GLOBAL
Scientific Research

# Journal of Social Sciences and Management Studies

Vol. 1 No. 3 (2022)

ISSN: 2957-8795

www.jescae.com

Journal of Social Sciences and Management Studies

**Vol.1, No.3**

**September 2022**

| | |
|---|---|
| Chief Editor | Dr. Hayat Khan |
| Edited by | Global Scientific Research |
| Published by | Global Scientific Research |
| Email | thejssm2@gmail.com |
| Website | www.jescae.com |
| Journal Link: | https://www.jescae.com/index.php/jssms |

# CONTENTS

RESEARCH ARTICLE

# Pela Gandong local wisdom as multicultural education model after the Ambon Conflict

**Anju Nofarof Hasudungan[1*]**

[1]Senior High School 1 Rupat, Riau Province, Indonesia

Corresponding Author: Anju Nofarof Hasudungan, anjuhasudungan81@guru.sma.belajar.id
Received: 24 March, 2022, Accepted: 14 April, 2022,Published: 16 April, 2022

**Abstract**
The purpose of this study is to describe how Pela Gandong as a model of multicultural education has been implemented between the State Junior High School (SMPN) 9 Ambon City and the State Junior High School (SMPN) 4 Salahutu Liang, Central Maluku Regency. The Ambon conflict became a very valuable lesson for the Indonesian people, especially the Ambonese-Maluku people. That the diversity that has been bestowed must be managed properly and is a reality of life. The Ambon conflict is the largest civil conflict based on ethnicity, religion, race and ethnicity (SARA) after the fall of the Suharto government on May 21, 1998. After the Ambon conflict ended, various parties began to think about how to do peacebuilding so that similar conflicts did not happen again. One of them is implementing multicultural education based on the local wisdom values of Pela Gandong. During the Ambon conflict resolution, Pela Gandong's local wisdom became the medium. The research method used is descriptive qualitative with a case study approach. Data was collected by means of literature study, interviews, observation, and document analysis. The results show that Pela Gandong contains multicultural values that have been built by the ancestors of the Maluku people, and is currently uniting Muslim and Christian students with a local cultural approach. The implementation is done by transforming Pela Gandong values in schools and teacher exchanges. Then jointly held; scouting activities, camping, Christmas, iftar, Sports and Arts Week. Both schools were also part of the 2013 film Provocateur of Peace as a campaign for peace and the spread of multicultural values.

**Keywords:** Local wisdom; pela gandong; multicultural education; Ambon Conflict

## Introduction

The Ambon conflict is the largest ethnic, religious, racial and inter-ethnic (SARA) based civil conflict after the fall of President Suharto on May 21, 1998. This can be seen from the Ambon turmoil which resulted in more than 8-9 thousand deaths, 29 thousand houses burned, and 45 mosques, 47 churches, 719 shops, 38 government buildings, and 4 banks were destroyed. The range of conflicts that occurred was also quite long, namely 4 years (Aziz SR, 2019). The Ambon conflict is only one of many conflicts that occur in Indonesia. For example, the Sambas conflict, the Poso conflict, the Sampit conflict, the Bloody Wamena and others, but the Ambon conflict is the biggest and most destructive.

Diversity is a gift that has been given by God and is grateful for (Dietrich, 2018; Burke & McDowell, 2021). But at the same time, if there is no management of diversity management, then the gift turns into a bloody conflict, and a terrible event; never thought it would happen. Diversity can be a source of conflict if humans are selfish and feel the most right (Martin et al., 2016; Kopnina et al., 2018; Gilbert, 2021). Conflict is a phenomenon that most often arises because conflict has always been a social and political part of human life and has become a driving force in socio-political dynamics and changes.

So that conflicts will always arise when community groups have certain goals and mutually impose their resources (Wiradhika, 2018). Indonesia is a large country with thousands of islands, from Miangas to Rote, and from Sabang to Merauke. The 2010 Population Census stated that there were 1,331 ethnic groups in Indonesia (BPS, 2015). The category is a code for the name of a tribe, another name/alias of a tribe, the name of a sub-tribe, even the name of a sub of a sub-tribe. Regarding the number of languages in Indonesia, the Language Development and Development Agency of the Ministry of Education and Culture or the Language Agency has mapped and verified 801 different regional languages. This amount was obtained from the verification process from 1991-2019. However, this number may continue to change over time.

Taking into account these data, it cannot be denied that Indonesia is a very multicultural country. The question is whether we can accept it or choose to reject it. If the choice is rejected, then we have disappointed The Founding Fathers who have worked hard, and sacrificed so much for the realization of the Unitary State of the Republic of Indonesia (NKRI). However, if we want to continue to maintain the integrity of the Unitary State of the Republic of Indonesia, then we cannot accept and understand the occurrence of horizontal conflicts, especially those that cause many casualties.

Therefore, multicultural education is very important to be taught to the next generation of this nation (Yılmaz, 2016;

Asowayan et al., 2017; Khaedir & Wahab, 2020). The aim is to equip and prepare a generation that has the knowledge, attitudes and skills that support peace and a harmonious life. In essence, the Indonesian nation is a nation that highly upholds the values of tolerance, peace, diversity and unity. If you look at the history of the Indonesian nation, it can be concluded that this nation was born and exists today. Because, there is a common destiny, vision and desire to live together and determine the fate of the nation in the future.

Today, the political choices of citizens in general elections, whether for regional heads, members of the legislature, and even the President and Vice President, can be a source of conflict that leads to the division of the Indonesian nation (Iswandi & Abdullah, 2020; Lee, 2021). This proves that we are not yet mature in democracy. The inability to accept differences in political choices can divide the Indonesian nation. Especially the inability to accept differences that even concern human rights such as the right to embrace religion, the right to worship, and the right to express one's culture. Multicultural-based education encourages students to respect each other's origins and differences in real life in society (Sukardi & Subandowo, 2014). The context after the Ambon conflict, that there are still negative prejudices and segregation or separation of regions based on religion, namely, Islam and Christianity. The education sector is also experiencing segregation (Hasudungan, 2020).

SMPN 9 Ambon City with the address at Wolter Monginsidi Lateri III Street, RT 1, RW 1, Lateri Village, Baguala District, Ambon City which has 1431 students, and 99% of them are Christian/Catholic. Meanwhile, SMPN 4 Liang is located at Waihula Street, Liang Village, Salahutu District, Central Maluku Regency, and has 414 students and 100% of them are Muslim. To remove negative prejudices and desegregation efforts that occur among the people in Ambon-Maluku city. Thus, the two schools have started and implemented multicultural education based on local wisdom Pela Gandong since 2013. Therefore, this study aims to describe the implementation of multicultural education at SMPN 9 Ambon City and SMPN 4 Salahutu Liang based on the local wisdom of Pela Gandong.

## Research Methods

This research uses descriptive qualitative method with multiple case study approach. Descriptive method is a method in examining the status of a group of people, an object, a condition, a system of thought, or a class of events in the present. The purpose of this descriptive research is to reveal events or facts, circumstances, phenomena, and circumstances that occurred during the research by presenting what actually happened (Bradshaw et al., 2017). The case study approach, according to Yin (2009) is used by considering (a) the focus of the research is to answer the "how" and "why" questions; (b) author cannot manipulate the behavior of those involved in the research; (c) author want to cover contextual conditions because they believe they are relevant to what is being studied; (d) unclear boundaries between phenomena and contexts. The case study design according to Yin (2003) and Prihatsanti et al. (2018) relates data to propositions, for example by pattern matching. Based on the fact that Yin views the purpose of case study research, among other things, as theory development. Thus, theoretical propositions are the starting point (and not the outcome) of case study analysis. Therefore, this case study aims to generalize analytically as if it were an experiment. Construction, internal and external validity and reliability are prerequisites (evaluation standards) for conducting case study research.

Single case studies only allow author to understand one unique case, while in multiple case studies, author can examine several cases to find out similarities or differences between cases. Author chose two cases at SMPN 9 Ambon City and SMPN 4 Salahutu Liang, with different characteristics, such as religious adherents, government administration and the quantity of students. Collecting data using literature study, observation (initial observations and participatory observations), unstructured in-depth interviews, documentation studies sourced from village monograph data, the Central Statistics Agency, and schools. Data analysis was carried out by adopting interactive data analysis from Miles & Huberman (1994). The stages of data analysis are data collection and data reduction. The purpose of data reduction is to make it easier for author to collect further data and provide a clearer picture. Consists of presenting data and drawing conclusions.

## Results and Discussion

Pela Gandong is a traditional system formed from an alliance between two or more villages regardless of their religion, mainly responsible for inter-religious harmony for which the area was famous until 1998. They have formed student bonds to help each other in times of crisis and in carrying out large community projects, such as the construction of churches, mosques and schools, and to share food whenever needed (Bräuchler, 2009).

When the Ambon conflict occurred, the local wisdom of Pela Gandong was transformed into a media for Ambon conflict resolution (Jati, 2013; Malisngorar, 2017; Hartimah et al., 2021). Then, after a peace agreement was reached through the Malino II Agreement on February 12, 2002, the local wisdom of Pela Gandong was again transformed into peace education (Amirrachman, 2012). In addition, there are multicultural values contained in the local wisdom of Pela Gandong, namely:

1.The concept of brotherhood without distinction of religion.
2.The Pela Gandong culture is a unifying frame for the Maluku people and has been around for a long time.
3.Creating a sense of togetherness and harmony.

4.Social institutions that develop as an adhesive for social relations between one country and another, both Muslim and Christian countries.
5. Function in regulating the social interaction system of indigenous peoples that transcends various fields with certain mutually agreed rights and obligations.
6.The concept of brotherhood in Pela Gandong positions the highest and most honorable social structure beyond the biological sibling relationship.
7.Pela Gandong has a cultural advantage which is mentioned there is also a culture of harmony or peace based on kinship in the concept of local wisdom which purely emerged and was initiated from the intelligence of the ancestors of the Maluku people.
8.The dialogue in Pela Gandong is carried out elegantly without any barriers. One is willing to be reprimanded, without having to answer harshly. Ready to be scolded, without having a grudge. This kind of dialogue is carried out without fear and suspicion. An atmosphere of open dialogue because of the value of the basudara (brotherhood) itself.

***Implementation of Multicultural Education Based on Local Wisdom Pela Gandong***

This is the reason, that multicultural education is an important thing that must be given to all students who are the successors of the Indonesian nation (Baihaqi, 2021). Starting from the earliest education levels such as kindergarten, elementary school, junior high school, final high school, to higher education.

This multicultural education is given with the aim of explaining the importance of maintaining the values of diversity that exist in Indonesia and upholding an attitude of tolerance. Not only that, there are several other multicultural education goals that provide special benefits for all students in Indonesia.

Multicultural education is an educational reform movement that seeks to reform schools in a way that will provide all learners with equal opportunities to learn. It describes teaching strategies that empower all learners and give them a voice. Multicultural education is an ongoing process. One of its main aims is to create within schools and communities democratic ideals (J. A. Banks, 1995; C. A. M. Banks & Banks, 1995).

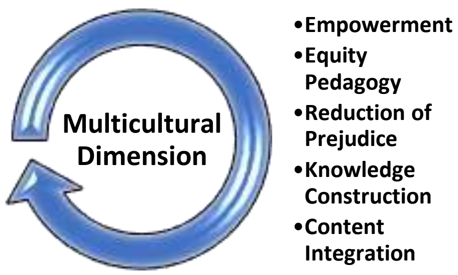



**Figure 1.** Multicultural Dimension
**Source:** (J. A. Banks, 1992)

Content integration relates to the extent to which teachers use examples, data, and information from various cultures and groups to illustrate key concepts, principles, generalizations, and theories within their field of study or discipline. When the knowledge construction process is implemented in the classroom, the teacher helps students to understand how knowledge is created and how it is influenced by the racial, ethnic, and social class positions of individuals and groups. The dimension of prejudice reduction in multicultural education describes the characteristics of students' racial attitudes and strategies that can be used to help students develop more democratic attitudes and values. Equity pedagogy exists when teachers use techniques and methods that facilitate the academic achievement of students from diverse racial, ethnic, and social class groups. Equity pedagogy is a modification of the teaching process by incorporating appropriate learning materials and strategies for all students. The concept of an empowering school culture and social structure is used to describe the process of restructuring school culture and organization so that students from diverse racial, ethnic, and social class groups will experience educational equality and cultural empowerment.
Multicultural education is a cross-border discourse that explores issues regarding social justice, deliberation, and human rights, political, moral, educational and religious issues (Tilaar, 2004). Tilaar further mentioned three sources to achieve a multicultural education curriculum, namely the concept of the needs of students, the concept of community needs, and the concept of the role and status of the subjects to be delivered. From these three concepts, the formulation of a multicultural education curriculum will be formed.

**Figure 2.** Both schools held Panas Pela of Education on January 29, 2018.
**Source:** Personal Documentation

Currently, the local wisdom of Pela Gandong has become an important instrument to maintain peace. In addition, the novelty that the author found is that the values of Pela Gandong can also be used as a model of local-based multicultural education. Panas pela is an effort to warm (Panas) the brotherly relationship (Pela) between SMPN 9 Ambon City and SMPN 4 Salahutu Liang which has been built since 2013. The implementation of Pela Gandong-based multicultural education is related to efforts to build peace. Building peace is essentially the same as peace keeping. This needs to be done not only because there are still potential peace vulnerabilities. But also the strengthening of identity politics and populism before, during, and after the 2014 and 2019 Indonesian Presidential and Vice-Presidential elections (Dewi, 2020; Wicaksana & Wardhana, 2021; Widian et al., 2022).

As a result, the Indonesian people were divided into two major groups due to differences in views and political choices. Racial and religious issues have become a campaign material to attract support and at the same time destroy the character of political enemies (Miichi, 2014; Bourchier, 2019; Afrimadona, 2021). Broken ties of kinship, friendship, quarrels with co-workers and even entering the realm of places of worship make identity politics a new threat that can disturb the peace and tranquility of the Indonesian nation.

Education as a strategic field and schools as institutions that spearhead the intellectual life of the nation must integrate culture-based multicultural education into the school environment and subjects. Culture is the root of multiculturalism (J. A. Banks, 1977). Referring to Banks' statement, it is important to have multicultural education based on local wisdom. This also repeats the success of Pela Gandong's local wisdom as a medium for conflict resolution and peace education. Culturally relevant teaching is also an important aspect of multicultural education (Gay, 2002). This teaching is intended to establish a relationship with the cultural background of these students (Pang, 2001).

