes the visual representation of abstract notions, hence facilitating comprehension of mathematical principles among pupils diagnosed with autism [17]. Additional tactics frequently utilised to enhance the acquisition of abstract concepts among individuals with ASD encompass computer-assisted education [18]. Nevertheless, although these strategies have exhibited some levels of effectiveness, further investigation is required to ascertain novel methodologies in instructing autistic children on abstract concepts that are customised to their individualised learning requirements [19].

Individuals diagnosed with ASD encounter several difficulties when it comes to grasping abstract concepts. The use of personalised assistance solutions, which incorporate the utilisation of tangible items and visual aids, has exhibited certain levels of effectiveness in tackling this particular concern. Further investigation is required to ascertain novel educational methodologies that are grounded in empirical evidence and specifically designed to cater to the distinct requirements of individuals with autism. This research will play a crucial role in providing valuable insights for the development of instructional practices and support materials tailored to the needs of instructors and students with Autism Spectrum Disorder (ASD). Enhancing the academic performance of autistic students by addressing the challenges associated with comprehending abstract concepts is crucial for their future success and overall well-being.

C. Sensory overload and attention span

Research has indicated that a substantial majority, ranging from 80% to 90%, of children diagnosed with autism spectrum disorder (ASD) have notable challenges in sensory processing, which subsequently impacts their engagement in everyday tasks and routines [20]-[22]. Hashim et. al., (2022), Kalandadze et al., (2022), and Kormos (2016), have outlined the impact of Autism Spectrum Disorder on the development of reading skills [23] – [25]. There exists a significant degree of variability in individuals' proficiency in the structural components of language, such as semantics and grammar. Insufficient social interaction can impede the development of vocabulary. Additionally, learners with ASD may encounter challenges in comprehending figurative language, such as metaphor, irony, idiom, humour, and other non-literal expressions. Furthermore, understanding the attitudes and motivations of authors and characters may pose difficulties to the autistic students. Singh et al. (2021) investigated interventions aimed at enhancing reading comprehension among students diagnosed with ASD [26]. Their study, which concentrated on single-case design, revealed that the utilization of visuals, metacognitive strategies, and modified texts yielded substantial benefits. However, collaborative strategies and technology assistance were found to be only moderately effective.

Children diagnosed with either Sensory Processing Disorder (SPD) or Autism Spectrum Disorder (ASD) may experience challenges in processing sensory information from several systems, including tactile (touch), auditory (sound), visual (seeing), gustatory (taste), olfactory (smell), proprioceptive (body position), and vestibular (balance and movement). These youngsters are frequently perceived as having difficulties with sensory integration (SI), which refers to the nervous system's capacity to process and arrange sensory stimuli in the environment to facilitate adaptive functioning. These impairments can impact a child's adaptive behaviour, cognitive ability, motor skills, physical activity, literacy, and numeracy skills [27].

D. Language deficits

The existing research generally agrees that most individuals with autism display different pragmatic skills compared to neurotypical individuals. Some people with autism may have a strong understanding of words, even if they struggle with other language skills [28] – [29]. Teaching ESL reading comprehension to autistic students presents a set of challenges that need to be addressed in order to effectively support their learning. Firstly, autistic students often have difficulty with vocabulary knowledge and background knowledge [30]. This means that they may struggle with understanding and interpreting the meaning of words and phrases in a text, as well as making connections to prior knowledge and experiences. Additionally, autistic students may have difficulties with grammatical knowledge, which can impact their comprehension of sentence structure and overall meaning in a text. Moreover, autistic students may struggle with understanding linguistic complexity, including lexical and syntactic knowledge [31]. Furthermore, language inaccessibility can pose a significant challenge for autistic students in understanding and comprehending the content of texts. Individuals with autism may have a good understanding of words and be able to draw conclusions, but they might struggle to understand information by putting it into context [32]. Moreover, autistic students may also have poor reading strategies, which can further hinder their ability to comprehend and make sense of the text [33]. Mashal and Kasirer (2011) have outlined the impact of Autism Spectrum Disorder on the development of reading skills [34]. There exists a significant degree of variability in individuals' proficiency in the structural components of language, such as semantics and grammar. Insufficient social interaction can impede the development of vocabulary. Additionally, learners with ASD may encounter challenges in comprehending figurative language, such as metaphor, irony, idiom, humour, and other non-literal expressions. Furthermore,

understanding the attitudes and motivations of authors and characters may pose difficulties to the autistic students.

