Unique Needs of Diverse Learners: Practices of Special Education

Christopher Jay M. Dayao¹, Jephunie Daligdig², Nazareth Zoilo³, Eunice Castro⁴, Amor L. Lanuza⁵, Daryll D. Regala⁶

Researchers

INTRODUCTION

In today's educational landscape, the philosophy of inclusive education has gained traction to ensure the equitable and effective education of children with special needs (Hornby, 2015). Inclusive education goes beyond the mere physical integration of students with diverse abilities and backgrounds (Srivastava, 2023) (Comia, 2021); it encompasses a fundamental shift in mindset, with the recognition that each learner brings a unique set of experiences, strengths, and challenges to the classroom (Srivastava, 2023) (Hornby, 2015).

Globaly, the inclusive education movement has been bolstered by influential declarations from the United Nations, which have mandated access to education for individuals with disabilities without discrimination (Bibiana et al., 2020). However, the transition to truly inclusive practices in schools has not been without its challenges. (Bibiana et al., 2020)

Nationally, educating students with diverse needs, particularly those from culturally and linguistically diverse (CLD) backgrounds, has been a long-standing challenge in the field of special education (Hoover &deBettencourt, 2017) (Hornby, 2015) (Evans et al., 2021). In many contexts, the traditional model of special education has been criticized for perpetuating a siloed approach, where students with disabilities are segregated from their peers (Hornby, 2015).

Locally, the implementation of inclusive education programs has been uneven, with a lack of awareness and understanding among key stakeholders, including school staff, students, and parents (Comia, 2021). This has led to a disconnect between the aspirational goals of inclusive education and the realities on the ground. (Comia, 2021) in Alberto Olarte Sr. National High School, Mabila Sarangani Davao Occidenta

Reasearch Question

The study aims to answer the question:

To address these challenges, the present study aims to investigate the implementation of inclusive education practices at Alberto Olarte Sr. National High School, with a focus on the following research question:

- 1. What are the perceptions of teachers and headteachers on the effectiveness of inclusive education in fostering the academic and social development of students with diverse needs?
- 2. What are the key challenges faced by teachers in implementing inclusive education and how can these challenges be addressed?
- 3. How can the school community, including families and policymakers, work together to create a more inclusive and supportive learning environment for all students?

PERCEPTIONS OF TEACHERS AND HEADTEACHERS ON INCLUSIVE EDUCATION:

Mixed Attitudes and Challenges

The study's findings suggest that teachers and headteachers at Alberto Olarte Sr. National High School hold a range of perceptions and attitudes towards inclusive education. While some express a genuine commitment to the principles of inclusive education and recognize its potential benefits for all students, others remain skeptical or overwhelmed by the perceived challenges (Boer et al., 2011)(Correia & Teixeira, 2017)(Kalenga et al., 2014)Teachers who support inclusive education emphasize the importance of fostering a sense of belonging and acceptance for students with diverse needs, as well as the potential for all students to learn from one another and develop empathy and understanding (Geleta, 2019)(Peter & Nderitu, 2014). However, many teachers also voiced concerns about their ability to effectively meet the unique needs of students with disabilities within the constraints of the mainstream curriculum

and classroom environment. Head teachers often cited the lack of appropriate infrastructure, resources, and specialized training as significant barriers to the successful implementation of inclusive education (Geleta, 2019) (Singh et al., 2023).

Key Challenges Faced by Teachers in Implementing Inclusive Education

Findings from the study highlight several key challenges that teachers at Alberto Olarte Sr. National High School face in implementing inclusive education practices (Correia & Teixeira, 2017) (Woodcock & Woolfson, 2019).

Teachers encounter various challenges when implementing inclusive education. Some teachers lack experience in inclusive settings, particularly when working with students who have severe and profound disabilities. Designing activities that genuinely include all students can be challenging, as teachers must balance the needs of students with varying levels of disabilities. Additionally, addressing the emotional impact of loss within an inclusive classroom, such as dealing with death, can be difficult. The limited availability of teacher aides can also hinder the effective implementation of inclusive practices.

To address these challenges, providing ongoing in-service training for teachers is essential to enhance their skills in inclusive practices. Promoting compassion and teaching empathy and understanding to students can also foster a more inclusive environment. Leveraging assistive technologies and universal design principles can help support the diverse learning needs of all students.