Materials that are close, contextual, relevant to the lives of students will be the key to the success of how the teaching and learning of multicultural education takes place (Watson & Leicester, 1991; Parker, 2019). The material developed in learning should prioritize regional advantages and needs, in the form of location, economic, social, political, historical and cultural advantages. For example, learning social sciences which is integrated with multicultural education based on local wisdom Pela Gandong. This was done considering that the Ambon-Maluku conflict not only resulted in hundreds of thousands of casualties but also broke inter-religious harmony, personality changes between individuals and groups, the economy was paralyzed, and the current polarization among the Ambon-Maluku community. Conflict does not only affect groups but also individuals, including students.

Contextualization of learning is directed at developing environmental awareness, understanding the potential advantages of a region, getting to know local and national culture, understanding problems from the point of weakness or limitations (Hadzigeorgiou & Skoumios, 2013; Ardoin et al., 2020; Edsand & Broich, 2020). Learners become motivated and play an active role in solving problems, both through ideas, ideas and actions (behavior). Thus, students are expected to become heirs of a strong, responsible, creative, innovative, competitive, and Indonesian cultured nation.

That multicultural education based on local wisdom has an important role in providing understanding, learning, awareness for students regarding matters relating to the values of the local culture of the region (Hanifah, 2017; Suradi, 2018; Julianto & Subroto, 2019). It does not stop at this function, in fact multicultural education based on local wisdom also plays an active and important role in an action to implement values to others, society, environment, religion, and to God (Siriat & Nurbayani, 2018).

The implementation of multicultural education values based on Pela Gandong local wisdom between SMPN 9 Ambon City and SMPN 4 Salahutu Liang, Central Maluku Regency is as follows:

1.The transformation of Pela values continues to be carried out, namely adopting Pela education as Pela education between SMPN 9 Ambon City where 99% of the students and teachers are Christian, and SMPN 4 Salahutu Liang where 100% of the students and teachers are Muslim

2.Teacher exchange

3.Scout Activities

4.Camping, Christmas and iftar together

Good relations between students and teachers in both schools are harmonious and increasingly harmonious. Almost every year, these two schools hold a reunion which in customary terms is called Panas Pela. As for Panas Pela, which was marked by eating betel nut by the Principal of SMPN 9 Ambon, E. Harmusial, accompanied by OSIS Chair Jack Dea and Principal of SMPN 4 Salahutu Liang, Hilia Pary and OSIS Chairperson, Dimara Dinasti Laga.

5.Apart from Panas Pela, they often organize joint activities for students, including Sports and Arts Week.

6.Activities of Intra-School Student Organizations (OSIS) together.

7.The two schools were also part of the 2013 film Provocateur of Peace as a form of campaign for peace and multicultural values.

Practically, in the field of education, the implementation of Pela Gandong-based multicultural education between SMPN 9 Ambon City and SMPN 4 Salahutu Liang, Central Maluku has an impact on improving the cognitive, affective and psychomotor aspects of students. Besides that, it is also a role model for other schools in Maluku Province to immediately overcome segregation, the negative prejudice that still exists. Apart from being in class, various cultural attractions were also performed by the students of the two schools, both through dance, song and poetry, all of which lead and invite students to live a life of love for each other despite their different religions.

**Figure 3.** Students from Both Schools Perform Dances
**Source:** Personal Documentation

The Pela Gandong relationship between the two schools has been built since 2013 by carrying out a number of joint activities including, sports and art week competitions, scouts, joint iftar, joint Christmas, joint student council activities to teacher exchanges to teach at the two schools.
Thus, multicultural education that integrates local wisdom values such as Pela Gandong belonging to the Maluku people has been able to become a typical multicultural education model. In the field of government and politics, Pela Gandong's multicultural education has been included in the Ambon City Government's program in the Regional Medium-Term Development Plan (RPJMD) for 2011-2016 (Fikri & Hasudungan, 2021).
It is hoped that the Maluku Provincial Government will continue to preserve Pela Gandong's local wisdom in the form of programs and policies as a reference for development in Maluku. And also the government pays great attention to schools and teachers and students who are still traumatized by the Ambon conflict and immediately overcomes the segregation that still exists. Schools are expected to be able to facilitate teachers to prepare learning tools that integrate multicultural education based on Pela Gandong's local wisdom in learning through training or the like.
Teachers as actors in teaching peace and multicultural pedagogy to students (Bartlett, 2009; Navarro-Castro & Nario-Galace, 2010; Szelei et al., 2019). A local approach that is close to the environment where students are located can make it easier for students to understand the meaning of peace and diversity. The teachers reported that the students were very responsive to the given value activities and became fond of discussing and applying the values of multiculturalism and peace. The teachers also noted that the students became more self-confident, more respectful of others and demonstrated an increase in positive, cooperative and peace-loving social and personal skills.
The bitterness and cruelty of the conflict and still continuing to fight so that the hard-won peace is maintained. Of course, we all want to form a generation that upholds the nation's cultural values. Students as the next generation of Maluku are expected to be able to take Pela Gandong-based multicultural education seriously and with discipline. It is hoped that students will have the knowledge, skills and attitudes regarding peace and diversity. Peace is an eternal work that cannot be stopped (Gleditsch et al., 2014; Hartwell, 2019; Millar, 2021). Because, students are also actors in the present and in the future in maintaining the peace of Ambon City and Maluku Province. The current Ambon-Maluku peace must be maintained by students as the next generation.

## Conclusion

Diversity is a gift that God has given and has become a reality of life that must be accepted by everyone. However, diversity is often the trigger for bloody conflicts such as the Ambon conflict in 1999-2002. This is due to a lack of understanding that humans are born with many differences from one another starting from physical, race, ethnicity, religion and even nation and state. This reality cannot be accepted so that it becomes a trigger for conflict. Therefore, multicultural education has become an educational reform movement that tries to reform schools and disciplines. As well as discussing issues regarding social justice, deliberation, and human rights, political, moral, educational and religious issues. Efforts at SMPN 9 Ambon City and SMPN 4 Salahutu Liang, Central Maluku Regency to apply multicultural education based on Pela Gandong local wisdom to maintain and build peace that has been painstakingly realized. The form is like a cultural attraction that is displayed by students from both schools through dance, song and poetry, all of which lead and invite students to live in love with each other despite different religions, ethnicities and groups. Of course, this can be realized when students have no negative prejudice and segregation. The Pela Gandong relationship between the two schools has been built since 2013 by carrying out a number of joint activities including, Sports and Arts Week competitions, scouts, joint iftar, joint Christmas, joint student council activities to teacher exchanges to teach at the two schools. Based on these conclusions, the authors provide two recommendations as follows: 1) Prepare learning tools used by teachers to integrate multicultural education based on local wisdom Pela Gandong. 2) Conducted research in other provinces regarding the potential of local wisdom as a model of multicultural education that can be applied in schools. Considering the potential for conflict that continues to threaten the Unitary State of the Republic of Indonesia, especially the strengthening of polarization in society, identity politics and populism in Indonesian politics today.

## References

Afrimadona. (2021). Revisiting Political Polarisation in Indonesia: A Case Study of Jakarta's Electorate. Journal of Current Southeast Asian Affairs, 40(2), 315–339. https://doi.org/10.1177/18681034211007490

Amirrachman, A. (2012). Peace education in the Moluccas, Indonesia: between global models and local interests [Universiteit van Amsterdam]. https://dare.uva.nl/document/2/145859

Ardoin, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. Biological Conservation, 241, 108224.

https://doi.org/10.1016/j.biocon.2019.108224

Asowayan, A. A., Ashreef, S. Y., & Omar, S. H. (2017). A Systematic Review: The Next Generation Science Standards and the Increased Cultural Diversity. English Language Teaching, 10(10), 63. https://doi.org/10.5539/elt.v10n10p63

Aziz SR, A. (2019). TRANSFORMASI KONFLIK DAN PERAN PEMERINTAH DAERAH. Journal of Urban Sociology, 2(1), 28. https://doi.org/10.30742/jus.v2i1.609

Baihaqi, M. (2021). Implementation of Multicultural Education in Indonesia. EDUTEC: Journal of Education And Technology, 4(3), 504–526. https://ejournal.ijshs.org/index.php/edu/article/view/197

Banks, C. A. M., & Banks, J. A. (1995). Equity Pedagogy: An Essential Component of Multicultural Education. Theory Into Practice, 34(3), 152–158. http://www.jstor.org/stable/1476634

Banks, J. A. (1977). Pluralism and educational concepts: A clarification. Peabody Journal of Education, 54(2), 73–78. https://doi.org/10.1080/01619567709538109

Banks, J. A. (1992). Insights on Diversity: Dimensions of Multicultural Education. Kappa Delta Pi Record, 29(1), 12–12. https://doi.org/10.1080/00228958.1992.10517907

Banks, J. A. (1995). Multicultural Education and Curriculum Transformation. The Journal of Negro Education, 64(4), 390. https://doi.org/10.2307/2967262

Bartlett, T. A. (2009). Teaching teachers to teach peace: A reflective pre-service case study [University of Toronto]. https://tspace.library.utoronto.ca/bitstream/1807/18097/3/Bartlett_Tiffany_A_200911_MA_Thesis.pdf

Bourchier, D. M. (2019). Two Decades of Ideological Contestation in Indonesia: From Democratic Cosmopolitanism to Religious Nationalism. Journal of Contemporary Asia, 49(5), 1–21. https://doi.org/10.1080/00472336.2019.1590620

BPS. (2015). Mengulik Data Suku di Indonesia. Badan Pusat Statistik.

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a Qualitative Description Approach in Health Care Research. Global Qualitative Nursing Research, 4, 233339361774228. https://doi.org/10.1177/2333393617742282

Bräuchler, B. (2009). Cultural solutions to religious conflicts? The revival of tradition in the Moluccas, Eastern Indonesia. Asian Journal of Social Science, 37(6), 872–891. https://doi.org/10.1163/156848409X12526657425226

Burke, K., & McDowell, A. (2021). White Women Who Lead: God, Girlfriends, and Diversity Projects in a National Evangelical Ministry. Sociology of Race and Ethnicity, 7(1), 86–100. https://doi.org/10.1177/2332649220903759

Dewi, K. H. (2020). Motherhood Identity in the 2019 Indonesian Presidential Elections. Contemporary Southeast Asia, 42(2), 224–250. https://www.jstor.org/stable/26937801

Dietrich, S. (2018). God's Mission as a Call for Transforming Unity. International Review of Mission, 107(2), 378–390. https://doi.org/10.1111/irom.12237

Edsand, H.-E., & Broich, T. (2020). The Impact of Environmental Education on Environmental and Renewable Energy Technology Awareness: Empirical Evidence from Colombia. International Journal of Science and Mathematics Education, 18(4), 611–634. https://doi.org/10.1007/s10763-019-09988-x

Fikri, A., & Hasudungan, A. N. (2021). Ambon City Local Government Medium-Term Development (RPJMD): Culture Transmission Through Panas Pela of Education as A Peacebuilding. Journal of Local Government Issues, 4(1), 30–44. https://doi.org/10.22219/logos.v4i1.12751

Gay, G. (2002). PREPARING FOR CULTURALLY RESPONSIVE TEACHING. Journal of Teacher Education, 53(2), 106–116. https://doi.org/10.1177/0022487104267587

Gilbert, P. (2021). Creating a Compassionate World: Addressing the Conflicts Between Sharing and Caring Versus Controlling and Holding Evolved Strategies. Frontiers in Psychology, 11(February). https://doi.org/10.3389/fpsyg.2020.582090

Gleditsch, N. P., Nordkvelle, J., & Strand, H. (2014). Peace research – Just the study of war? Journal of Peace Research, 51(2), 145–158. https://doi.org/10.1177/0022343313514074

Hadzigeorgiou, Y., & Skoumios, M. (2013). The development of environmental awareness through school science: Problems and possibilities. International Journal of Environmental and Science Education, 8(3), 405–426. https://doi.org/10.12973/ijese.2013.212a

Hanifah, N. (2017). Multicultural Education Based on Local Wisdom as an Alternative Values Education in Early-Childhood Education. Proceedings of the 3rd International Conference on Early Childhood Education (ICECE 2016), 58(1997), 364–368. https://doi.org/10.2991/icece-16.2017.63

Hartimah, T., Sulaiman, S., & Farlina, N. (2021). Pela Gandong for Social Reconciliation and Peacebuilding in Ambon. Buletin Al-Turas, 27(2), 361–378. https://doi.org/10.15408/bat.v27i2.21847

Hartwell, L. (2019). Conflict Resolution: Lessons from the Dayton Peace Process. Negotiation Journal, 35(4), 443–469. https://doi.org/10.1111/nejo.12300

Hasudungan, A. N. (2020). Panas pela of education : Desegregation of Muslim and Christian post-reconciliation at SMPN 4 Salahutu Liang and SMPN 9 Ambon. Simulacra, 3(2), 223–236. https://doi.org/https://doi.org/10.21107/sml.v3i2.7854.g5051

Iswandi, I., & Abdullah, G. (2020). RELIGIOUS ISSUES IN THE 2019 PRESIDENTIAL ELECTION OF INDONESIA. Jurnal Al-Dustur : Journal of Politic and Islamic Law, 3(1), 1–21. https://doi.org/10.30863/jad.v3i1.523

Jati, W. R. (2013). Kearifan Lokal Sebagai Resolusi Konflik Keagamaan. Walisongo: Jurnal Penelitian Sosial Keagamaan, 21(2), 393. https://doi.org/10.21580/ws.2013.21.2.251

Julianto, H. D., & Subroto, W. T. (2019). Multicultural Education Based On Local Education In Elementary School. International Journal of Educational Research Review, 420–426. https://doi.org/10.24331/ijere.573943

Khaedir, M., & Wahab, A. A. (2020). The Function of Multicultural Education in Growing Global Citizen. Proceedings of the 2nd Annual Civic Education Conference (ACEC 2019), 418(Acec 2019), 507–512. https://doi.org/10.2991/assehr.k.200320.096