III. ENABLERS IN TEACHING ESL READING COMPREHENSION TO AUTISTIC STUDENTS

A. Instructional strategies

Teachers who work with children with Autism Spectrum Disorder (ASD) typically lack the training and support to deliver effective treatment and care for these individuals. They might lack the requisite expertise in instructional techniques tailored to the unique requirements of children with Autism Spectrum Disorder (ASD), such as offering visual aids. As a result, they may turn to employing traditional teaching methods while instructing youngsters who are impacted [35]. Despite the challenges faced in teaching ESL reading comprehension to autistic students, there are various facilitators that can be employed to support their learning. These facilitators include the use of visual supports and aids, breaking down the text into smaller chunks, providing explicit instruction and scaffolding, offering opportunities for repetitive practice and reinforcement, and incorporating multisensory approaches.

One facilitator in teaching ESL reading comprehension to autistic students is the use of visual supports and aids [36]. Visual supports and aids, such as pictures, diagrams, and visual organizers, can enhance understanding and comprehension for autistic students [37]. Another facilitator in teaching ESL reading comprehension to autistic students is breaking down the text into smaller chunks and providing clear instructions and directions [38]. Breaking down the text into smaller chunks and providing clear instructions and directions can help autistic students better comprehend the material. Additionally, providing explicit instruction and scaffolding can assist autistic students in developing necessary reading strategies and skills [39]. Explicit instruction and scaffolding can assist autistic students in developing necessary reading strategies and skills [40]. Furthermore, providing opportunities for repetitive practice and reinforcement can aid in reinforcing reading comprehension skills for autistic students.

Incorporating multisensory approaches can be another facilitator in teaching ESL reading comprehension to autistic students [41]. Multisensory approaches, such as incorporating tactile and auditory elements into reading activities, can engage different senses and improve comprehension for autistic students [42]. In a research by Melville (2022), some key findings were discovered which demonstrated the potential advantages of using punctuation and exaggerated letters to enhance ASD students' intonation and emotional comprehension of characters' experiences [43]. The study also highlighted the positive influence of music on students' enjoyment and understanding in the learning processes. Additionally, it emphasised the importance of fostering self-encouragement and mutual support among students with autism disorder. The study also emphasized the role of mediated semiotic tools in facilitating comprehension of reading texts among autistic learners.

B. Whole-school management approach

Another possible facilitator to ensuring a successful teaching of ESL reading comprehension to students with autism is a coeducational setting which suggests that individualized approaches may be necessary to accommodate the needs of students with ASD [44]. An extensive inquiry into the whole-school approach and team approach to fostering a favorable school atmosphere for students with autism uncovers unique advantages. The comprehensive approach implemented by the school, which involves the systematic incorporation of policies, practices, and cultural norms, cultivates a widespread culture of tolerance and acceptance throughout the school community. This strategy enables all those involved, such as teachers, administrators, support staff, and students, to collaboratively advocate for the needs of autistic students, thus establishing a unified and supportive atmosphere that promotes their overall development [45]. Department meetings can include dedicated agenda time for discussions on implementation plans to train teachers and staff in supporting autistic children. Maintaining regular communication with coaching as necessary will assist and maintain teacher endeavors that benefit their autistic students [46].