Creating an Inclusive and Supportive Learning Environment:

The Role of the School Community Enhancing the effectiveness of inclusive education at Alberto Olarte Sr. National High School will require a collaborative effort involving various stakeholders within the school community. Developing strong partnerships between teachers, school administrators, families, and community members is crucial to creating a more inclusive and supportive learning environment for all students (Rabi &Zulkefli, 2018).

School leaders play a pivotal role in fostering an inclusive school culture, providing clear vision and guidance, and ensuring that teachers have the necessary resources and support to effectively implement inclusive practices (Geleta, 2019) (Peter & Nderitu, 2014). Families, as key partners in their children's education, can contribute to the success of inclusive education by actively engaging with the school, advocating for their children's needs, and collaborating with teachers to develop tailored support strategies.

Policymakers and education authorities also have a critical role to play in creating an enabling environment for inclusive education. They can provide clear policy directives, allocate adequate funding, and offer targeted professional development opportunities for teachers to enhance their competencies in inclusive practices (Bibiana et al., 2020).

Overall, the findings from this study highlight the complex and multifaceted nature of implementing inclusive education in the context of Alberto Olarte Sr. National High School. While there is a general recognition of the benefits of inclusive education, the successful implementation of inclusive practices requires a concerted effort from all stakeholders to address the various challenges faced by teachers and school leaders. By working collaboratively to foster a more inclusive and supportive learning environment, the school community can ensure that all students have the opportunity to thrive and reach their full potential.

THEORETICAL FRAMEWORK

The study is grounded in the principles of inclusive education, which emphasize the fundamental right of all children to access quality education that meets their unique needs and supports their holistic development (Kalenga et al., 2014; Peter & Nderitu, 2014; Correia & Teixeira, 2017). This theoretical framework is based on the social model of disability, which posits that the barriers faced by individuals with disabilities are not inherent to the individual, but rather a result of societal, environmental, and attitudinal factors. These principles are further informed by the ecological systems theory, which highlights the interconnected nature of the various systems that influence a child's development.

This research will be guided by two key theoretical frameworks: the social model of disability and the theory of universal design for learning. This framework supported by the ecological systems theory, which underscores the importance of examining the complex web of interactions between the individual, their immediate environment, and the broader societal systems that shape their educational experiences.

The social model of disability emphasizes that the challenges faced by individuals with disabilities are not inherent to the individual, but rather a result of societal, environmental, and attitudinal barriers. The theory of universal design for learning provides a framework for designing curricula, teaching methods, and learning environments that are accessible and inclusive for all students, regardless of their individual needs and abilities.

These theoretical frameworks will inform the analysis of the key challenges faced by teachers in implementing inclusive education practices, as well as the strategies and approaches that can be employed to create a more inclusive and supportive learning environment for all students.

The social model of disability posits that disability is not an inherent characteristic of the individual, but rather a result of the interaction between a person's impairment and the societal barriers and attitudes that prevent their full participation (Blum et al., 2015). This model shifts the focus from the individual's limitations to the need for systemic changes in the environment, policies, and practices to create a more inclusive and accessible society.

The theory of universal design for learning provides a framework for designing and implementing inclusive educational practices. This approach emphasizes the importance of offering multiple means of engagement, representation, and expression to cater to the diverse needs and learning styles of all students (Srivastava, 2023).

By adopting these frameworks, the present study will explore the implementation of inclusive education practices at Alberto Olarte Sr. National High School, with a focus on identifying the key challenges faced by teachers and the strategies required to create a more inclusive and supportive learning environment.

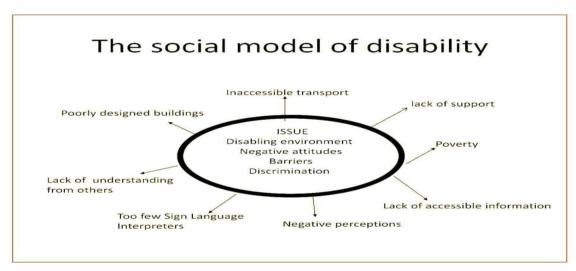


Figure 1. Supported by the Ecological System Theory

METHODOLOGY

Research Design

The researcher will employ a qualitative research design, with a focus on ethnographic and case study approaches. The rationale for this choice lies in the study's aim to explore the perceptions, experiences, and challenges of teachers and school leaders regarding the implementation of inclusive education in a specific school context.