Kopnina, H., Washington, H., Taylor, B., & J Piccolo, J. (2018). Anthropocentrism: More than Just a Misunderstood Problem. Journal of Agricultural and Environmental Ethics, 31(1), 109–127. https://doi.org/10.1007/s10806-018-9711-1

Lee, S. Y. (2021). An Urban Explanation of Jokowi's Rise: Implications for Politics and Governance in Post-Suharto

Indonesia. Journal of Current Southeast Asian Affairs, 40(2), 293–314. https://doi.org/10.1177/1868103421990853
Malisngorar, J. (2017). PELA GANDONG SEBAGAI SARANA PENYELESAIAN KONFLIK. Jurnal PERSPEKTIF, 22(1), 66–79. http://jurnal-perspektif.org/index.php/perspektif/article/view/589
Martin, J.-L., Maris, V., & Simberloff, D. S. (2016). The need to respect nature and its limits challenges society and conservation science. Proceedings of the National Academy of Sciences, 113(22), 6105–6112. https://doi.org/10.1073/pnas.1525003113
Miichi, K. (2014). The Role of Religion and Ethnicity in Jakarta's 2012 Gubernatorial Election. Journal of Current Southeast Asian Affairs, 33(1), 55–83. https://doi.org/10.1177/186810341403300104
Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook, 2nd Edition (2nd ed.). Sage Publications.
Millar, G. (2021). Ambition and ambivalence: Reconsidering positive peace as a trans-scalar peace system. Journal of Peace Research, 58(4), 640–654. https://doi.org/10.1177/0022343320941909
Navarro-Castro, L., & Nario-Galace, J. (2010). Peace education: a pathway to a culture of peace. In Center for Peace Education Miriam College. Center for Peace Education Miriam College. https://www.mc.edu.ph/Portals/8/Resources/Peace_Education_ebook_2010.pdf
Pang, V. O. (2001). Multicultural Education: A Caring-Centered, Reflective Approach with Internet Guide and PowerWeb (1st ed.). McGraw-Hill Humanities/Social Sciences/Languages.
Parker, J. (2019). Multicultural Education as a Framework for Educating English Language Learners. International Journal of Multidisciplinary Perspectives in Higher Education, 4(1), 22–35. https://doi.org/10.32674/jimphe.v4i1.1404
Prihatsanti, U., Suryanto, S., & Hendriani, W. (2018). Menggunakan Studi Kasus sebagai Metode Ilmiah dalam Psikologi. Buletin Psikologi, 26(2), 126. https://doi.org/10.22146/buletinpsikologi.38895
Siriat, L., & Nurbayani, S. (2018). PENDIDIKAN MULTIKULTURAL BERBASIS KEARIFAN LOKAL DALAM PEMBENTUKKAN KARAKTER PESERTA DIDIK DI TANJUNGPINANG-KEPRI. JURNAL PENDIDIKAN ILMU SOSIAL, 27(2), 150. https://doi.org/10.17509/jpis.v27i2.11185
Sukardi, T., & Subandowo, S. (2014). MENCARI FORMAT BARU PENDIDIKAN BERBASIS MULTIKULTURAL DI INDONESIA. SOSIO DIDAKTIKA: Social Science Education Journal, 1(1). https://doi.org/10.15408/sd.v1i1.1210
Suradi, A. (2018). The Challenges of Education Based on Multicultural in National Local Culture Conservation in Globalization Era. Cendekia: Jurnal Kependidikan Dan Kemasyarakatan, 16(1), 103. https://doi.org/10.21154/cendekia.v16i1.1156
Szelei, N., Tinoca, L., & Pinho, A. S. (2019). Rethinking 'cultural activities': An examination of how teachers utilised student voice as a pedagogical tool in multicultural schools. Teaching and Teacher Education, 79, 176–187. https://doi.org/10.1016/j.tate.2018.12.020
Tilaar, H. A. R. (2004). Multikulturalisme tantangan-tantangan global masa depan dalam transformsi pendidikan nasional. Grasindo.
Watson, K., & Leicester, M. (1991). Multicultural Education: From Theory to Practice. British Journal of Educational Studies, 39(2), 232. https://doi.org/10.2307/3120934
Wicaksana, I. G. W., & Wardhana, A. (2021). Populism and foreign policy: The Indonesian case. Asian Politics & Policy, 13(3), 408–425. https://doi.org/10.1111/aspp.12594
Widian, R., Satya, P. A. N. I. P., & Yazid, S. (2022). Religion in Indonesia's Elections: An Implementation of a Populist Strategy? Politics and Religion, 1–23. https://doi.org/10.1017/S1755048321000195
Wiradhika, N. (2018). KONFLIK SARA DALAM NOVEL JALAN LAIN MENUJU TULEHU KARANGAN ZEN R.S. : SEBUAH TINJAUAN SOSIOLOGI SASTRA. AKSIS: Jurnal Pendidikan Bahasa Dan Sastra Indonesia, 2(1), 17–28. https://doi.org/10.21009/AKSIS.020102
Yin, R. K. (2003). Case study research: Design and methods (3rd ed.). Sage Publications.
Yin, R. K. (2009). Case Study Research Design and Methods (4th ed.). SAGE Publications.
Yılmaz, F. (2016). Multiculturalism and multicultural education: A case study of teacher candidates' perceptions. Cogent Education, 3(1), 1172394. https://doi.org/10.1080/2331186X.2016.1172394

https://doi.org/10.56556/jssms.v1i3.85

RESEARCH ARTICLE

# A Tracer Study on the Bachelor of Agricultural Technology Graduates of Batch 2019 of Isabela State University – San Mateo Campus

**Mar Heisen A. Yanos*[1], Julie F. Espinosa[2]**

[1,2]Isabela State University San Mateo Campus, Philippines

Corresponding Author: Mar Heisen A. Yanos, marheisen.a.yanos@isu.edu.ph
Received: 16 March, 2022, Accepted: 14 April, 2022, Published: 18 April, 2022

**Abstract**

A tracer review is one of the easiest ways to gauge the efficacy of a system. The study's aim was to determine the graduates 'profile, the status of employability, the relevance of their course to their present job, the graduates' learning skills to their present job and to evaluate the quality of education at the ISU-San Mateo campus. Data were collected by sending online questionnaires with their active social media and email accounts to graduates and handing out questionnaires to graduates working nearby agencies and institutions. Findings from the study revealed that graduates revealed that their degree is relevant to their job, and they are equipped with different skills to compete in the global market but still experienced tight competition and no immediate vacancy that causes them to be on probation, part-time, and seasonally employed.

**Keywords:** Agricultural Technology; Employability; Graduate; Tracer Study

## Introduction

Education plays an important role in manpower development which can provide leadership to national development efforts. It forms the human capital required to promote at least two essential growth drivers-education and study. This research is important in order to understand how a university has done in terms of improving its students 'competencies and preparing them for the work world (Cagasan, 2017).

Institutions engaged in human resource development through long-term and short-term programs have a responsibility to keep track of their graduates' success in evaluating accountability and whether their programs have impacted the person, organization, etc or not. Tracer research constitutes one type of analytical analysis that offers useful information for assessing the outcomes of a specific higher education institution's education and training. Such knowledge can be used in the sense of quality control to further improve the institution. (Mundo et. al., 2019) The graduates are seen as the strongest proof of the success of a program in terms of jobs and positions held. In addition, they provide a clear source of input about the importance of the system in the current labor market.

The survey questions were related to the graduates' qualifications prior to their entry into higher education, their education background, their eligibilities, their employment, their length of time in looking job, the reasons for the delay of employment, the factors that facilitate their first or present job, employment status, the relevance of their college degree in their present job, their competencies learned in college that is useful in their job and assess the quality of education at ISU-San Mateo Campus. The Bachelor of Agricultural Technology is now in its fifth year of service and has been able to deliver the first batch of graduates in 2019, this paper looks at a tracer analysis to assess the importance of the curricula. The results obtained from the first batch of graduates will provide the necessary inputs to help the Campus develop its services. The Commission on Higher Education orders all Higher Education Institutions (HEIs) to conduct a report on the tracer. Tracer studies are also expected of HEIs seeking accreditation from accrediting bodies such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) for state universities and colleges like ISU.

This tracer research aimed to classify the graduates ' situation after completing their qualifications to determine the effect of further and higher education. The study also tackled the fit between the training provided and the labor market needs. It may help to increase the importance and sensitivity of further and higher education to the needs of the labor market on the one hand, and the needs of the community of the diverse students on the other.

The research focused only on the Bachelor of Agricultural Technology first batch of graduate jobs using a descriptive survey method using the GTS questionnaire which was developed by the Commission on Higher Education as the basis for constructing the questionnaire to derive the necessary details from the study's respondents. The questionnaire consisted of three sections that reported the following inputs: the respondent profile, educational background, and relevant information, and respondents' job status data. A random sample of the first class of BAT Graduates in 2019 was included in the actual responses, with a sample size of 25. Data obtained from the questionnaire used were tabulated and analyzed. The frequency count and percentage were the instruments used to measure the data derived from the survey conducted.

**Results and Discussion**

Table 1 indicates the frequency and percentage distribution according to age of the respondents and sex. It can be gleaned from the table that, when the questionnaire was administered, most of the BAT graduates fall between 21 – 23. This implies that the respondents are still young as they have just graduated from their baccalaureate. 14 males or 56% of the total number of participants and 11 females or 44% of the respondents were tapped to answer the data gathering instrument used in the study.

**Table 1**. Frequency and Percentage Distribution of the Respondents According to Age and Sex

| | Frequency | Percentage |
|---|---|---|
| Age | | |
| 18 – 20 | 3 | 12% |
| 21 – 23 | 20 | 80% |
| 24 – 26 | 2 | 8% |
| Sex | | |
| Male | 14 | 56% |
| Female | 11 | 44% |

**Table 2.** Frequency and Percentage Distribution of Respondents According to their Employability

| | Frequency | Percentage |
|---|---|---|
| Length of Time | | |
| Below 1 Year | 24 | 96% |
| More than 1 Year | 1 | 4% |
| Employment Status | | |
| Permanent | 1 | 4% |
| Temporary | 3 | 12% |
| Casual/Contractual | 4 | 16% |
| Job Order | 5 | 20% |
| Other | 12 | 48% |
| Job After Graduation | | |
| Private | 18 | 72% |
| Government | 7 | 28% |
| Monthly Salary | | |
| Below – 5, 000 | 1 | 4% |
| 5, 000 – 9, 999 | 11 | 44% |
| 10, 000 – 14, 999 | 5 | 20% |
| 15, 000 – 20, 999 | 7 | 28% |
| 20, 000 – 24, 999 | 1 | 4% |
| Reasons for Delay of Employment | | |
| Delay in the issuance of school-credentials | 1 | 4% |
| Delay in the issuance of other needed documents | 2 | 8% |
| No immediate vacancy | 6 | 24% |
| Tight competition for the job | 6 | 24% |
| Available jobs are not in line with specialization | 4 | 16% |
| Lack financial support for job hunting | 5 | 20% |
| Not emotionally ready | 1 | 4% |

Table 2 represents respondents' frequency and percentage distribution based on the period of time they are searching for work, job status, and reasons for employment. The graduates took a short time to land a job with 1 graduate who was able to land a job for more than one (1) year. It was also gleaned from the data presented in the table that one (1) of the respondents was given a status of permanency while three (3) as temporary, four (4) for Casual or Contractual, five (5) for job order while the other respondents are under probationary, part-time, and seasonal job. It also reflects that most of the graduates or eighteen (18) of them had their first jobs under the private sector while seven (7) were connected with the government. This implies that there are many jobs offered in private establishments. Most also of the respondents' or eleven (11) of them received a monthly salary of Php. 5,000 – Php. 9, 999, seven (7) received a salary of Php. 15, 000 – Php. 20, 999, five (5) of them received Php. 10, 000 – Php. 14, 999 while the others received a monthly salary of below Php. 5, 000 and a monthly salary of Php. 20, 000 – Php. 24, 999. The salaries differ because of the different classifications of the jobs of the respondents. Nevertheless, it can be gleaned that the majority of graduates have encountered strong competition for the job and no immediate vacancy, while the others are facing other reasons for their delay.

**Table 3.** Frequency and Percentage Distribution where the respondents are working

| | Frequency | Percentage |
|---|---|---|
| Government Agencies | 3 | 12% |
| Local Government Units | 2 | 8% |
| Agricultural Industry | 12 | 48% |
| Merchandising Companies | 4 | 16% |
| Not Indicated | 4 | 16% |

Table 3 presents employers and the type of establishment where the first batch of graduates are employed. The result connotes that most of the respondents or twelve (12) or 48% are working in agricultural industries followed by four (4) or (16%) who are employed at merchandising companies, three (3) or 12% are working in government agencies, and two (2) or 8% are working at local government.

**Table 4.** Frequency and Percentage Distribution of Respondents According to Relevance of College Degree in the Present Job.

| | Frequency | Percentage |
|---|---|---|
| Very Relevant | 14 | 56% |
| Relevant | 6 | 24% |
| Fairly Relevant | 3 | 12% |
| Not Relevant | 2 | 8% |

Table 4 data shows the frequency and percentage distribution of respondents in terms of the importance of their degree in their current work. The data showed that their college degree was highly important in getting them to land their current jobs; six (6) or 24% said it was significant, three (3) or 12% said it was relatively important, while two (2) or 8 %t said it was not significant. In the light of these facts, the information presented clearly showed the high percentage of graduates' employability as demonstrated by the importance of their degree to successfully landing their first jobs and as employees.

**Table 5.** Competencies Learned by the Respondents which are Relevant to their Present Job

| | Frequency | Rank |
|---|---|---|
| Communication Skills | 22 | 1 |
| Human Relation/Inter Personal Skills | 17 | 2 |
| Leadership/Managerial Skills | 13 | 4.5 |
| Entrepreneurial Skills | 7 | 8 |
| Information Technology Skills | 15 | 3 |
| Problem Solving Skills | 13 | 4.5 |
| Critical Thinking Skills | 11 | 6 |
| Research and Extension Skills | 10 | 7 |

Table 5 indicates that the respondents were prepared to be equipped with various skills as their tools to compete in the global job market. The communication skills were deemed the most important and appropriate as revealed by the respondents. In addition, their human relationships / interpersonal skills, IT skills, problem-solving skills, and leadership / managerial skills are even important in their current work. It was further stated that because of the skills they possessed, they easily adapted themselves to their respective employment. According to Panit (2013) skills have a highly influential connection with the status of the job because their skills may be an influential or added attribute to their employability.