In contrast, the team approach utilizes teamwork and focused interventions to leverage the combined knowledge of multidisciplinary teams consisting of educators, therapists, counselors, and parents. The collaborative synergy allows for the customization of support mechanisms that are specifically designed to meet the individual needs of autistic pupils. This facilitates personalized treatments and promotes significant development in academic, social, and emotional areas [46]. Collaborative action is crucial for teachers in an inclusive school. The schools and teachers employed proactive and reactive strategies to develop an inclusive pedagogy while providing support to their students [47]. By recognizing the inherent benefits of both models, educational institutions can implement a hybrid model that combines the comprehensive inclusion of the whole-school approach with the focused interventions facilitated by the team approach. This integration maximises the utilisation of resources, optimises the efficiency of support systems, and fosters an inclusive atmosphere that values diversity while placing a high importance on the welfare and achievements of autistic students within the school community [47]. To adequately address the needs of autistic students, policymakers, relevant authorities, and designers must possess enhanced design preferences for creating a sustainable learning environment. Creating a supportive environment for autistic students in the educational

setting would provide them with a favourable opportunity to thrive in both their academic and social pursuits [48].

C. Research learning communities

Another form of creating a facilitator for teachers teaching the autistic students in schools is an in-depth engagement with research evidence and empowerment to become researchers themselves. In their study, Mintz et al., (2021) outlined the utilisation of the research learning communities (RLCs), a type of collaborative professional development to render research on autism and education system reform easily understandable for primary school teachers [49]. It is a type of collaborative professional development that is growing in popularity A multidisciplinary team of experts facilitated the collaboration between school leaders and class teachers, providing them with structured opportunities to engage with up-to-date and excellent research. The participants in their research developed and tested treatments based on experiments to assist students with autism and enhance the overall school policy and practices on special education and disability. The RLC provided the teachers with an opportunity to exchange their experiences with fellow educators through a process of reciprocal contemplation and knowledge acquisition. The evaluation revealed that the participants exhibited increased self-assurance in spearheading change and effectively used research to formulate policies and practices for special educational needs and disabilities in schools.

For the achievement of inclusive education, it is crucial to have an unwavering dedication to the ongoing professional growth of teachers. This commitment is not just a singular endeavour, but a continuous devotion to cultivating a vibrant educational atmosphere. To achieve this purpose, it is recommended to form learning communities based on the fundamental principles of contextual learning and learning as a social practice, as stated by Lave and Wenger in 1991 [50]. A recent study conducted by Walton et al. (2022) explores the complex aspects that impact the professional growth of teachers [51]. Their findings emphasise the need of being responsive to contextual demands, having a high level of competence, and having supportive networks. These aspects jointly influence the professional development of educators, highlighting the importance of using a comprehensive strategy. The study provides additional insight into learning communities that operate at the convergence of multiple systems. These communities provide favourable conditions for transformation, allowing teachers to go beyond conventional limits by reinterpreting knowledge and learning. The support for contextual learning arises as a crucial idea, emphasising the transformative influence of collaboration in fostering inclusive environments inside educational institutions. Importantly, the research findings not only provide theoretical understanding, but also have the ability to direct the creation of specific strategies for the professional advancement of teachers in the field of inclusive education. Introducing professional learning communities - a carefully crafted framework aimed at empowering teacher leaders. According to Fair (2023), these communities not only give resources but also offer crucial help, facilitating the proactive development of inclusive education in specific settings [52]. Additionally, participating in professional development endeavours on autism also nurtures teachers' positive attitudes towards the notion of inclusive education [39]. Nevertheless, these concepts have a broader relevance beyond the whole educational context. In order to effectively enhance the English as a Second Language (ESL) reading comprehension skills of autistic pupils, it is crucial for teachers to be fully engaged in a suitable educational environment. This highlights the importance of having a detailed comprehension for specialised education, emphasising that customised learning settings play a crucial role in achieving the best results. Implementing inclusive education requires a thorough and ongoing dedication to the professional growth of teachers. Learning communities, influenced by the principles of contextual learning and social practice, serve as transforming entities, providing not only theoretical concepts but also practical solutions. The journey towards inclusive education is guided by committed teacher leaders who are fully engaged in nurturing conducive learning environments, resulting in a cascading influence that benefits students with a wide range of learning requirements.