This study will employ a qualitative data to gain a comprehensive understanding of the implementation of inclusive education practices at Alberto Olarte Sr. National High School.

The study examines the perspectives and experiences of teachers and headteachers, as they play a crucial role in the success of inclusive education. The case study approach will provide an in-depth analysis of the specific school context, allowing the researcher to identify the unique challenges and opportunities for fostering inclusive practices.

Information for this study through observational methods and comprehensive face to face interviews with teachers and school administrators. A structured interview guide will be used to ensure consistency in data collection while allowing for the exploration of emergent themes.

Sampling and Data Collection

The study will use purposive sampling to select a sample of eight teachers who have experience in implementing inclusive education practices at the school. In addition, the school principal and teachers will be included in the sample to gain insights into the school-level perspective on inclusive education.

Data will be collected through in-depth interviews with the selected teachers and school leaders, as well as classroom observations and document analysis of relevant school policies and records. the interview guide will be informed by the research questions and the themes that emerged from the literature review.

Research Participants and Ethical Considerations

Prior to data collection, the researcher will seek approval from the school principal as well as obtain informed consent from all participants. Participants will be assured of confidentiality and anonymity, and their right to withdraw from the study at any time.

Additionally, ensuring that they are fully aware of the study's purpose, procedures, and their rights. To protect the participants' privacy and confidentiality, the researcher will maintain anonymity throughout the research process. Furthermore, the participants will be explicitly informed of their right to withdraw from the study at any time, without any consequences or repercussions.

Data Analysis

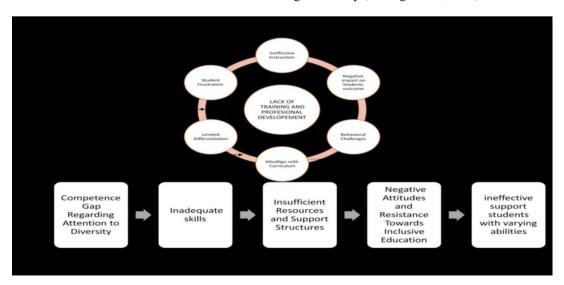
The data collected through interviews, observations, and document analysis will be analyzed using thematic analysis. This approach involves the identification of recurring themes and patterns within the data, which will be used to develop a comprehensive understanding of the implementation of inclusive education practices at the school (Ab.Latiff et al., 2015).

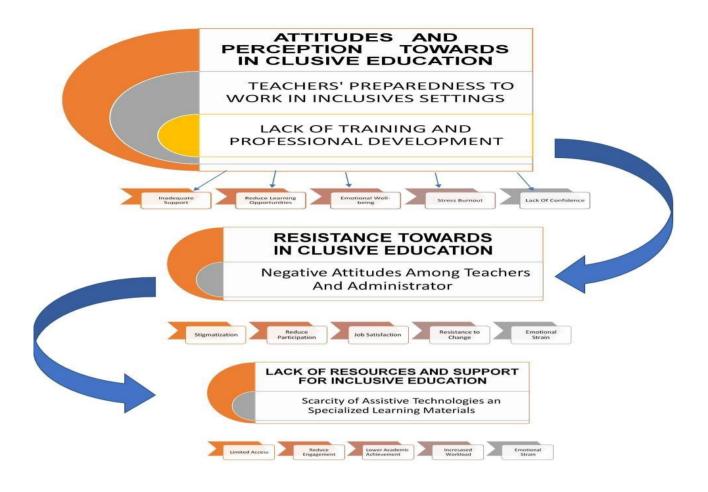
The researcher will follow a systematic process of data coding, categorization, and theme identification to ensure the reliability and validity of the findings. Additionally, the researcher will employ member checking, where participants will be given the opportunity to review and provide feedback on the researcher's interpretations, enhancing the trustworthiness of the study's findings.

RESULTS

The findings of the study reveal several key challenges and barriers faced by teachers in implementing inclusive education practices at Alberto Olarte Sr. National High School.

One of the primary challenges identified is the lack of adequate training and professional development opportunities for teachers (Kalenga et al., 2014). Despite the emphasis on inclusive education in national policies, the study found that teachers often feel underprepared to meet the diverse needs of students with varying abilities and learning styles. Furthermore, the demands of the mainstream curriculum and the perceived lack of support from the Department of Education have contributed to teachers' difficulties in ensuring inclusivity (Kalenga et al., 2014).