**Table 6.** Assessment on the Quality of Education at ISU-San Mateo Campus

| Factors | Excellent | Very Good | Good | Fair | Needs Improvement |
|---|---|---|---|---|---|
| Curriculum/ Course Content | 21 | 4 | 0 | 0 | 0 |
| Methods of Instruction | 20 | 4 | 1 | 0 | 0 |
| Faculty | 18 | 6 | 1 | 0 | 0 |
| Facilities | | | | | |
| Library | 20 | 5 | 0 | 0 | 0 |
| Laboratories | 14 | 9 | 2 | 0 | 0 |
| Physical Plan | 16 | 8 | 1 | 0 | 0 |
| Student Service | 23 | 2 | 0 | 0 | 0 |
| Career | 12 | 4 | 4 | 2 | 3 |
| Guidance | 15 | 4 | 0 | 0 | 1 |
| Housing/ | 9 | 2 | 0 | 0 | 1 |
| DormsJob Placement Academic Counseling | | | | | |
| Research Services | 15 | 7 | 2 | 0 | 1 |
| Extension Services | 17 | 6 | 1 | 0 | 1 |
| General Administration | 15 | 9 | 1 | 0 | 0 |

Table 6 shows how the ISU-San Mateo provides quality education to its students. The data revealed that most of the factors are excellent. The ability to understand the different factors is the most accurate way for learners to measure their success. Still, other factors need to be improved especially on the different students' services and research and extension. This support the claims of Macatangay (2013) that the school related factors were very relevant in the job placement of the respondents.

## Conclusion

The Bachelor of Agricultural Technology pursued by the students was able to help them to improve the learning competencies that help them in their employment. The program is relevant in the work environment as proven by the high percentage of employability. These are manifested by the excellent quality education delivered by the ISU-San Mateo campus. Although the results of the study resulted in a satisfaction tracer study should be also conducted on all graduates of the program and a yearly update on the employment status of the graduates should be made to determine their status. This Tracer study was also conducted to enable our institution to get information on possible deficits in a given educational programmed which can serve as a basis for curricular improvement or enhancement which might help to broaden perspectives among administrators, faculty and students. Furthermore, it also served as benchmark in establishing a stronger partnership and expansion of tie-ups with various institutions and agencies for the possible employment of graduates and it also looked into the skills and competencies in teacher education provided during their undergraduate studies if these existing programs were still effective, adequate and relevant in responding to the rapid and complex changes brought about by emerging developments. Further, based on the findings and conclusions of this study, other recommendations are as follows: Institutionalize system-wide the conduct of tracer studies every other school year to include not only the graduates but also the employers as respondents; Intensify and offer attractive incentives to graduating senior high school students to enter the agricultural courses. Lastly, the University/Campus should also help the graduates to seek employment for all the graduates by coordinating or creating linkages to other agencies or companies.

**References**

Armoogun, N.Y., Ramasawmy, B. And Driver, B.M. (2016) *The need to enhance the employability competences (knowledge, skills, autonomy, and attitudes) of undergraduates in agriculture. Evidence from students' perceptions nd employers'expectations.* Tuning Journal for Higher Education. Vol 4 No. 1. 10.18543

Cagasan, E.G., Dargantes, T., Florentino, N.N. et. al. (2017) *Tracer study of the graduate degree programs of the Visayas state university.* Science and Humanities Journal. Vol. 11, 2017, pp. 16-39

Orejana, A.J Resurreccion, P.F. (2010) *Tracer study on the graduates of the bsba program: an in out to curricular development.* Philippine E-Journals. The Mindanao Forum. Vol. 23 No.1

Macatangay, L. (2013). Tracer study of BSCS graduates of Lyceum of the Philippines University from 2004-2009. *Academic Research International*, *4*(5), 361.

Mercado, Felixberto M. (2009). A Tracer Study of MSEUF Graduates. Enverga University

Mundo, S.A. and Panganiban, P.C. (2019). *A tracer on the bs mathematics graduates of batch 2014-2018 of the college of arts and sciences main campus I of Batanga State University.* International Journal of Advanced Research and Publications. ISSN: 2456:9992

Panit, N.M., Bentor, S.S. and Ongy, E.E. (2013). *Employment outcomes of graduates of an agricultural school.* Journal of Society & Technology 3:83-89

Kiliswa, I., Udoto, M.O. and Konyangao, J.O. (2016). *Tracer study of bachelor of science in agricultural education and extension graduates – class of 2008 – Egerton University.* Imperial Journal of Interdisciplinary Research. Vol. 2, Issue 8, 2016

Lucanas, R. (n.d.) *A tracer study on the employmet status of AB Journalism graduates of Bicol University College of Arts and Letters 2010-2012.*

Verhaest, D., Mestdagh, L., Bogaert, E. Et. al. (2016). *Crowding out in the labour market: do employers lend a hand?*

Wilkes, J. And Burns, A. (2019). *A decade of agriculture graduates' employability and career pathways.* International Journal of Innovation in Science and Mathematics Education, 27(4), 2-13, 2019

RESEARCH ARTICLE

# Influence of School Environment on Academic Performance of Secondary School Students in Calabar Metropolis, Cross River State, Nigeria

**Bassey John Okoi[1], Christiana Efut Okoi[1], Salvation U. Eteng*[2]**

[1]Department of Curriculum Studies/Educational Management and Planning, University of Uyo, Uyo, Akwa Ibom State, Nigeria
[2]Department of Urban and Regional Planning University of Uyo, Uyo, Akwa Ibom State, Nigeria

Corresponding Author: Bassey John Okoi, salvationeteng@gmail.com
Received: 10 March, 2022, Accepted: 19 April, 2022, Published: 22 April, 2022

**Abstract**
The study focused on examining the influence of school environment on the academic performance of secondary school students in Calabar. The study specifically sought to analyse the extent to which location and physical facilities determines academic performance of students. Data for the study were obtained through field surveys including questionnaire administration. A total of 200 copies of questionnaire were distributed in the sampled schools. However, students were the target population of the study. The variables that were used in measuring location were noise, ventilation and travelling distance from home to schools. Variables for physical facilities were libraries, science laboratories, adequacy of classrooms and ICT/computer laboratories. It was observed in the study that majority of the schools were located in considerably far distances and the environs where schools are located are susceptible to noise and pollution. It was also noted that majority of the students were undertaking studies in poorly ventilated classrooms. Furthermore, the study observed that physical facilities such as libraries and laboratories were poorly equipped, classrooms were inadequate and ICT/computer laboratories were not properly equipped. All of these pose threats to the academic performance of students. For instance, it was observed that majority of the students perform low academically. Holistically, it is difficult for student to attain academic goals as well as perform academically well in school environments that are unconducive and lack the necessary physical facilities. Based on the study findings, it was concluded that schools be located in places that are not prone to atmospheric and noise pollution. Equally, there is need to ensure that schools structures are designed in such a way that ventilation will be adequate was stressed. Finally, facilities such as libraries, science and computer laboratories should be equipped appropriately.

**Keywords:** Laboratories; libraries; location; physical facilities; traveling distance

## Introduction

Education is a veritable tool for national development. It is regarded as the bedrock of the nation and plays it an indispensable role in national integration. Due to its importance, the National Policy spelt out that education is an instrument for social change, development and sustainability. Therefore, for a nation to be revolutionized, the education of its people has to be given priority since education paves way for civilization and provides a sense of belonging to learners in the society. From the forgoing, it is clear that everyone deserve to be educated thus, access to good quality education is a fundamental human right (Emmet and Eur, 2011).

With the assertion that education is a fundamental right, it is important to ensure that the school environment is regulated in such a way that it will promote academic performance and achievement by learners. This is because the academic performance of students in the school is largely tied to school environmental factors and teaching styles (Chetty, Handayani, Sahabudin, Ali, Hamzah, Rahman and Kasim, 2019), student personnel management, the quality/quantity of teachers (Nwogu and Esobhawan, 2014; Maphoso and Mahlo, 2015; Aliyu and Ali, 2021) as well as the school environment (Chukwuemeka, 2013; Nsa, Offiong, Udo and Ikot, 2014). Basically, school environment provides the opportunity for training, the needed resources and the necessary assistance in the establishment and management of the educational system. Therefore, the school environment determines the physical, structural, personal, and functional factors of the educational institution, which provide distinctiveness to schools. In other words, the school environment determines the level of academic performance of students (Chukwuemeka, 2013; Amaechina and Ezeh, 2019). School environmental factors can therefore affect students' performance positively or negatively. For instance, schools that are located in districts with high level of noise pollution, unhealthy sanitation practices as well as lack of basic facilities such as laboratories, poorly equipped libraries and inadequate classrooms, such students are vulnerable to poor academic performance. Lee and Sulaiman (2018) noted that favourable school environment with the availability of the needed facilities and environmental conditions influence learning outcome and promote academic performance. This is due to the fact that the school environmental factors play inevitable roles in the academic performance of students.

Globally, available studies have pointed to the fact that the school environment determines the level of academic performance of students. For instance, Lee and Sulaiman (2018) observed that in Malaysia, there is a difference in the academic performance of students in schools with favourable and unfavourable environment. Schools with necessary and required facilities and in noiseless locations which were rgarded as being favourable allowed students to explore and gain knowledge thereby performing better academically than students that lack the necessary facilities. Ngbambi (2014) posited that in Tanzania, school and environmental factors contributes maximally in promoting academic performance of student. He observed that poor academic performance of students is due to poor working environment for teachers, poor supply of teaching and learning materials high teacher-students ratio and poor teaching pedagogy. Equally, inadequate facilities which all make the school environment unfavorable affect student performance. Khan, Begum and Imad (2019) further identified a positive relationship between environment and student academic performance at the secondary school level. He revealed that, the school environment is a significant factor that influence students' academic performance.

Ngbambi (2014) established that the school environment may have negative influence on students' academic achievement especially if such environment lacks good school climate, instructional materials, discipline, physical facilities, poor teacher quality, the location of school, it vulnerability to noise pollution and security. In Nigeria, existing studies have affirmed that school environment is unconducive for learning. For instance, students do not have access to various facilities and materials and the schools are not located in good environments which are expected to enhance their understanding. The result is poor academic performance in schools. Nsa et al., (2014) noted a positive relationship between availability of laboratory facilities and students' academic performance. They also showed that the availability of facilities in schools drastically promote academic performance of students.

From the foregoing, it is obvious that school environment in terms of the location and facilities that are available influence academic performance positively or negatively. Therefore, for secondary school students to perform maximally well and attain academic goals, there is need to monitor strictly the school environment. However, the performance of students in relation to the school environment has not been given adequate attention in available studies in Calabar and Cross River State. This imply that there is a gap in knowledge that needs to be filled. In order to bridge the gap in knowledge, the study sets out to examine the influence of school environment on academic performance of students in secondary schools in Calabar Metropolis, Nigeria.

**Literature review**

There is a growing concern among scholars that school environment determines teaching and learning in schools. Nsa et al., (2012); Nsa et al., (2014) believed that the availability of science and computer laboratories, library facilities, adequate classroom facilities, workshop facilities, playgrounds, etc aid teaching and learning. Ramli, Zain, Zain, and Rahman (2021) analysed school environmental factors and how there influence academic performance. They used questionnaire as the instrument for data collection and employed regression and correlation methods in carrying out analysis. Their results indicated that environmental factors have significant impact on academic performance of students. They further noted that environmental factors affect students' quality of life. In order for academic performance of students to be improved. They suggested that school environmental factors be addressed and upgraded.

In a related study, Nghambi (2014) in Tanzania noted that school environmental factors play inevitable roles in determining student academic performance in Secondary Schools. Using questionnaires, interview and field observations Ngbambi showed that poor performance in examinations was associated with poor working environment for teachers, poor supply of teaching and learning materials, high teacher-students ratio, and poor teaching methodology. Specifically, he noted that inadequate teaching and learning materials, high teacher-student ratio and poor working environment have a significant impact on student achievement. From his findings, it was noted that school environmental factors influence academic performance of students especially at the secondary school level. He concluded that a conducive working environment for teachers, adequate supply of teaching and learning materials, provision of motivation to teachers, proper recruitment and in-service training for teachers, a good education policy, teachers being responsible and accountable, use of proper teaching and learning methods, as well as community participation in school activities and good child care will make the school environment conducive and favourable for students.

Nsa et al. (2014) assessed the relationship between school environmental variables and students' academic performance in agricultural science. They employed correlational survey design and selected students randomly. Their target population consisted of students. They further used copies of questionnaire and checklist. Furthermore, they analysed data using pearson product moment correlation. Their study showed a significant relationship between availability of laboratory facilities and students' performance in agricultural science. They also identified a significant relationship between availability of farming facilities and academic performance of students. Based on their findings, they recommended the creation of a more conducive environment that will aid students' perform better academically.

Akpan (2020) examined the influence of school environment on the academic performance of Biology students in secondary schools in Ukanafun Local Government Area of Akwa Ibom State. He used variables such as class size, instructional facilities, peer relationship and school location as well as students' academic performance in Biology. His findings revealed that there was significant influence of the variables related to school academic environment on the academic performance of students in Biology. Based on their findings, they recommended that schools should endeavour to create a conducive environment so as to promote students' academic performance and both government and private school administrators need to monitor the school environment in order to ensure improved academic performance. Similar findings were made by Harinarayanan and Pazhanivelu, (2018). From the submission of the scholars it is clear that the school environment influences academic performance of the students. However, the studies presented above have not given concern to the study area which implies that there is a gap in knowledge. Based on this observation, this study is necessary.

**Methodology**

The study area is Calabar metropolis. It is situated between Longitudes 8 $^{o}$18` East and 8$^{o}$26` East of the Greenwich meridian and Latitudes 4$^{o}$50' North and 5$^{o}$67' North of the Equator. The entire study area is made up of 159.65square kilometres (Eteng and Ajom, 2021). Calabar metropolis is bounded to the North by Odukpani Local Government Area and to the West by the Calabar River. In the East, it share boundaries with the Great Kwa River and the Atlantic Ocean to the West. The population of the study area has been growing steadily over the years. The 1991 population census results put the number of humans at 328876 (NPC, 1991). By the end of 2021, the population was estimated at 687351 persons (Ajom and Eteng, 2021). There are several secondary schools in Calabar metropolis. The secondary schools publicly are and privately owned. However, private schools dominate in the study area.