CONCLUSION

Due to the intricacies involved in fostering reading comprehension abilities alongside the distinct and intricate academic requirements of students with ASD, gaining further insights into special education teacher practices will result in improved readiness and assistance for both special education teachers and their students. Teaching reading comprehension to autistic students in ESL requires complex strategies and continuous professional growth due to the intricate difficulties involved. Autism Spectrum Disorder (ASD) includes challenges in communication, understanding abstract concepts, experiencing sensory overload, and having difficulty with language, which makes teaching comprehension more complex. However, the use of visual aids, organized setting, and multimodal strategies by teachers shows potential for success. Collaborative models, such as whole-school administration and team techniques, establish supportive ecosystems that foster student growth. Research learning communities (RLCs) enable educators to actively participate in state-of-the-art research, thereby improving treatments and teaching. The success of inclusive education relies on the adoption of contextual learning and social behaviours, which provide fair opportunities and comprehensive development for all learners. By incorporating these insights, teachers can enable autistic children to excel academically, particularly in the development of their ESL reading comprehension skills. Additionally, these

students can also be assisted to excel socially. All these are endeavours that aim at cultivating a more inclusive and supportive school environment for both teachers and students. The study explores the challenges faced by ESL teachers in teaching reading comprehension to autistic students, highlighting the limitations of the research. The study relied on self-reported data from teachers, which may be subject to bias. It also did not explore the effectiveness of different instructional strategies or the impact of teacher training on confidence and efficacy. Future research should investigate these factors, explore technology's role, and replicate the study in different contexts to increase generalizability.