DISCUSIONS

STATEMENT:

I "do not feel adequately prepared to teach students with diverse needs. As a teacher, I often feel overwhelmed and uncertain about how to effectively support the learning of students with various disabilities, learning difficulties, or other special educational needs. I lack the necessary training and professional development opportunities to develop the specialized skills and strategies required for inclusive teaching practices. Without the proper guidance and resources, it is challenging for me to modify the curriculum, adapt instructional methods, and create an environment that caters to the unique needs of all my students."

Another key challenge identified is the negative attitudes and resistance towards inclusive education among some teachers and school administrators (Correia & Teixeira, 2017). The study found that while the policy calls for inclusivity, there is a prevalent mindset among educators that doubts the workability of inclusive education, particularly the idea of having children with special needs in regular classrooms (Peter & Nderitu, 2014).

STATEMENTS:

- 2."I sometimes feel that my colleagues and school leadership are not fully supportive of inclusive education. There seems to be a prevalent mindset among some educators that doubts the feasibility and effectiveness of inclusive practices, particularly the idea of having children with special needs in regular classrooms. This lack of buy-in and collaboration from the broader school community has made it challenging to implement inclusive education successfully.
- 2.2"school does not allocate sufficient resources and support for inclusive education. The lack of appropriate infrastructure, adapted curriculum, and necessary teaching and learning materials have hindered my ability to

effectively implement inclusive practices in the classroom. Without the necessary resources and support, it is difficult for me to create an inclusive learning environment that caters to the diverse needs of all my students."

Another significant challenge is the limited availability of resources and support structures for inclusive education (Themane& Thobejane, 2018). Teachers reported a scarcity of assistive technologies, specialized learning materials, and physical infrastructure that cater to the needs of students with disabilities or special educational needs. This lack of resources has hindered the implementation of effective inclusive practices in the classroom (Themane& Thobejane, 2018). (Correia & Teixeira, 2017)

STATEMENT:

"As an educator, I face numerous challenges in implementing inclusive education practices in my classroom. One of the primary issues is the lack of adequate training and professional development opportunities to equip me with the necessary skills and strategies for teaching students with diverse needs. Without the proper guidance and resources, it is often overwhelming and uncertain for me to effectively support the learning of students with various disabilities, learning difficulties, or other special educational needs."

CONCLUSIONS

The findings of this study highlight the critical need for a more comprehensive and systemic approach to supporting the implementation of inclusive education practices in schools.

DISCUSSIONS

To address the challenges faced by teachers, it is crucial for policymakers, school administrators, and education stakeholders to prioritize the following:

Provision of comprehensive and ongoing professional development opportunities for teachers. This will enable them to acquire the necessary knowledge, skills, and strategies for effectively implementing inclusive teaching practices. Teachers must be equipped with the ability to modify the curriculum, adapt instructional methods, and create an environment that caters to the unique needs of all their students, including those with disabilities, learning difficulties, or other special educational needs.

Fostering a school climate and culture that promotes a positive attitude towards inclusive education. This requires strong leadership and collaboration among all members of the school community, including teachers, administrators, and support staff. By cultivating a shared understanding and commitment to inclusive education, educators can overcome the prevalent mindset that doubts the feasibility and effectiveness of inclusive practices. This shift in mindset will empower teachers to work together, share best practices, and provide mutual support in their efforts to create truly inclusive classrooms.

In addition to these key priorities, policymakers, school administrators, and education stakeholders must also address the limited availability of resources and support structures for inclusive education. Ensuring the provision of adequate assistive technologies, specialized learning materials, and appropriate physical infrastructure is crucial for enabling teachers to effectively implement inclusive practices in the classroom. Without the necessary resources and support, it remains challenging for teachers to create an inclusive learning environment that caters to the diverse needs of all their students.

Furthermore, it is essential to strengthen the collaboration and communication between the Department of Education and individual schools. By aligning policies, guidelines, and support mechanisms, the Department can provide teachers with the necessary guidance and resources to navigate the demands of the mainstream curriculum while ensuring inclusivity. This alignment and support from the Department can help mitigate the perceived lack of support that often contributes to teachers' difficulties in implementing inclusive education.