In order to obtain data, the survey design was adopted in this study. In the study, 20 secondary schools were randomly selected comprising of 10 private and 10 public schools. The schools were selected such that both Calabar South and Calabar Municipality were covered through ensuring that 5 private schools and 5 public schools were randomly chosen in Calabar Municipality and same process was replicated in Calabar South. In all, a total of 20 secondary schools were selected and used as the sample. In each of the sampled schools, 10 copies of questionnaire were randomly distributed to students. Specifically, students were the target population for the study. Therefore, 200 students were sampled out for questionnaire administration comprising of 20 students from each selected schools. Data were further analysed using simple percentages and descriptive statistics.

**Findings and Discussions**

**Location**

The variables that were used in assessing the location of secondary schools in Calabar metropolis were the mean travelling distance from home of students to schools, the level of noise generated within the school environment by adjoining neighbourhoods and extent of ventilation. As noted in Table 1, majority of the students (29 percent and 31 percent) travel between 901metres and above 1.2kilometres on daily basis to school. This suggest that the schools are located in considerably far distance. The implication of travelling long distances is that students spend energy and time on moving from homes to schools especially those that cannot afford transportation fares. Even for those demand the services of commercial cars, they are subjected to delays due to traffic hold-ups given the fact that school activities mostly kick-start within the traffic peak periods.

The Table further revealed that most students (53.5 percent) are subjected to study within environments that are prone to noise pollution. Such noises are generated from incompatible land uses and activities which do not complement the siting of schools within such environs. The students therefore become distracted easily and loose focus when teaching and learning is ongoing. Equally, it was revealed in the Table that student are packed up in classrooms that are not well ventilated. The implication is that they lack the needed comfort to help them focus on their studies while teaching and learning is ongoing in classes. Even more, schools lack fans and air conditioners to provide ventilation. Obviously, being stocked up in areas that are not well ventilated put the health and wellbeing of students in danger. From the observations in the table, it is clear that students in secondary schools are not studying in good environments that will boost their academic performance. This imply that a lot needs to be done in order to promote the academic performance of students in schools.

**Table 1.** Location

| Variables | Categories | Frequency | Percentage |
|---|---|---|---|
| Travelling Distance | 0-300m | 19 | 9.5 |
| | 301-600m | 39 | 19.5 |
| | 601-900m | 22 | 11 |
| | 901-1.2km | 58 | 29 |
| | Above 1.2km | 62 | 31 |
| | **Total** | **200** | **100** |
| Noise | Very noisy | 107 | 53.5 |
| | Noiseless | 93 | 46.5 |

| | | | |
|---|---|---|---|
| | **Total** | **200** | **100** |
| Ventilation | Well ventilated | 98 | 49 |
| | Poorly ventilated | 102 | 51 |
| | **Total** | **200** | **100** |

**Source:** Field Survey, 2022

**Physical Facilities**

The physical facilities that make up school environment were identified to include availability of libraries, science laboratories, adequate classrooms and ICT/computer laboratories. Table 2 noted that majority (61.5 percent) students study in poorly equipped libraries their schools as against 38.5 percent that have well equipped libraries. The domination of students that study in poorly equipped libraries imply that academic performance of students is low. In the Table, it was also noted that most students lack access to good/equipped science laboratories while classrooms of majority (65.5 percent) are inadequate. The table finally showed that most students do not have access to ICT/computer laboratories.

**Table 2.** Physical Facilities

| Variables | Categories | Frequency | Percentage |
|---|---|---|---|
| Libraries | Well Equipped | 77 | 38.5 |
| | Poorly Equipped | 123 | 61.5 |
| | **Total** | **200** | **100** |
| Science Laboratories | Well Equipped | 121 | 60.5 |
| | Poorly Equipped | 61 | 30.5 |
| | Not Available | 18 | 9 |
| | **Total** | **200** | **100** |
| Adequate Classrooms | Adequate | 69 | 34.5 |
| | Inadequate | 131 | 65.5 |
| | **Total** | **200** | **100** |
| ICT/Computer Laboratories | Available | 48 | 24 |
| | Not available | 69 | 34.5 |
| | Available but not equipped | 83 | 45.5 |
| | Total | 200 | 100 |

**Source:** Field Survey, 2022

**Academic Performance**

In Table 3, the academic performance of students was examined.

**Table 3.** Academic Performance

| Academic Performance | Frequency | Percentage |
|---|---|---|
| Upper | 35 | 17.5 |
| Middle | 74 | 37 |
| Lower | 91 | 45.5 |
| Total | 200 | 100 |

Source: Field Survey, 2022

The Table revealed that most of the students in the study area perform lower in academics. Clearly, the low level of performance in academics can be largely tied to the school environment in terms of location and physical facilities that are available in the school. This is because students are likely to perform lower academically when the needed facilities that can boost their performances are lacking.

**Recommendations**

Based on the findings of the study, the following recommendations were made;

Schools should be located in places that are not prone to atmospheric and noise pollution. To achieve this, appropriate site selection criteria and experts should be engaged in the process of choosing sites for secondary schools in the study area

i. There is need to ensure that structures that are to be used as learning facilities should be designed in such a way that ventilation will be adequate given the fact that students perform better academically when they study in well ventilated environments. Most importantly, cross ventilation should be ensured in the buildings accommodating schools.
ii. Schools should also be located within close proximity to homes. This will help in reducing the time, energy and resources spent on travelling by students from home to schools
iii. Facilities such as libraries, science and computer laboratories should be equipped appropriately. This will help student perform better academically as the facilities will aid them to study.

**Conclusion**

The study focused on assessing the influence that exist between school environmental factors and academic performance of students in secondary schools in Calabar Cross River State, Nigeria. The paper used variables such as location of schools and physical facilities that are available in the school. The study observed that location as a variable of school environment affect the academic performance negatively in the study area. For instance, most school were observed to be located in areas that are prone to noise, poorly ventilated and in long travel distances from homes to schools of students. The absence of sufficient facilities in secondary schools were also observed as variables that affect student academic performance negatively in the study area. Having in mind that secondary schools play important and indispensable roles in the preparation of students for nation building, it was suggested that appropriate approaches be adopted in the selection of sites for the location of schools. Equally, facilities that are capable of providing aid for better understanding in classrooms by secondary school students should be provided.

**References**

Ajom, S. K. and Eteng, S. U. (2021). Assessment of waste scavenging activities in Calabar, Cross River State, Nigeria. International Journal of Social Science and Human Research, 4(11): 3141-3145

Akpan, I. (2020). The influence of school environment on academic performance of biology students in secondary schools in Ukanafun Local Government Area of Akwa Ibom State. Available at SSRN: https://ssrn.com/abstract=3530562 or http://dx.doi.org/10.2139/ssrn.3530562 (Retrieved 31st March, 2021)

Aliyu, D and Ali, M. (2021). Teacher's quality as a correlate to students' academic performance in senior secondary schools in Maiduguri Metropolis, Borno State. Journal of Science Technology and Education, 9(1):81-87

Amaechina, U. O., and Ezeh, S. C. (2019). School environment and academic performance of secondary school students in Enugu Education Zone. Benue State University Journal of Educational Management, 1(2): 125-131

Chetty, N. D., Handayani, L., Sahabudin, N. A., Ali, Z., Hamzah, N., Rahman, N and Kasim, S. (2009). Learning styles and teaching styles determine students' academic performances. International Journal of Evaluation and Research in Education, 8(3): 610-615

Chukwuemeka, O. (2013). Environmental influence on academic performance of secondary school students in Port Harcourt Local Government Area of Rivers State. Journal of Economics and Sustainable Development, 4(12)

Emmet, S and Eur, L. L (2011). Education in terms of human right. Procedia Social and Behaviourial Science, 12: 346-361

Eteng, S. U and Ajom, S. K. (2021). Household characteristics and water consumption among residents of Calabar, Cross River State, Nigeria. International Journal of Scientific and Engineering Research, 12(3): 565 - 571

Khan, F.N., Begum, M. and Imad, M. (2019). Relationship between students' home environment and their academic achievement at secondary school level. Pakistan Journal of Distance & Online Learning, 5(2): 223-234.

Lee, M. C. and Sulaiman F. (2018). The effectiveness of practical work in physics to improve students' academic performances. International Journal of Social Sciences, 3(3): 1404-1419

Maphoso, L. S and Mahlo, D. (2015). Teacher qualification and pupil academic performance. Journal of Social Sciences, 42(1 and2): 51-58

Nghambi, G. H. (2014) Factors contributing to poor academic performance in certificate of secondary education examination for community secondary schools in Urambo district, Tabora, Tanzania. MSc. Dissertation. Open University of Tanzania. 94p

Nsa, E. O., Akpan, E. O. and Williams P.S. (2012). Instructional strategies and students' skills acquisition in vegetable crop production. Pakistan Journal of Business and Economics Review, 3(1): 125-141.

Nsa, S. O., Offiong, A. A., Udo, M. F and Ikot, A. S. (2014). School environmental variables and students academic performance in agricultural science. International Journal of Business and Social Science, 5(8): 163-167

Nwogu U. J and Esobhawan, B. I. (2014). Teacher quality and quantity: Implications for the implementation of universal basic education in Nigeria. Academic Research International, 5(1): 199-207

Ramli, A., Zain, R., Zain, M. and Rahman, A (2021). Environmental Factors and Academic Performance: The Mediating Effect of Quality of Life. International Conference on Business and Technology, 2082–2105

RESEARCH ARTICLE

# Availability and use of Audio-Visual Aids in Teaching Science

**Sandeep Dawadi**[1*]

[1]Physics Education Department of Science Education Mahendra Ratna Campus, Tahachal, Kathamandu, Nepal

Corresponding Author: Sandeep Dawadi, Sandeepdawadi515@gmail.com
Received: 13 March, 2022, Accepted: 21 April, 2022, Published: 23 April, 2022

**Abstract**

Audio-visual instructional materials are highly motivating supplements to make the teaching effective. The learning process itself is based primarily on sensory experiences. So, availability and use of audio, visual aids helps to make the science learning permanent, to transfer the learning and to understand the science structure. The main objective of the study is to find out the availability of instructional materials in the secondary private and public schools, to find out the teacher knowledge and skills to construct and use of teaching materials. The study is based on primary data drawn by observation and questionnaire on the field visited and secondary sources of data collected from the checklist and Districts Education office, Kathmandu. The data analysis procedure was descriptive in nature and appropriate statistical measurements with a sensible description of availability and use of instructional materials in teaching science. Thus, this study proved the availability and use of instructional materials more than private school with compare to public schools and the availability of instructional materials in the schools was not satisfactory. Even available materials in the schools were not used properly by teachers at the time of teaching in science. The findings and conclusion of the study will help to concern agencies. It is better to conduct such type of research studies at the national level.

**Keywords:** Audio-Visual; Availability; Instructional material; effectiveness; learning

## Introduction

Different education plans had been recommended and emphasized for the science curriculum at school level in Nepal. Science education has been provided indispensable to human being even to a layman. Introduction of science at school and higher level is not easy task in imparting meaningful science knowledge. Here comes a need of making science meaningful and significant. So, now a day's it is emphasized on inductive and analytical method to make science teaching more meaningful and practical. Meaningful and practical in science teaching refers to the visualization and intuition or the visualization touches the feeling of the learner. Hence, visual aids (instructional materials) play an important role in making science teaching meaningful and significant. It helps to understand what, how and why the science study is required. Researcher is not yet sure that any study in this field has under taken. Thus, the need of the study has been felt most urgent. To realize the benefits of audio visual aids in teaching, secondary schools need to adopt effective methods for using and managing their audio, visual resources. Educators, administrators and policy planners worldwide have made many futile attempts in improving education through the integration of audio visual aids in classroom teaching/learning process.Hence, this study was focused on the utilization of audio visual aids and facilities or availability at Secondary School level in Nepal. Students of school level think in terms of concrete materials. So the effectiveness of the science teaching depends upon the availability and use of audio visual teaching materials in the classroom (Gautam,2000). The learning process itself is based primary or secondary experiences. The audio visual aids provide the students auditory and visual experiences, which promote the learning. Besides this with the help of the teaching aids, the teacher will also be able to arouse the interests in the mind of student and be able to motivate them to the learning process. Thus it is clear that the teaching materials are highly motivating supplements to make the teaching effective.

## Statement of Problem

The problems of the statement are study on the availability and use of audio visual aids in teaching science. i.e, what is the situation of the use of audio visual aids in secondary school level of private and public school? Are there adequate teaching materials to teach science at the secondary level? Are the teacher aware and cognizant of the appropriate creation and use of teaching material in teaching science at secondary level? Is there a difference between private and public schools in the use of audio-visual aids in teaching science?.Curriculum and textbooks were revised and written from time to time. New approaches to classroom teaching were discussed and an ample use of appropriate teaching aids and models were recommended for the secondary level. In order to achieve the objectives of science teaching as declared in the new education plan, there must be at least a moderate supply of audio visual teaching materials in all schools and the teacher must be well qualified and cognizant in using these materials. Most of the schools of Nepal are still using the traditional method characterized by mastery of subject matter through drill, repetition and memorization. This method is subject centered, teacher-dominated and in this method is subject matter is presented with limited teaching aids.In this context, knowledge and awareness of the use of audio-visual aids is essential for every concerned person and agency.Hence, this study is new in its kind and focused on to find out the use and availability of audio, visual aids in teaching science in the secondary private and public schools.

**Research Questions**

This study is geared to find out the answer to following questions:

- Are there adequate teaching materials available to teach science at the secondary level?
- Are the teacher aware and cognizant for appropriate creation and use of teaching material in teaching science at secondary level?
-

**Population of the Study**

All the science teachers of the secondary level including secondary school at Kathmandu district constituted the population of the study. According to the Districts Education Office (DEO), there are 948 schools which are providing secondary education. Out of them 159 schools is exclusively $S_1$-type whereas 784 schools are $S_2$-type.

Observation check list, questionnaire and class observation was used as data collection tools. The researcher was also study the syllabus, text books, teacher guides, curriculum of class nine and ten as well as other sources on the basis of which list of instructional materials can be made.