ACKNOWLEDGEMENT

REFERENCES

1. American Psychiatric Association, "Diagnostic And Statistical Manual Of Mental Disorders (5th Ed.)," Washington DC: Author, 2013.
2. L. Cheney, R. B. Dudas, J. M. Traynor, J. A. Beatson, S. Rao, & L. W. Choi-Kain, "Co-Occurring Autism Spectrum And Borderline Personality Disorder: An Emerging Clinical Challenge Seeking Informed Interventions," Harvard Review Of Psychiatry, Vol. 31, No. 2, Pp. 83-91, 2023. Available: 10.1097/HRP.0000000000000361
3. Q. Zhang, "Secure Preschool Education Using Machine Learning And Metaverse Technologies," Applied Artificial Intelligence, Vol. 37, No. 1, P. 2222496, 2023. Available: Https://Doi.Org/10.1080/08839514.2023.2222496
4. K. M. O'Mara, "Commonalities In Evidence-Based Instructional Strategies For Autism Spectrum Disorder And English Language Learners," Ph.D. Thesis, University Of Arkansas, 2023.
5. K. C. Hogge, "Perceptions Regarding Reading Comprehension And Self-Efficacy In Students With Autism Spectrum Disorder: An Embedded-Multiple Case Study," Ph.D. Dissertation, Liberty University, Virgina, USA, 2022.
6. R. B. Drill, And S. Bellini, "Combining Readers Theater, Story Mapping And Video Self-Modeling Interventions To Improve Narrative Reading Comprehension In Children With Autism Spectrum Disorder," Journal Of Autism And Developmental Disorders, Vol. 52, No. 1, Pp. 1-15, 2022. Available: Https://Doi.Org/10.1007/S10803-021-04908-X
7. G. Braun, G., And M. T. Hughes, "Examining Teachers Practice: Enhancing Reading Comprehension For Students With Autism Spectrum Disorder," Journal Of Teacher Education And Educators, Vol. 9, No. 3, Pp. 287-307, 2020. Available: Https://Files.Eric.Ed.Gov/Fulltext/EJ1281781.Pdf
8. M. Alnemr, "Improving Reading Comprehension In Kids With Special Needs," Eximia, Vol. 5, No. 1, Pp. 552-557, 2022. Available: Https://Techniumscience.Com/Index.Php/Socialsciences/Index
9. Tuna, "Recognising And Expressing Emotions: Difficulties Of Children With Autism Spectrum Disorder In Learning A Foreign Language And How To Resolve Them," Center For Educational Policy Studies Journal, 2023. Available: Https://Doi.Org/10.26529/Cepsj.1382
10. Rodríguez, And G. A. Haddock, "Promoting Social Communication: Teaching Strategies For Students With Autism Spectrum Disorder In East Africa. In Handbook Of Speech-Language Therapy In Sub-Saharan Africa: Integrating Research And Practice," (Pp. 611-626), Cham: Springer International Publishing, 2023.
11. M. H. Hassan, W. J. E. Wahed, R. H. Wardi, M. H. Abdullah, B. Isa, B., & M. F. Ahmad, "Help Me Help You": Designing Visual Teaching Tools For The Autism Spectrum Disorder (ASD) Children," International Journal Of Art & Design, Vol. 6, No. 2, 106-117, 2022. Available: Https://Myjms.Mohe.Gov.My/Index.Php/Ijad/Index
12. T. Herdlein, "How Secondary Teachers Select, Implement, And Assess Reading Comprehension Interventions For Students With Autism Spectrum Disorder," Phd. Dissertation, Walden University, 2022.
13. S. Rakap, M. Karnas, U. Bayrakdar, S. Kalkan, M. Vural-Batik, & H. I. Sari, "Virtual Learning Is Not For My Child! A Parental Perspective Of Practices Used With Children With Autism During The Pandemic," International Online Journal Of Education And Teaching, Vol. 10, No. 2, Pp. 1821-1847, 2023. Available: File:///C:/Users/UPSI%20Lenovo%2016/Downloads/27.+Kalkan+Et+Al.,+ID+1831,+1831-1847.Pdf
14. Polo-Blanco, P. Suárez-Pinilla, J. Goñi-Cervera, M. Suárez-Pinilla, And B. Payá, "Comparison Of Mathematics Problem-Solving Abilities In Autistic And Non-Autistic Children: The Influence Of Cognitive Profile," Journal Of Autism And Developmental Disorders, Vol. 54, No. 1, Pp. 353–365, Nov. 2022, Available: Doi: 10.1007/S10803-022-05802-W.
15. Findley, "An Investigation Of Individualized Education Programs For Students With Autism." Ph. D. Thesis, University Of Kentucky, USA, 2023.

16. Honan Et Al., "Program Evaluation Of An Adapted PEERS® Social Skills Program In Young Adults With Autism Spectrum Disorder And/Or Mild Intellectual Impairment And Social Skills Difficulties," Journal Of Evaluation In Clinical Practice, Vol. 29, No. 1, Pp. 126–135, Aug. 2022. Available: Doi: 10.1111/Jep.13743.

17. Z. Rosli, F. Shahbodin, & C. K. N. C. K. Mohd, "Constructing A Conceptual Framework For Implementing Assistive Learning Technology To Enhance Word Problem Solving Skills In Children With Autism," Scandinavian Journal Of Information Systems, Vol. 35, No. 3, Pp. 326-333, 2023. Available: Https://Doi: 10.5281/SJIS.7759822

18. Zibin, A. R. M. Altakhaineh, D. Suleiman, And B. A. Abdallat, "The Effect Of Using An Arabic Assistive Application On Improving The Ability Of Children With Autism Spectrum Disorder To Comprehend And Answer Content Questions," Journal Of Psycholinguistic Research, Vol. 52, No. 6, Pp. 2743–2762, Sep. 2023. Available: Doi: 10.1007/S10936-023-10019-8.