In conclusion, addressing the challenges faced by teachers in implementing inclusive education requires a multifaceted and collaborative approach. Policymakers, school administrators, and education stakeholders must work together to provide comprehensive professional development, foster a positive school climate, and ensure the availability of necessary resources and support structures. By prioritizing these key areas, the education system can empower teachers to create truly inclusive learning environments, where all students, regardless of their abilities or special educational needs, can thrive and reach.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study underscore the critical need for a more comprehensive and systemic approach to bolstering the implementation of inclusive education practices in schools. Inclusive education is a fundamental aspect of ensuring equitable access to quality learning opportunities for all students, regardless of their abilities or special educational needs. However, the study has revealed significant challenges that teachers face in effectively implementing inclusive practices within their classrooms.

One of the primary issues identified is the lack of adequate training and professional development opportunities for teachers. Without the proper guidance and resources, educators often feel overwhelmed and uncertain about how to effectively support the learning of students with diverse needs, including those with disabilities, learning difficulties, or other special educational requirements. Providing comprehensive and ongoing professional development is crucial to equipping teachers with the necessary knowledge, skills, and strategies to modify curriculums, adapt instructional methods, and create inclusive learning environments that cater to the unique needs of all their students.

Another key challenge is the prevalence of a negative mindset and lack of buy-in from the broader school community towards inclusive education. Many educators and administrators harbor doubts about the feasibility and effectiveness of inclusive practices, particularly the idea of having children with special needs in regular classrooms. This lack of shared understanding and commitment to inclusive education has made it extremely challenging for teachers to implement such practices successfully. Fostering a positive school climate and culture that promotes the value of inclusive education is essential. This requires strong leadership and collaboration among all members of the school community, including teachers, administrators, and support staff, to cultivate a shared vision and commitment to creating truly inclusive learning environments.

Furthermore, the study highlights the limited availability of resources and support structures for inclusive education. Teachers have reported a scarcity of assistive technologies, specialized learning materials, and appropriate physical infrastructure that cater to the needs of students with disabilities or special educational requirements. This lack of resources has significantly hindered the ability of teachers to implement effective inclusive practices in their classrooms. Ensuring the provision of adequate resources and support structures is crucial for enabling teachers to create inclusive learning environments that address the diverse needs of all their students.

In addition to these key challenges, the study also underscores the need for stronger collaboration and communication between the Department of Education and individual schools. By aligning policies, guidelines, and support mechanisms, the Department can provide teachers with the necessary guidance and resources to navigate the demands of the mainstream curriculum while ensuring inclusivity.

ACKNOWLEDGEMENT

We would like to express our sincerest gratitude to the researchers and scholars whose work has been instrumental in informing this research paper. Their dedication to exploring the challenges faced by teachers in implementing inclusive education has provided valuable insights that have shaped the content and direction of this paper.

We would also like to acknowledge the crucial role played by the Department of Education and school administrators in supporting and promoting inclusive education practices. Their leadership and commitment to fostering inclusive learning environments are essential for empowering teachers to succeed in their efforts.

Finally, we are deeply grateful to the teachers who have shared their experiences, insights, and struggles in implementing inclusive education. Their voices and perspectives have been instrumental in highlighting the pressing need for a more comprehensive and collaborative approach to addressing the challenges that hinder the successful implementation of inclusive practices in schools.

REFERENCES

- [1]. APA 7 Ab.Latiff, M A., Mohamed, W A W., &Asran, M A. (2015, August 1). Implementation of Inclusive Education for Special Needs Learners with Learning Disabilities. Elsevier
- [2]. BV, 204, 81-87. https://doi.org/10.1016/j.sbspro.2015.08.115
- [3]. Bibiana, R I., Madrine, K., Eric, W., & Simon, T. (2020, February 29). Policy strategies for effective implementation of inclusive education in Kenya. Academic Journals, 12(1), 28-42. https://doi.org/10.5897/ijeaps2019.0622
- [4]. Boer, A. D., Pijl, S. J., & Minnaert, A. (2011, April 1). Regular primary schoolteachers' attitudes towards inclusive education: a review of the literature. Taylor & Francis,

International IT Journal of Research (IITJR)