**Data Collection Procedures**

For the data collection, the researcher personally visited each of the schools included in the sample and also observed the classroom. The questionnaire were filled by interviewing the senior science teachers of the schools

**Data Analysis Process**

The questionnaire contained introductory information, which explained the responded to fill the form freely and sincerely. A tally sheet was used to organize the obtained data. The data analysis procedure was descriptive in nature and appropriate statistical measurements with a sensible description of availability and use of materials in teaching of science at secondary level.

**Availability of the Materials in School**

Following tables shows the list of frequently used materials in the instruction of the science lessons and the extent of their availabilities in the schools. The table also shows absolute as well as the percentage description of the extent of availability of materials.
Physics deal with the study of physical phenomena (i.e. measurement, light, heat, electricity and magnetism etc.). For the study of physical phenomena in school level the availability of physics instructional material should adopts. Availability of the physics instructional materials in $S_1$ – schools and $S_2$- schools are categories in the following table 1.

**Data Collection Tools**

**Table 1.** Availability of the Physics instructional materials

| S.N | Name of materials | $S_1$-School | | | | $S_2$ –School | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AV | % | NR | % | AV | % | NR | % | AV | % | NR | % |
| 1. | Meter Scale | 5 | 100 | | | 5 | 100 | | | 10 | 100 | | |
| 2. | Spring Balance | 5 | 100 | | | 5 | 100 | | | 10 | 100 | | |
| 3. | Measuring Cylinder | 5 | 100 | | | 5 | 100 | | | 10 | 100 | | |
| 4. | **Electrical instrument** | | | | | | | | | | | | |
| | Ammeter | 4 | 80 | 1 | 20 | 3 | 60 | 1 | 20 | 7 | 70 | 2 | 20 |
| | Voltmeter | 2 | 40 | 2 | 40 | 3 | 60 | | | 6 | 60 | 2 | 20 |
| | Bulb | 3 | 60 | | | 5 | 100 | | | 8 | 80 | | |
| | Dry cells | 3 | 60 | | | 5 | 100 | | | 8 | 80 | | |
| 5. | **Optical instrument** | | | | | | | | | | | | |
| | Plain mirror | 3 | 60 | | | 4 | 80 | | | 7 | 70 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Glass slab | 2 | 40 | 5 | 100 | 7 | 70 |
| | Lens | 5 | 100 | 4 | 80 | 9 | 90 |
| 6. | Magnet | 5 | 100 | 5 | 100 | 10 | 100 |

The statistics shows that materials such as meter scale, spring balance, measuring cylinder, magnet was available in 100% of both public as well as private school. Among the material that lies in electric category, ammeter was available 80% in public school and 60% in private school. So, it can be said that one more private school lacks ammeter than public school. In the same category of electrical instrument voltmeter was available in 40% of public school and 60% in private school. Likewise, 60% public schools had electric bulb while other 40% lacks and 100% private school had electric bulb. In the same category, Dry Cell was available in 60% in Public School it lacks in 40% in public school while 100% private school had Dry Cell. Moreover, one for ammeter in public school, one for private school and two for voltmeter on public school didn't had any response. In the next grouping of Optical Instrument, Plane Mirror was deficient in 60% public school and was not available in 40% public school while 80% private school owns it and 20% didn't own it. Among the optical instrument glass slab was available in 40% public school while 60% of them lacked it and in private school, 100% of them possess glass slab. Lens was another optical instrument which is possessed by 100% of public school and 80% of private school while one private school was deficient in it. Moreover, for this category none of the school had any response for any material. Chemistry deals with the study of chemicals. To gives the basics concept of chemicals for school level, availability of the chemistry instructional materials is the most.

Availability of the chemistry instructional materials in $S_1$ – schools and $S_2$- schools are presented in given Table 2

**Table 2** Availability of the Chemistry Instructional Materials

| S. N | Name of materials | $S_1$-School | | | | $S_2$-School | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AV | % | NR | % | AV | % | NR | % | AV | % | NR | % |
| **7.** | **Chemistry practical apparatus** | | | | | | | | | | | | |
| | Beakers | 5 | 100 | | | 5 | 100 | | | 10 | 100 | | |
| | Test tube | 4 | 80 | | | 5 | 100 | | | 9 | 90 | | |
| | Conical flask | 1 | 20 | 1 | 20 | 4 | 80 | | | 5 | 50 | 1 | 10 |
| | Wolfe's bottle | 1 | 20 | | | 4 | 80 | | | 5 | 50 | | |
| | Delivery tube | 1 | 20 | | | 4 | 80 | | | 5 | 50 | | |
| | Thistle funnel | 1 | 20 | 2 | 40 | 4 | 80 | | | 5 | 50 | 2 | 20 |
| | Gas jar | 1 | 20 | | | 4 | 80 | | | 5 | 50 | | |
| | Trough | 2 | 40 | 3 | 60 | 4 | 80 | 1 | 20 | 6 | 60 | 4 | 40 |
| | Beehive Shelf | 1 | 20 | | | 4 | 80 | | | 5 | 50 | | |
| | Round bottomed flask | 1 | 20 | 2 | 40 | 4 | 80 | 1 | 20 | 5 | 50 | 3 | 30 |
| | Hard glass test tube | 2 | 40 | | | 5 | 100 | | | 7 | 70 | | |
| 8. | **Chemicals** | | | | | | | | | | | | |
| | Copper sulphate | 1 | 20 | | | 4 | 80 | | | 5 | 50 | | |
| | Table salt | 5 | 100 | | | 5 | 100 | | | 10 | 100 | | |
| | Ether | 1 | 20 | 2 | 40 | 3 | 60 | 1 | 20 | 4 | 40 | 3 | 30 |
| | Universal indicator | 3 | 60 | | | 4 | 80 | | | 7 | 70 | | |
| | Baking soda | 1 | 20 | 2 | 40 | 4 | 80 | | | 5 | 50 | 2 | 20 |
| | $HCL,H_2SO_4,HNO_3$ | 2 | 40 | | | 4 | 80 | | | 6 | 60 | | |

In the same way in next category of Chemistry, Beakers were possessed by 100% of both Public and Private School. Test Tube was available in 80% public school and not available in 20% public school while 100% private school had Test tube. Delivery tube, Thistle funnel, Gas jar, conical flask, and Wolfe's bottle were available in 20% public school and 80% of private school. In 40% public school Trough was available where as 80% of private school had Trough. Beehive Shelf as well as Round Bottomed Flask was Possessed by 20% public school and

40% lacked it while 80% of private school had Beehive Shelf and Round Bottomed flask. Eventually, hard glass test tube was available in 40% public school and not available in 60% public school while 100% private school had possession of hard glass test tube. In the grouping of chemical substance, in 20% public school Copper Sulphate, Ether and Baking soda were available. In private school Copper Sulphate was available in 80%, Ether was available in 60% and Baking Soda was available in 80% school. Table Salt was available in all of the public and private school. And Universal indicator was available in 60% public school and 80% private school. And HCl, $H_2SO_4$, $HNO_3$, were available in 40% public school and 80% private school. Two for ether in Public School, One in Private school, two for baking soda in public school didn't have any response.

Availability of the biology instructional materials of $S_1$ – schools and $S_2$- schools are presented in the table 3.

**Table 3.** Availability of the Biology instructional materials

| S.N. | Name of materials | $S_1$-School | | | | S2-School | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AV | % | NR | % | AV | % | NR | % | AV | % | NR | % |
| 9. | Microscope | 5 | 100 | | | 4 | 80 | | | 9 | 90 | | |
| 10. | Specimen | 3 | 60 | | | 4 | 80 | 1 | 20 | 7 | 70 | 1 | 10 |
| 11. | Permanent slide | 4 | 80 | | | 4 | 80 | | | 8 | 80 | | |

Table no-6 shows the Microscope was available in all public schools while 20% private school lacked it and Specimen and Permanent slide were possessed by 80% private school while Specimen was possessed by 60% public school and Permanent slide was possessed by 80% of public school. In average, out of 31 materials only 55.54% were available in public school. Similarly, out of 31 materials 85.16% were available in private school. Integrated result, only 70.97% materials were available out of 31 materials. So, the statistics demonstrated that private school have more materials available than public School. During the study period of Audio Visual Aids it was found that among ten schools including private as well as public school, in public school there were less material in comparison to private school.

There were other 8 major materials surveyed by researcher. The materials and their availability are shown below in table

**Table 4** Availability of Reading Materials

| School | Name of material | Total no.of school | Available | % | Not available | % |
|---|---|---|---|---|---|---|
| PUBLIC | Text books | 5 | 5 | 100 | | |
| | White board, marker, duster | 5 | 5 | 100 | | |
| | Curriculum | 5 | 5 | 100 | | |
| | Teacher's guide | 5 | 5 | 100 | | |
| | Reference books | 5 | 3 | 60 | 2 | 40 |
| | Computer | 5 | 2 | 40 | 3 | 60 |
| | Internet | 5 | 2 | 40 | 3 | 60 |
| | Bulletin Board | 5 | 3 | 60 | 2 | 40 |
| PRIVATE | Text books | 5 | 5 | 100 | | |
| | White board, marker, duster | 5 | 5 | 100 | | |
| | Curriculum | 5 | 4 | 80 | 1 | 20 |
| | Teacher's guide | 5 | 5 | 100 | | |
| | Reference books | 5 | 5 | 100 | | |
| | Computer | 5 | 5 | 100 | | |
| | Internet | 5 | 4 | 80 | 1 | 20 |
| | Bulletin Board | 5 | 5 | 100 | | |

Table 4 shows the list of frequently used materials in the instruction of science and the extent of their availabilities in the schools in the sample. Table 7 shows that all school i.e. 100% public school were focused to have materials such as text books, white boards, marker, duster, curriculum and teacher guide. But references books and bulletin Board are only available in three schools; computer and internet are only available in two schools. Table 4 also shows that all school i.e. 100% private school were focused to have materials such as text books, white board, marker, duster, teacher guide, reference books, computer and bulletin board. But curriculum and internet were not available in one private school.

### Utilization of Teaching Materials in Science Class

Beside the availability and non-availability of material , the study also propounded to explore whether the teachers were enthusiastic and cognizant about the construction and use of materials. Above table explains about the availability and non availability of whole materials necessary in science classes . But the condition of materials (i.e. whether they were used or not ) are unknown . So, the researcher perform next more action to know about it.

As the researcher cannot get all information only from interview and checklist. To fulfill the gap the researcher observed at least three science classes of each teacher regularly. And the information that the researcher collected about the condition of utilization of materials in their science classes are shown in the given table 5

**Table 5** Utilization of Teaching Materials in Science Class

| Type of school | S.N. | Name of materials | Available | | | | | Not Available | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Use | | | | | Would Use | | | | |
| | | | Yes | No | Reason for not using | | | Yes | No | Reason for not using | | |
| | | | | | N.K | M.T | N.E | | | N.K | M.T | N.E |
| PUBLIC | 1. | Chart paper | 1 | 4 | 2 | 2 | | | | | | |
| | 2. | Computer | 1 | 1 | 1 | | | 2 | 1 | 1 | | |
| | 3. | Internet | 1 | 1 | 1 | | | 2 | 1 | 1 | | |
| | 4. | Model | 2 | 3 | | 2 | 1 | | | | | |
| | 5. | Real Material | 3 | 2 | 1 | 1 | | | | | | |
| | 6. | Smart board | 1 | | | | | 2 | 2 | 2 | | |
| | 7. | Lab Material | 2 | 3 | | 2 | 1 | | | | | |
| | 8. | Tape Recorder | 1 | 3 | | 1 | 2 | 1 | | | | |
| PRIVATE | 1. | Chart paper | 4 | 1 | | | 1 | | | | | |
| | 2. | Computer | 5 | | | | | | | | | |
| | 3. | Internet | 4 | | | | | 1 | | | | |
| | 4. | Model | 4 | 1 | | | 1 | | | | | |
| | 5. | Real Material | 2 | 3 | 1 | 1 | 1 | | | | | |
| | 6. | Smart board | 1 | | | | | 2 | 2 | 2 | | |
| | 7. | Lab Material | 4 | | | | | 1 | | | | |
| | 8. | Tape Recorder | 5 | | | | | | | | | |

Further description of used materials (i.e. Chart paper, computer, internet, models, real materials, smart board, lab materials and tape recorder) in science classes during the observation are as flows**.** As in evident from the table, chart paper is available school. Four teacher didn't use chart paper due to the no knowledge and taking much time. One teacher of private school didn't use chart paper due to its less effectiveness. Concisely, every school have chart paper but it was not used by many schools due to some of its stumbling block.

### Computer

Computer is very essential material for teaching/learning purpose . It is very effective and can be used for making student to understand the subject topic matters. But it was not used more in public school. Computer was available in two public school and all of five private schools have computer. Out of two public school having computer, one school use it but next school didn't use it because of no knowledge of applications. In three schools computer were not available and in two schools out of them it was said that they would use it if it was available. But next school wouldn't use it though if it was available due to lack of knowledge of application. In brief , it could be said that there wasvery poor use of computer in public schools compare to private schools.

### Internet

Internet is another materials where almost all resources are available for teaching and learning purpose. But its use was also seemed to be poor in schools. In two public schools, internet was available but only one public school use it. Another school didn't use it due to lack of skilled human resource.In private school, three private school have provision of internet and they use also. If available, two public school would use internet but one public school wouldn't use it due to lack of knowledge of application. And the three private school where there was no provision of internet however they would use it if it is available. In short, it was recognized that internet was used more by private school than public school.

**Models**

Models are mock-up material which helps students and teacher forteaching and learning process. It was available in all five public school but only two public school use it and three public school didn't use it. Two public school didn't use it because it consume much time and one public school didn't use it because it was not effective. Among five private school, four private school use it but one private school didn't use it because it was not too effective. In short it can be said that private school were using model then public school which weren't using it though it was available in all public school.

**Real materials**

Real materials are very important and frequently used material in schools science classes. It gives long term concepts of science subject. The teacher expressed that real materials were useful as well as effective. Real materials are available in local area which gives exact concept to student and it helps to teacher by making the topic easy for teaching and teacher also can give real concepts about science classes. The above table shows that three teachers of public school were using real materials in the time of observation, but two teachers of public school didn't use any real materials in their classes due to the lack of knowledge and lack of time. But in the case of private school, two teachers use real materials in their lesson, but three teachers didn't use real materials due to the lack of knowledge, time and one teacher said that these materials were not effective.