19. M. Mahmud Et Al., "Towards Explainable And Privacy-Preserving Artificial Intelligence For Personalisation In Autism Spectrum Disorder," In Lecture Notes In Computer Science, 2022, Pp. 356–370. Available: Doi: 10.1007/978-3-031-05039-8_26.

20. Lane, R. L. Young, A. E. Z. Baker, And M. T. Angley, "Sensory Processing Subtypes In Autism: Association With Adaptive Behavior," Journal Of Autism And Developmental Disorders, Vol. 40, No. 1, Pp. 112–122, Jul. 2009. Available: Doi: 10.1007/S10803-009-0840-2.

21. M. Lloyd, M. Macdonald, And C. Lord, "Motor Skills Of Toddlers With Autism Spectrum Disorders," Autism, Vol. 17, No. 2, Pp. 133–146, May 2011. Available: Doi: 10.1177/1362361311402230.

22. L. Williams, A. V. Kirby, L. R. Watson, J. Sideris, J. Bulluck, And G. T. Baranek, "Sensory Features As Predictors Of Adaptive Behaviors: A Comparative Longitudinal Study Of Children With Autism Spectrum Disorder And Other Developmental Disabilities," Research In Developmental Disabilities, Vol. 81, Pp. 103–112, Oct. 2018. Available: Doi: 10.1016/J.Ridd.2018.07.002.

23. H. U. Hashim, M. M. Yunus, And H. Norman, "Autism Children And English Vocabulary Learning: A Qualitative Inquiry Of The Challenges They Face In Their English Vocabulary Learning Journey," Children, Vol. 9, No. 5, P. 628, Apr. 2022. Available: Doi: 10.3390/Children9050628.

24. T. Kalandadze, J. Braeken, C. Brynskov, And K.-A. B. Næss, "Metaphor Comprehension In Individuals With Autism Spectrum Disorder: Core Language Skills Matter," Journal Of Autism And Developmental Disorders, Vol. 52, No. 1, Pp. 316–326, Mar. 2021. Available: Doi: 10.1007/S10803-021-04922-Z.

25. Kormos, The Second Language Learning Processes Of Students With Specific Learning Difficulties. Routledge, 2016.

26. B. D. Singh, D. W. Moore, B. E. Furlonger, A. Anderson, R. Fall, And S. Howorth, "Reading Comprehension And Autism Spectrum Disorder: A Systematic Review Of Interventions Involving Single-Case Experimental Designs," Review Journal Of Autism And Developmental Disorders, Vol. 8, No. 1, Pp. 3–21, Apr. 2020. Available: Doi: 10.1007/S40489-020-00200-3.

27. Crasta, E. Salzinger, M.-H. Lin, W. J. Gavin, And P. L. Davies, "Sensory Processing And Attention Profiles Among Children With Sensory Processing Disorders And Autism Spectrum Disorders," Frontiers In Integrative Neuroscience, Vol. 14, May 2020. Available: Doi: 10.3389/Fnint.2020.00022.

28. J. Schaeffer Et Al., "Language In Autism: Domains, Profiles And Co-Occurring Conditions," Journal Of Neural Transmission, Vol. 130, No. 3, Pp. 433–457, Mar. 2023. Available: Doi: 10.1007/S00702-023-02592-Y.

29. N. Sukenik And L. Tuller, "Lexical Semantic Knowledge Of Children With ASD—A Review Study," Review Journal Of Autism And Developmental Disorders, Vol. 10, No. 1, Pp. 130–143, Jul. 2021. Available: Doi: 10.1007/S40489-021-00272-9.

30. S. D. Odermatt, W. Möhring, S. Grieder, And A. Grob, "Cognitive And Developmental Functions In Autistic And Non-Autistic Children And Adolescents: Evidence From The Intelligence And Development Scales–2," Journal Of Intelligence, Vol. 10, No. 4, P. 112, Nov. 2022. Available: Doi: 10.3390/Jintelligence10040112.