Volume 2, Issue 4, October- December, 2024

Available online at: https://itjournal.org/index.php

- [5]. 15(3), 331-353. https://doi.org/10.1080/13603110903030089
- [6]. Comia, B. (2021, June 21). Inclusive education program in the division of Antipolo
- [7]. City: Basis for implementation model. , 10(6). https://doi.org/10.5861/ijrse.2021.651 Correia, A M R., & Teixeira, V. (2017, October 2). The will and the way of inclusive education in Macao. Emerald Publishing Limited, 6(4), 401-413. https://doi.org/10.1108/aeds-05-2016-0040
- [8]. Chintala, Sathishkumar. "Analytical Exploration of Transforming Data Engineering through Generative AI". International Journal of Engineering Fields, ISSN: 3078-4425, vol. 2, no. 4, Dec. 2024, pp. 1-11, https://journalofengineering.org/index.php/ijef/article/view/21.
- [9]. Goswami, MaloyJyoti. "AI-Based Anomaly Detection for Real-Time Cybersecurity." International Journal of Research and Review Techniques 3.1 (2024): 45-53.
- [10]. Bharath Kumar Nagaraj, Manikandan, et. al, "Predictive Modeling of Environmental Impact on Non-Communicable Diseases and Neurological Disorders through Different Machine Learning Approaches", Biomedical Signal Processing and Control, 29, 2021.
- [11]. Amol Kulkarni, "Amazon Redshift: Performance Tuning and Optimization," International Journal of Computer Trends and Technology, vol. 71, no. 2, pp. 40-44, 2023. Crossref, https://doi.org/10.14445/22312803/IJCTT-V71I2P107
- [12]. Evans, W H., Gable, R A., & Habib, A. (2021, June 7). Lessons from the Past and Challenges for the Future: Inclusive Education for Students with Unique Needs.
- [13]. Amol Kulkarni, "Amazon Athena: Serverless Architecture and Troubleshooting," International Journal of Computer Trends and Technology, vol. 71, no. 5, pp. 57-61, 2023. Crossref, https://doi.org/10.14445/22312803/IJCTT-V71I5P110
- [14]. Kulkarni, Amol. "Digital Transformation with SAP Hana.", 2024, https://www.researchgate.net/profile/Amol-Kulkarni-23/publication/382174853_Digital_Transformation_with_SAP_Hana/links/66902813c1cf0d77ffcedb6d/Digital -Transformation-with-SAP-Hana.pdf
- [15]. Patel, N. H., Parikh, H. S., Jasrai, M. R., Mewada, P. J., &Raithatha, N. (2024). The Study of the Prevalence of Knowledge and Vaccination Status of HPV Vaccine Among Healthcare Students at a Tertiary Healthcare Center in Western India. The Journal of Obstetrics and Gynecology of India, 1-8.
- [16]. SathishkumarChintala, Sandeep Reddy Narani, Madan Mohan Tito Ayyalasomayajula. (2018). Exploring Serverless Security: Identifying Security Risks and Implementing Best Practices. International Journal of Communication Networks and Information Security (IJCNIS), 10(3). Retrieved from https://ijcnis.org/index.php/ijcnis/article/view/7543
- [17]. Multidisciplinary Digital Publishing Institute, 11(6), 281-281. https://doi.org/10.3390/educsci11060281
- [18]. Geleta, A D. (2019, June 30). School Principals and Teachers' Perceptions of Inclusive Education in Sebeta Town Primary Government Schools, Sebeta, Ethiopia. , 8(1), 1364-1372. https://doi.org/10.20533/ijtie.2047.0533.2019.0166
- [19]. Hoover, J J., & DeBettencourt, L U. (2017, March 24). Educating Culturally and Linguistically Diverse Exceptional Learners: The Need for Continued Advocacy.
- [20]. Goswami, MaloyJyoti. "Enhancing Network Security with AI-Driven Intrusion Detection Systems." Volume 12, Issue 1, January-June, 2024, Available online at: https://ijope.com
- [21]. Dipak Kumar Banerjee, Ashok Kumar, Kuldeep Sharma. (2024). AI Enhanced Predictive Maintenance for Manufacturing System. International Journal of Research and Review Techniques, 3(1), 143–146. https://ijrrt.com/index.php/ijrrt/article/view/190
- [22]. Sravan Kumar Pala, "Implementing Master Data Management on Healthcare Data Tools Like (Data Flux, MDM Informatica and Python)", IJTD, vol. 10, no. 1, pp. 35–41, Jun. 2023. Available: https://internationaljournals.org/index.php/ijtd/article/view/53
- [23]. Pillai, Sanjaikanth E. VadakkethilSomanathan, et al. "Mental Health in the Tech Industry: Insights From Surveys And NLP Analysis." Journal of Recent Trends in Computer Science and Engineering (JRTCSE) 10.2 (2022): 23-34.
- [24]. Goswami, MaloyJyoti. "Challenges and Solutions in Integrating AI with Multi-Cloud Architectures." International Journal of Enhanced Research in Management & Computer Applications ISSN: 2319-7471, Vol. 10 Issue 10, October, 2021.
- [25]. Taylor & Francis, 26(3), 176-189. https://doi.org/10.1080/09362835.2017.1299530 Hornby, G. (2015, June 18). Inclusive special education: development of a new theory for the education of children with special educational needs and disabilities. WileyBlackwell, 42(3), 234-256. https://doi.org/10.1111/1467-8578.12101
- [26]. Credit Risk Modeling with Big Data Analytics: Regulatory Compliance and Data Analytics in Credit Risk Modeling. (2016). International Journal of Transcontinental Discoveries, ISSN: 3006-628X, 3(1), 33-39. Available online at: https://internationaljournals.org/index.php/ijtd/article/view/97
- [27]. Sandeep Reddy Narani , Madan Mohan Tito Ayyalasomayajula , SathishkumarChintala, "Strategies For Migrating Large, Mission-Critical Database Workloads To The Cloud", Webology (ISSN: 1735-188X),