**Smart board**

Smart board is the materials that contain different materials for many subjects. It is the most important audio/visual instructional materials which can store the previous courses too. So it can help teachers to teach and students to remember. Among both private and public school only one public school and one private school had smart board. But other school didn't have smart board. The school where smart board was available, teacher use it. Out of not available other four public school, teacher of two public school would use smart board but other teacher of two public school wouldn't use it due to the lack of knowledge in application, though it would be available. And among the teachers of not available other four private school also, two teacher would use, if it was available but next two wouldn't use it due to the lack of knowledge of application.

At last it could be said that, there was no actual difference in the utilization of smart board between private and public school.

**Lab materials**

Lab materials is very useful materials for the visual and experimental teaching and learning process. The general lab materials were available in all type of schools but not sufficient for science teaching. The general lab materials were available in all public school but only two of them use it and three didn't use it. Two public school didn't use it because it was much time consuming and one public school didn't use it because it was not too much effective. While in private school it was available in four school and was also used by all four private school. The private school which didn't have lab material would use it if it was available. Like this we can say in short that lab materials are neglected to use in many public school while private school use it in required time.

**Tape recorder**

Tape recorder is also a useful material in audio based science classes. It makes the topic courses interesting for the student so that they can easily understand the theme of course. Tape recorder was available in four public school and only one public school use it. But three school didn't use it because one public school think that it was much time consuming , while other two public school said that it was not effective. Then, in private school Tape recorder was available in all school and it was also used by all private school. In short it can be said, private school were properly using the tape recorder than public school which were not using it although it was available.

**Conclusion**

The availability of the instructional materials in the teaching materials were essential for teaching concepts of Science meaningfully. Most of the teachers were able to use these visual aids in teaching Science.Though only some materials were made by teachers themselves, most of the materials couldn’t be made either because of lack of time or lack of materials. That’s why most of the materials were bought from the market. Materials like Textbooks, White boards, Marker, Dusters, Curriculums, Teacher’s guide books and other basic related materials were available in all types of school but materials like Reference books, internet, computer and Bulletin board were not available in public schools. Similarly, curriculum and internet were not available in some private schools. Private schools have more instructional materials and used more materials than public schools.

**References**


Aman, Rao (1998).Teaching of Physics. New Delhi-110002 (INDIA), Anomal publication Pvt. Ltd.

Anzaku, (2011). The use of Audio Visual material in the Teaching and Learning process in College Education in Benue State -Nigeria.

Dale,Edgar(1959). Audio-visual Method in Teaching Revise Edition. USA:Henryand Co-inc.

Gautam, Shankarnath (2000).A study on the availability and use of teaching materials in teaching mathematics at primary schools of tanahu district, Master thesis,DoE, T.U

Koirala, Bidhyanath and Acharya, Sushan (2004).Girls in Science and technology education , A study on access, Participation and performance of Girls in Nepal, UNESCO Kathmandu Series of manograph& working Paper, Kathmandu.

Ministry of Education (2067/68 BS).Kathamandu, Nepal, Flash report.

Mohan R.(2010). Innovative Science Teaching. New Delhi. PHIlearning private limited.

National Curriculum Framework, (2063BS). Kathmandu, Nepal. Retrieved on…from www.moes.edu.np.

Ndem, N. Udo (2011).Effects of improvised materials on students achievement and retention in physics. Retrived from: www.ajol.info

Pandey, H.B. (2042) ,A study on Use of Visual Aids in Teaching Fraction, Master's Thesis, Department of Education, T.U.

Pandit, C.N.(2065). Modern science teaching.Kathmandu:Bidurprakashan.

Poudel, AdhikariBishnu Prasad (2011), Education and Education In Nepal,Aashis Books House Pvt.Ltd. Kathmandu.

Sah,S.S. (2001), A Study on the Relationship between Qualification of Teacher and Mathematics Achievement of Primary School students, Master' Thesis, Department of Education, T.U.

Shymansky, James and Jennifer, Alport (1983). The effect of New Science curricula on student performance. Journal of research in science teaching.

Singh Kumud (1975), Availability and use of the Social Study Teaching Material in Primary Schools of Kathmandu Nagar Panchayat, Master's Thesis, Department of Education, T.U.(http://www.digitallearning.in/articles/article-details.asp?articleid=2213&typ =DEVELOPMENT).

Subedi, Ram Bandu (2004). A study on the use and availability of audio visual aids in teaching mathematics at secondary level. UnpublishedMaster's Thesis, Department of Education, MahendraRatna Campus Tahachal, Kathmandu.

Yadav, Haris. (2042 BS). Study on the use of visual aids in the instruction of mathematics in the primary school of Dhanusha district. Kathamandu, Tribhuvan University, Nepal.

https://doi.org/10.56556/jssms.v1i3.107

RESEARCH ARTICLE

# Perceptions of Educational Stakeholders on the Introduction of Entrepreneurship Subject at Secondary Schools in Zanzibar

**Alawi Saleh Mussa[1,] Alex Naho[1*]**

[1]Jordan University College.Department of Education, PO BOX 1878, Morogoro -Tanzania

Corresponding Author: Alex Naho, alexnaho@yahoo.com
Received: 17 March, 2022, Accepted: 25 April, 2022, Published: 28 April, 2022

**Abstract**
This study aimed at examining the perceptions of educational stakeholders on the introduction of entrepreneurship subjects at secondary schools in Zanzibar and the challenges of its integration. The study employed both qualitative and quantitative approaches. Questionnaires, focus group discussions, and interviews were used in data collection. A sample of 67 respondents, 30 students, 30 teachers, 6 head teachers, and 1 educational officer was used. The study employed stratified sampling and purposive sampling techniques in selecting the sample. Purposive sampling was used to select the teachers, head teachers, and the educational officer while stratified sampling was used to sample the students. Interviews were conducted with head teachers and educational officers whereas focus group discussions and questionnaires were administered to students and teachers respectively. The data collected through the questionnaires were analyzed with the aid of Statistical Package for Social Sciences (SPSS) version 20, while data collected using interviews and focus group discussion was analyzed qualitatively. The results were unequivocal as about 89.6% of respondents accepted the idea of the introduction of entrepreneurship subjects at secondary schools. Meanwhile, the findings showed that the integration would be faced with a myriad of challenges such as a shortage of competent entrepreneurship subject teachers, a shortage of teaching and learning materials, and the use of traditional teaching methods. The study recommended that the entrepreneurship subject can be introduced at secondary schools in Zanzibar but the use of modern teaching methods, frequent training of entrepreneurship subject teachers, and teaching entrepreneurship subject in an appropriate environment must be respected for better performance.

**Keywords:** Perception, entrepreneurship, entrepreneurship subject, educational stakeholders

## Introduction

Unemployment has become a global challenge. Education has always been considered a foundation for solving problems of unemployment but this assertion is becoming invalid with the increasing number of jobless secondary school graduates. One of the ways of ensuring that education assists in addressing national and global unemployment are by incorporating entrepreneurship education into the school curriculum. Entrepreneurship education seeks to provide students with the knowledge, skills, and motivation to encourage entrepreneurial success in a variety of settings. Some scholars have provided insights on the issue of the introduction of entrepreneurship education. According to Gautama, M., and Kumar, S.(2015) a growing number of universities are pursuing research in entrepreneurship and establishing education programs, courses, activities, and services to promote entrepreneurial spirit and train entrepreneurs. Different countries have introduced entrepreneurship subjects in their education system. Mahadevan *et al* (2017) said that nowadays entrepreneurship education has been offered at all levels of schooling from primary or secondary schools to the university level. However, there is a difference in terms of the extent to which entrepreneurial education has been incorporated at different levels.
In Tanzania with particular reference to Zanzibar, entrepreneurship subject is being considered to be taught in higher-level education. The Zanzibar Education Policy (ZEP) of 2006 is silent about entrepreneurial education. However, it emphasizes skills and knowledge which should be imparted to individuals who should be self-reliant after completing their studies. It is noted that the policy for higher education emphasizes education which will impart students with knowledge and skills of self-employment ( Donath and Sabokwigina 2010).

Currently, entrepreneurship topics are being integrated into some subjects like civics, economy, and general study. Most of the teachers are not competent in teaching entrepreneurship subjects as they teach relying simply on their experience. The teaching methods employed by teachers are more traditional. Owing to these reasons (articulated above), this paper vividly tries to examine the perception of education stakeholders on the introduction of entrepreneurship subjects at secondary schools in Zanzibar.

## Statement of the Problem

In Zanzibar secondary schools in particular and Tanzania in general, the situation of entrepreneurship education is extremely bad. The syllabi for ordinary secondary education avowed nothing about entrepreneurship education. However, in the advanced level of secondary school education, entrepreneurship is stipulated as a factor of production specifically for form five economics students. It is also stipulated in general studies and civics subjects, but it is neither a topic nor a subtopic.

Thus, the majority of secondary school leavers know nothing about entrepreneurship as a subject rather than hearing it as being associated with street vendors. The syllabus for primary education has nothing to do with entrepreneurship education. It emphasizes more on social studies. Entrepreneurship subject is unique and has not yet been introduced at secondary schools as such. So far, related researches in this field focus more on offering some useful information that can be used by governmental officials during the introduction of entrepreneurship education at secondary schools. However, there is little information on the perception of educational stakeholders concerning the introduction of entrepreneurship subjects in Zanzibar secondary schools, particularly in the Mkoani district. This need is what this study intends to serve.

## Literature Review

The literature review of this paper is based on two aspects which are perceptions of educational stakeholders on the introduction of entrepreneurship subjects and the challenges facing the integration of entrepreneurship subjects in secondary education. More clarification of the literature review mentioned above is hereunder.

### Perceptions of Educational Stakeholders on the Introduction of Entrepreneurship Subject

The perception of the introduction of entrepreneurship subject was viewed positively worldwide. Many countries agreed with the introduction of entrepreneurship education at different levels of education. This argument supported by Karimi, et al.(2010) maintained that recent decades have seen a tremendous rise in entrepreneurship education at various universities, colleges, and secondary schools around the globe. The necessity and importance of entrepreneurship and its education have led to a dramatic rise in the number and status of entrepreneurship programs at colleges and universities and lower levels of education. The popularity of entrepreneurship courses has increased dramatically among all levels of education namely for graduate, undergraduate, and secondary students. (Finkle, T. and Deeds, D. 2018)

The USA has the longest tradition of encouraging entrepreneurship studies at universities, business schools, and a low level of education in comparison to any other country. This shows that they perceived entrepreneurship education as an engine of boosting the economy of the country. Vesper. K.H. and Gartner, W.B. (1997) noted that universities in the USA are generally regarded as the pioneers of academic entrepreneurship education. At the beginning of the 21st century, more than 50 universities in the USA were offering not only single courses as part of entrepreneurial training but also complete programs. (Koch, L.T.2003)

Recently, there is an increased interest in entrepreneurship education among some countries, especially East European and Asian countries. According to Chinese researchers Li, W., (2007) only six of 26 top business schools offered business venturing programs, and five focused on entrepreneurship modules. Unfortunately, in some places such as Latin America and Africa, entrepreneurship education has not received such recognition. However, there are surely but slowly some developing countries paying more attention to entrepreneurship education, where few courses are finding their way into undergraduate and Master's curricula. (Niyonkuru. R., 2005)

According to Yaghoubi, J., (2010), In Latin America, entrepreneurship courses are offered at universities in Colombia, Argentina, Mexico, Honduras, Panama, Costa Rica, Peru, and Brazil. However, there is very little reliable information available. Little is known about entrepreneurship education in Africa. However, African universities recognize that the educational system in Africa is lagging in terms of offering entrepreneurship education in the higher education curricula. Based on Niyonkuru. R., (2005) there are very few universities that offer specific programs in entrepreneurship and have made entrepreneurship an integral part of the African education system. The results concluded that most higher education institutions and academics in Africa are starting to recognize that entrepreneurship is an important subject area to focus on and that a strong entrepreneurship program is necessary for an institution to be acknowledged.

### Challenges Facing the Integration of Entrepreneurship Subjects in Secondary Education

Entrepreneurship subject was integrated into the formal education systems in many countries around the world. The motive behind this was the importance of this subject in economic development. However, there are many challenges to the integration of entrepreneurship subject (ES) particularly in secondary schools. These challenges will be our next focus of discussion.

There is a lack of teachers with enough practical entrepreneurial training, skills, and content. In teaching entrepreneurship education awareness of the content of the subject coupled with skills and experience is considered very important. Teachers' awareness of entrepreneurship education has grown in the last five years and attitudes towards the new curriculum have become very positive. Nevertheless, the majority of teachers still do not know the aims, contents, and work methods of entrepreneurship education. Consequently, they may be unable to effectively impart the desired knowledge and entrepreneurial skills to their students.

In addition, the task of drawing up course content to be included in the curriculum is also a challenge. Preparing a curriculum in entrepreneurship with relevant content is not an easy task. It is indeed difficult and needs enough time. The process will require expertise with enough skills and knowledge of entrepreneurship education. Therefore, it can lead to massive use of resources both financial and human in preparing teachers who can teach entrepreneurship subjects and experts who can develop a curriculum of entrepreneurship education in secondary schools.

Another challenge is cost. Both teachers and students need money to practice the theory of initiating, establishing, and running enterprises. This undoubtedly constitutes constraints that subsequently frustrate the integration of entrepreneurship in an academic program in Zanzibar secondary schools. About this, Mutembei, L.,(2012) reiterated that headteachers experience challenges in financial management, mainly lack of enough funds which hinders effective curriculum implementation as they are unable to buy enough resource materials. The program implementation experiences and places a huge challenge for both teachers and students. Oseni, E., (2017) noted that traditional in-class teaching and assessment methods are employed during teaching entrepreneurship subjects, with little (or no) emphasis on outside-class methods, which are necessary for experience. To summarize the challenges presented so far, Tendai, C., (2012) purported that the integration of ES is faced with a lot of challenges, particularly in terms of financial resources needed to fund the program and experts who can teach the subject properly.