31. Jarbou, D. Won, J. Gillis-Mattson, & R. Romanczyk, "Deep Learning-Based School Attendance Prediction For Autistic Students," Scientific Reports, Vol. 12, No. 1, P. 1431, 2022.Available: Https://Www.Nature.Com/Articles/S41598-022-05258-Z

32. S. Engel And L. C. Ehri, "Reading Comprehension Instruction For Young Students With Autism: Forming Contextual Connections," Journal Of Autism And Developmental Disorders, Vol. 51, No. 4, Pp. 1266–1280, Jul. 2020. Available: Doi: 10.1007/S10803-020-04596-Z.

33. H. Masduqi, F. Fatimah, & A. Subiyanto, "Qualitative Research Into Reading In English As A Foreign Language In Indonesia–Quo Vadis," Indonesian TESOL Journal, Vol. 3, No. 2, Pp. 76-87, 2021. Available: Https://Ejournal.Iainpalopo.Ac.Id/Index.Php/ITJ/Index

34. Mashal And A. Kasirer, "Thinking Maps Enhance Metaphoric Competence In Children With Autism And Learning Disabilities," Research In Developmental Disabilities, Vol. 32, No. 6, Pp. 2045–2054, Nov. 2011. Available: Doi: 10.1016/J.Ridd.2011.08.012.