- Volume 15, Number 1, 2018. Available at: https://www.webology.org/datacms/articles/20240927073200pmWEBOLOBY%2015%20(1)%20-%2026.pdf
- [28]. Parikh, H., Patel, M., Patel, H., & Dave, G. (2023). Assessing diatom distribution in Cambay Basin, Western Arabian Sea: impacts of oil spillage and chemical variables. Environmental Monitoring and Assessment, 195(8), 993
- [29]. Amol Kulkarni "Digital Transformation with SAP Hana", International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169, Volume: 12 Issue: 1, 2024, Available at: https://ijritcc.org/index.php/ijritcc/article/view/10849
- [30]. Banerjee, Dipak Kumar, Ashok Kumar, and Kuldeep Sharma.Machine learning in the petroleum and gas exploration phase current and future trends. (2022). International Journal of Business Management and Visuals, ISSN: 3006-2705, 5(2), 37-40. https://ijbmv.com/index.php/home/article/view/104
- [31]. Kalenga, R C., Fourie, E., & Maphosa, C. (2014, March 1). Replicating Society's Discrimination of Disadvantaged and Marginalized Groups: Inclusive Education and the Power of the Curriculum. Kamla Raj Enterprises, 17(2), 523-532. https://doi.org/10.1080/09720073.2014.11891461
- [32]. Peter, M N., & Nderitu, M N. (2014, January 1). Perceptions of Teachers and Head Teachers on the Effectiveness of Inclusive Education in Public Primary Schools in Yatta Division Machakos County. Richtmann Publishing. https://doi.org/10.5901/jesr.2014.v4n1p91
- [33]. Banerjee, Dipak Kumar, Ashok Kumar, and Kuldeep Sharma."Artificial Intelligence on Additive Manufacturing." International IT Journal of Research, ISSN: 3007-6706 2.2 (2024): 186-189.
- [34]. TS K. Anitha, Bharath Kumar Nagaraj, P. Paramasivan, "Enhancing Clustering Performance with the Rough Set C-Means Algorithm", FMDB Transactions on Sustainable Computer Letters, 2023.
- [35]. Kulkarni, Amol. "Image Recognition and Processing in SAP HANA Using Deep Learning." International Journal of Research and Review Techniques 2.4 (2023): 50-58. Available on: https://ijrrt.com/index.php/ijrrt/article/view/176
- [36]. Goswami, MaloyJyoti. "Leveraging AI for Cost Efficiency and Optimized Cloud Resource Management." International Journal of New Media Studies: International Peer Reviewed Scholarly Indexed Journal 7.1 (2020): 21-27.
- [37]. Madan Mohan Tito Ayyalasomayajula. (2022). Multi-Layer SOMs for Robust Handling of Tree-Structured Data.International Journal of Intelligent Systems and Applications in Engineering, 10(2), 275 –. Retrieved from https://ijisae.org/index.php/IJISAE/article/view/6937
- [38]. Banerjee, Dipak Kumar, Ashok Kumar, and Kuldeep Sharma."Artificial Intelligence on Supply Chain for Steel Demand." International Journal of Advanced Engineering Technologies and Innovations 1.04 (2023): 441-449.
- [39]. Rabi, N. M., &Zulkefli, M. Y. (2018, December 4). Mainstream Teachers' Competency Requirement for Inclusive Education Program., 8(11). https://doi.org/10.6007/ijarbss/v8-i11/5354
- [40]. Singh, G K S., Ahmad, I., Baharudin, S N A., & Ngadni, I. (2023, June 20).
- [41]. Challenges Faced by Teachers in Inclusive Classrooms in Early Childhood Education
- [42]. (ECE) Setting., 12(2). https://doi.org/10.6007/ijarped/v12-i2/17267