35. R. Hidayah And N. Solichah, "Improving Teachers Knowledge In Making Visual Support For Children With Autism Spectrum Disorders," Deleted Journal, Vol. 9, No. 2, Pp. 223–234, May 2023. Available: Doi: 10.15575/Psy.V9i2.14218.
36. B. K. Öztürk, "Digital Reading And The Concept Of Ebook: Metaphorical Analysis Of Preservice Teachers' Perceptions Regarding The Concept Of Ebook," SAGE Open, Vol. 11, No. 2, P. 215824402110168, Apr. 2021. Available: Doi: 10.1177/21582440211016841.
37. W. Qi And Y. Jiang, "Use Of A Graphic Organiser As A Pedagogical Instrument For The Sustainable Development Of EFL Learners' English Reading Comprehension," Sustainability, Vol. 13, No. 24, P. 13748, Dec. 2021. Available: Doi: 10.3390/Su132413748.
38. Gholamipour, "The Effect Of Practicing Domestic Vs. Foreign Newspaper On Iranian Intermediate EFL Learners' Reading Comprehension Ability," International Journal Of Research In English Education, Vol. 3, No. 2, Pp. 1- 16. 2018. Available:Https://Ijreeonline.Com/Files/Site1/User_Files_68bcd6/Mahboubeh Gholamipour-A-10-79-1-7494ca6.Pdf
39. Petersson-Bloom And M. Holmqvist, "Strategies In Supporting Inclusive Education For Autistic Students—A Systematic Review Of Qualitative Research Results," Autism & Developmental Language Impairments, Vol. 7, P. 239694152211234, Jan. 2022. Available: Doi: 10.1177/23969415221123429.
40. H. M. E. Mostafa, E. S. Dadour, & A. A. Qoura, "Using A Computer-Based Scaffolding Strategy To Enhance EFL Preparatory Stage Students' Reading Skills And Self-Regulation," Journal Of Research In Curriculum Instruction And Educational Technology, Vol. 5, No. 1, Pp. 111-134, 2019. Available: Https://Journals.Ekb.Eg/Article_31978_B1dfca458bb51af5e9cc8b17cdeca870.Pdf
41. S. Fitzgibbons, "The Interface Between Reading And Handwriting," Frontiers In Psychology, Vol. 13, Jul. 2022. Available: Doi: 10.3389/Fpsyg.2022.892913.
42. CESARI, B. GALGANI, A. GEMIGNANI, AND D. MENICUCCI, "ENHANCING QUALITIES OF CONSCIOUSNESS DURING ONLINE LEARNING VIA MULTISENSORY INTERACTIONS," BEHAVIORAL SCIENCES, VOL. 11, NO. 5, P. 57, APR. 2021. AVAILABLE: DOI: 10.3390/Bs11050057.
43. K. Melville, "Exploring How Scripts, Drama, Art, And Sensory Stimulation Can Contribute To Autistic Students' Reading Comprehension And Enjoyment Of Fiction Text," (Ph.D. Dissertation). St. John's University (New York), 2022.
44. J. Stephenson, L. Browne, L., M. Carter, T. Clark, D. Costley, D., J. Martin,... & N. Sweller, "Facilitators And Barriers To Inclusion Of Students With Autism Spectrum Disorder: Parent, Teacher, And Principal Perspectives," Australasian Journal Of Special And Inclusive Education, Vol. 45, No. 1, Pp. 1-17, 2021. Available: Https://Doi.Org/10.1017/Jsi.2020.12
45. [H. Mclennan, "Including Students On The Autism Spectrum: Stakeholder Experience And Knowledge Gained In Evaluating Practice (Doctoral Dissertation)," Griffith University, Australia, 2021.
46. L. F. Rentschler, K. A. Hume, And J. R. Steinbrenner, "Building Inclusive High School Communities For Autistic Students," Teaching Exceptional Children, Vol. 56, No. 2, Pp. 98-106, 2023. Available: Https://Journals.Sagepub.Com/Doi/Pdf/10.1177/00400599221098194
47. S. Lakkala, A. Galkienė, J. Navaitienė, T. Cierpiałowska, S. Tomecek, And S. Uusiautti, "Teachers Supporting Students In Collaborative Ways—An Analysis Of Collaborative Work Creating Supportive Learning Environments For Every Student In A School: Cases From Austria, Finland, Lithuania, And Poland," Sustainability, Vol. 13, No. 5, P. 2804, 2021. Available: Https://Www.Mdpi.Com/2071-1050/13/5/2804
48. M. P. Zarina, M. M. Yusop, S. Palanible, N. A. Rani, N. M. Nor, S. I. Safie, S. I. And C. Mason, "Post-Secondary Technical Vocational Education And Training Education Framework For Autistic Learners In Malaysia," In INTED2023 Proceedings (Pp. 1668-1677). IATED, 2023.
49. J. Mintz, S. Seleznyov, N. Peacey, C. Brown, C., And S. White, "Evidence Informed Practice For Autism, Special Educational Needs And Disability In Schools: Expanding The Scope Of The Research Learning Community Model Of Professional Development," Support For Learning, Vol. 36, No. 2, Pp. 159-182, 2021. Available: Https://Nasenjournals.Onlinelibrary.Wiley.Com/Doi/Pdf/10.1111/1467-9604.12349
50. J. Lave, And E. Wenger, "Situated Learning. Legitimate Peripheral Participation," Cambridge, England: Cambridge University Press, 1991.
51. Walton, S. Carrington, B. Saggers, C. Edwards, And W. Kimani, "What Matters In Learning Communities For Inclusive Education: A Cross-Case Analysis," Professional Development In Education, Vol. 48, No. 1, Pp. 134-148, 2022. Available: Https://Doi.Org/10.1080/19415257.2019.1689525
52. Fair, "It Will Be A Ripple Effect: 'Coaches Cultivating Teacher Leadership For Inclusive Education Through Professional Learning Communities," Journal Of Interdisciplinary Teacher Leadership, Vol. 7, No. 1, Pp. 134-160, 2023. Available: https://Kenanfellows.Org/Journals/Wp-Content/Uploads/Sites/377/2023/12/Coaches-Cultivating-Teacher-Leadership-For-Inclusive-Education-Through-Professional-Learning-Communities.Pdf