- [43]. Bharath Kumar Nagaraj, SivabalaselvamaniDhandapani, "Leveraging Natural Language Processing to Identify Relationships between Two Brain Regions such as Pre-Frontal Cortex and Posterior Cortex", Science Direct, Neuropsychologia, 28, 2023.
- [44]. Sravan Kumar Pala, "Detecting and Preventing Fraud in Banking with Data Analytics tools like SASAML, Shell Scripting and Data Integration Studio", *IJBMV*, vol. 2, no. 2, pp. 34–40, Aug. 2019. Available: https://ijbmv.com/index.php/home/article/view/61
- [45]. Parikh, H. (2021). Diatom Biosilica as a source of Nanomaterials. International Journal of All Research Education and Scientific Methods (IJARESM), 9(11).
- [46]. Tilwani, K., Patel, A., Parikh, H., Thakker, D. J., & Dave, G. (2022). Investigation on anti-Corona viral potential of Yarrow tea. Journal of Biomolecular Structure and Dynamics, 41(11), 5217–5229.
- [47]. Amol Kulkarni "Generative AI-Driven for Sap Hana Analytics" International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169 Volume: 12 Issue: 2, 2024, Available at: https://ijritcc.org/index.php/ijritcc/article/view/10847
- [48]. Srivastava, M. (2023, September 10). The Evolution of Education: Navigating 21st-
- [49]. Century Challenges., 5(5). https://doi.org/10.36948/ijfmr.2023.v05i05.6314 Themane, M., & Thobejane, H R. (2018, May 3). Teachers as change agents in making teaching inclusive in some selected rural schools of Limpopo Province, South Africa: implications for teacher education. Taylor & Francis, 23(4), 369-383.
- [50]. https://doi.org/10.1080/13603116.2018.1434690
- [51]. Bharath Kumar Nagaraj, "Explore LLM Architectures that Produce More Interpretable Outputs on Large Language Model Interpretable Architecture Design", 2023. Available: https://www.fmdbpub.com/user/journals/article_details/FTSCL/69
- [52]. Pillai, Sanjaikanth E. VadakkethilSomanathan, et al. "Beyond the Bin: Machine Learning-Driven Waste Management for a Sustainable Future. (2023)." Journal of Recent Trends in Computer Science and Engineering (JRTCSE), 11(1), 16–27. https://doi.org/10.70589/JRTCSE.2023.1.3

- [53]. Nagaraj, B., Kalaivani, A., SB, R., Akila, S., Sachdev, H. K., & SK, N. (2023). The Emerging Role of Artificial Intelligence in STEM Higher Education: A Critical review. International Research Journal of Multidisciplinary Technovation, 5(5), 1-19.
- [54]. Parikh, H., Prajapati, B., Patel, M., & Dave, G. (2023). A quick FT-IR method for estimation of α-amylase resistant starch from banana flour and the breadmaking process. Journal of Food Measurement and Characterization, 17(4), 3568-3578.
- [55]. Sravan Kumar Pala, "Synthesis, characterization and wound healing imitation of Fe3O4 magnetic nanoparticle grafted by natural products", Texas A&M University Kingsville ProQuest Dissertations Publishing, 2014. 1572860. Available online at: https://www.proquest.com/openview/636d984c6e4a07d16be2960caa1f30c2/1?pq-origsite=gscholar&cbl=18750
- [56]. Woodcock, S., & Woolfson, L. (2019, January 1). Are leaders leading the way with inclusion? Teachers' perceptions of systemic support and barriers towards inclusion. Elsevier BV, 93, 232-242. https://doi.org/10.1016/j.ijer.2018.11.004