**Data Collection Methods**

The study mainly used primary data whereby both qualitative and quantitative data were collected. Quantitative data was collected using a structured questionnaire consisting of both open and closed-ended questions; the questionnaires were administered to 30 teachers who are teaching entrepreneurship in their subjects. In addition to the above, qualitative information was collected through focus group discussions and interviews. The data collected through FGD was obtained from the 5 groups of six respondents each. Questions were discussed in different sessions in which advanced-level students participated. Using this method of data collection, the researcher used tricky questions that allowed respondents to come up with envisioned responses and excellent answers. Also, an interview was conducted in which a total of 7 respondents have interviewed namely 6 head teachers and 1 educational officer. The interview was guided by structured schedules with both closed and open-ended questions administered by the researcher. The study used semi-structured interviews to ensure effective data collection.

**Data Analysis Techniques**

In this study, data were analyzed using both qualitative and quantitative methods. The data collected were sorted and analyzed in descriptive and numerical forms. The data which were collected through interviews, focused group discussion, and open-ended questionnaire items were subjected to content analysis whereas the data collected through the quantitative method were presented in numerical form. The study mainly used qualitative analysis such as content analysis of the texts whereby the content of the study was analyzed to identify the main themes provided by respondents, which relate to the objectives and questions of the study. Moreover, the study used a quantitative method to analyze data. Under this study, Statistical Package for Social Science (SPSS) software version 20 and manual were applied for data analysis. This is because the number of variables analyzed was useful for calculating frequencies, statistical tables, graphs, and percentages for easy interpretations and understanding.

**Discussion of the Result**

**Perceptions of Educational Stakeholders on the Introduction of entrepreneurship subject**

The introduction of entrepreneurship subjects at secondary schools in Zanzibar was accepted by the majority of the respondents. The introduction of entrepreneurship subjects would provide an opportunity for students to learn entrepreneurship subjects in a wider scope than before. This was revealed by all the respondents namely students, teachers, educational officers, and heads of schools. For instance, the study revealed that the majority of the teachers about 89.6% agreed with the introduction of entrepreneurship subjects at secondary schools.

Similarly, students agreed with the idea of introduction of entrepreneurship subject in secondary by 97%, headteachers approved the introduction of entrepreneurship subject in secondary by 70%, and educational officers accepted the introduction of entrepreneurship subject in secondary by 100%.

These findings vindicate the assertion of Oseni, E., (2017) who said that the incorporation of entrepreneurship education as a course and subject into the educational curricula of vocational, secondary, and tertiary institutions as well as entrepreneurship agencies has become a globally accepted initiative to address the increasing unemployment rates. Again, universities and secondary schools started to offer entrepreneurship courses and numerous courses related to entrepreneurial activities have been introduced in the United States. ( Nian T. et al,2014)

In addition, respondents outlined different reasons that influenced them to support the notion of the introduction of entrepreneurship subject at secondary schools. The main reasons were that entrepreneurship subject will provide a great contribution to the economic development of society through self-employment. This was supported by Yi, Rosni, and Aminu, who said that investment in entrepreneurship education can bring huge benefits to the economy and society.

Furthermore, respondents clarified that entrepreneurship subjects help to reduce the problem of unemployment among youths in a country. This argument supported by Oluwatoyin noted that entrepreneurship education in universities and tertiary institutions cushions the effect of unemployment among graduates through job creation and self-reliance for the economic growth of the country.

**The Challenges of Integration of entrepreneurship subject in Secondary Schools**

The result of the study specified that the majority of respondents agreed that the integration of entrepreneurship subjects at secondary schools faced many challenges. The study finding mentioned that many teachers 76.7% pointed out that the shortage of knowledge and skills for teachers on entrepreneurship subjects was the challenge that integration faced.

On the other hand, the analysis of interviews of headteachers and educational officers revealed that the shortage of knowledge and skills for teachers on entrepreneurship subjects was the challenge that integration of entrepreneurship education at secondary schools faced. Similarly, in the focus group, discussion majority of students stated the fact that among the challenges that integration faces are the shortage of knowledgeable and skilled entrepreneurship subject teachers.

This idea can be justified in consideration by Charlie who explained that there is a lack of sufficient and skilled manpower in both universities and a low level of an educational institution. Inadequate and low level of entrepreneurship knowledge of teachers affects the teaching and learning of entrepreneurship education in a country. Similarly, Uchugbu, C. et al., (2016) argued that another key challenge obstructing the integration of entrepreneurship education is the inadequacy of competent lecturers (teachers) in the field of entrepreneurship to make the course practically interesting and goal-oriented as opposed to too much focus on theory.

Another outcome from the study specified that the shortage of training for teachers in entrepreneurship education is a challenge to the integration of entrepreneurship subjects at secondary schools. The majority of respondents about 90% agreed with the notion that the integration of entrepreneurship subjects at secondary schools faces the problem of a shortage of training for teachers on entrepreneurship education. This finding is also articulated by Okwara O.et al(2009), They clarified that the training services for teachers carried out are very limited or very minimal, which is evidenced by the fact that some of the seminars conducted for them lasted for just a day.

In addition, respondents indicated that inadequate fund provision for entrepreneurship education is one of the challenges facing the integration of entrepreneurship subjects at secondary schools. Most of the participants 76.7% agreed that there is a shortage of funds for the development of entrepreneurship subjects at secondary schools. A comparable study conducted by Baba, G., (2013) explained that poor funding of entrepreneurship education in particular and the education sector, in general, has been a serious challenge to entrepreneurship, both at the institutional level and the nation at large, and funding constraint has adversely affected the implementation of entrepreneurship education curricula.

Furthermore, the result from the study specified that inadequate instructional materials/equipment (teaching and learning materials) serves as a common challenge facing the integration of ES at secondary schools. The majority of respondents about 73.3% voiced this challenge. This claim has also been made by Ahmed(2015) who said that the lack of adequate teaching and learning facilities such as textbooks, typewriters, computer systems, photocopying, and duplicating machines does hinder effective teaching and learning of entrepreneurship subjects.

Likewise, the study finding mentioned that method of teaching emphasized theoretical rather than practical learning as a challenge to the integration of ES at secondary schools. Based on the study, the respondents about 73.3% were not satisfied with the method of teaching used in teaching ES at secondary schools. They mentioned that it was too traditional. This result is similar to those obtained by Oseni (2017) who indicated that business schools still adhere to traditional in-class teaching and assessment methods, with little (or no) emphasis on outside-class methods, which are necessary to earn experience. Many other scholars have also commented on this result. Ifedili and Ofoegbu(2011) for instance said that another serious challenge facing entrepreneurship education is an ineffective style of teaching that stresses theoretical rather than practical.

Further, the respondents also rate inadequate motivation for entrepreneurship subject teachers as a constraint. The data from the field mentioned that among the common challenge that integration faces are lack of motivation for EST. About 70% of teachers were not satisfied with the motivation provided to ES teachers as identified in the study. This finding was supported by Ahmed who reported that teachers' morale is also low as they are not well motivated to do their job properly. When teachers are not motivated, their level of job commitment may be low and the objectives of the school may not be accomplished. (Ahmed 2015)

Additionally, the lack of government policy to support the graduates is also considered a challenge to the integration of entrepreneurship subjects at secondary schools according to the study findings. The majority of respondents as much as 90% mentioned that poor government policy to support graduates is a real challenge. This finding was validated by Mwasalwiba et al (2012) who described that while current national policies emphasize graduate entrepreneurship, there is a failure to implement these policies at the lower government level. Similarly, Karimi, S. et al(2010) noted that there are not enough funds that are allocated for business start-up training and support for graduates who want to start their businesses after graduation.

Lastly, the lack of an entrepreneurship curriculum in secondary schools is also considered a challenge to the integration of ES at secondary schools based on the study findings. The study revealed that 60% of respondents agreed that there is no entrepreneurship curriculum in secondary schools. Karimi, S. et al (2010) argued that entrepreneurship subject needs to be embedded in the mainstream academic curricula to enable students to receive an education of entrepreneurial spirit and entrepreneurial skills once they get into universities. Also, Cheung and Chan(2011) reported that syllabuses for entrepreneurship education are not available in schools thus teachers are teaching without any identified syllabus. This is a great challenge because the teacher may end up teaching the wrong content.

**Conclusion and Recommendation**

The study was conducted to find out about the perception of education stakeholders on the introduction of ES at secondary schools in Zanzibar. The study used purposive sampling and stratified sampling to select respondents. Questionnaires, interviews, and focus group discussions were used to collect data. The questions were either fixed choice questions (ages, gender, working experience, and qualifications) or like scale questions with a range of strongly agree to strongly disagree as the options to choose from.

The results revealed that the introduction of entrepreneurship subjects at secondary schools was vital for the development of society. The stakeholders accepted the idea of introducing ES at secondary schools. Their views were highly influenced by the importance of entrepreneurship subjects in Zanzibar and the Mkoani district in particular. The study indicated that the integration was faced with a myriad of challenges such as a shortage of competent teachers and a shortage of funds to implement the program.

**Recommendations of the Findings**

Introducing entrepreneurship subjects at secondary schools is no simple task. It needs clear commitment and preparation to be fruitful. Consequently, government institutions responsible for education and education stakeholders should consider the following recommendations: -

i. Entrepreneurship subject can be introduced as a subject in Zanzibar secondary schools.
ii. The government should provide training for entrepreneurship subject teachers before starting the program.
iii. The entrepreneurship subject should be established in Zanzibar Colleges and Universities to prepare enough entrepreneurship subject teachers
iv. The government should establish a special program for providing funds to entrepreneurship graduates. This fund can help graduates to start their businesses and other investment after graduation.

**References**

Abirami, A. et al (2017) "Significance of Elating the Entrepreneurial Initiatives through Education among MBA Students", in International Journal of Trend in Scientific Research and Development, 1 (5), 777.

Ahmed, Z., (2015) "Failure Associated with Teaching and Learning Of Business Studies in Public Secondary Schools in Yola North L.G.A. Adamawa", in Journal of Business and Management 17(3), 38-44.

Akiri, A., (2013) "Effects of Teachers' Effectiveness on Students' Academic Performance in Public Secondary Schools: Delta State-Nigeria", in Journal of Educational and Social Research, 3 (3), 105-111.

Baba, G., (2013) "The Challenges of Entrepreneurship Development in Nigeria and way forward", in Journal of Business and Organizational Development, 5, (1), 54-64.

Cheung, C. and Chan, R., (2011) "The Introduction of Entrepreneurship Education to School Leavers in a Vocational Institute", in International Journal of Scientific Research in Education, 4, 8-16.

**Gaut**ama, M. and Kumar, S.**,** (2015) **"**Entrepreneurship Education: Concept, Characteristics, and Implications for Teacher Education", in International Journal of Education, 5 (1), 21-35.

Ifedili, C. and Ofoegbu, F., (2011) "Managing Entrepreneurship Education in Nigerian Universities", in European Journal of Educational Studies, 3(1), 46-63.

Karimi, S, et al., (2010) "Entrepreneurship Education in Iranian Higher Education: The Current State and Challenges", in European Journal of Scientific Research, 48 (1), 35-50.

Karimi, S, et al., (2010) "Entrepreneurship Education in Iranian Higher Education: The Current State and Challenges", in European Journal of Scientific Research, 48 (1), 35-50.

Klandt, H., (2004) "Entrepreneurship Education and Research in German-speaking Europe", in Academy of Management Learning and Education, 3(3), 293-301.

Koch, L.T., (2003) “Theory and Practice of Entrepreneurship Education: A German View”, in International Journal of Entrepreneurship Education, 1(4), 633-660.

Li, W., (2007) “Ethnic Entrepreneurship: Studying Chinese and Indian Students in the United States”, in Journal of Developmental Entrepreneurship, 12, 449-466.

Mansheng, Z., and Haixia X., (2012) “A Review of Entrepreneurship Education for College Students in China”, in Administrative Sciences, 2(2), 82-98.

Moses, C and Mosunmola, A., (2014) “Entrepreneurship Curriculum and Pedagogical Challenges in Captivating Students' Interest towards Entrepreneurship Education”, in Research Journal of Economics and Business Study, 4(01), 1-11.

Muhura, C., (2016) “Entrepreneurship Education: The Road to Sustainable Development in Tanzania”, in International Education Studies, 7(10), 40-49.

Mutembei, L., (2012) Challenges Facing Head Teachers in Managing Day Secondary Schools in Imenti South District Meru County Kenya, Master of Education Project, Kenyatta University.

Mwasalwiba, E. at. El., (2012) “Graduate Entrepreneurship in Tanzania: Contextual Enablers and Hindrances”, in European journal of Scientific Research, 76 (3), 386-402.

Neergaard, H. et. al., (2012) “Pedagogical Interventions in Entrepreneurship from Behaviorism to Existential Learning”, in Journal of Enterprising Culture, 17 (103), 103-125.

Nian T. et. al.,(2014) “Students’ Perception on Entrepreneurship Education: The Case of University Malaysia Perlis”, in International Education Studies, 7(10), 40-49.

Niyonkuru. R., (2005) Entrepreneurship Education at Tertiary Institutions in Rwanda: A Situation Analysis, Master Thesis, University of the Western Cape.

Nwekeaku, C., (2013) “Entrepreneurship Education and Challenges to Nigerian Universities”, in Journal of Education and Practice, 4(3), 51-56.

Okwara, O. et. al., (2009) “Towards a Model of Integrated English Language Curriculum for Secondary Schools in Kenya”, in Education Research and Reviews, 4(5), 301-309.

Oseni, E., (2017) “The Relevance of Entrepreneurship Education to the Development of Micro, Small and Medium Enterprises in Nigeria”, in International Journal of Small Business and Entrepreneurship Research 5(5), 1-8.

Shamaki, T., (2015) “Influence of Learning Environment on Students’ Academic Achievement in Mathematics: A Case Study of Some Selected Secondary Schools in Yobe State”, in Nigeria Journal of Education and Practice, 6(34), 40-44.

Shane, S., (2003) a general Theory of Entrepreneurship: The Individual-Opportunity Nexus, Cheltenham: Edward Elgar.

Uchugbu, C. et al., (2016) “Extension Education: Guide for Entrepreneurship Promotion in Rural Areas for Poverty Reduction and Wealth/Employment creation in Nigeria”, in Journal of Advances in Agricultural Science and Technology, 4(1), 07-15.

Yaghoubi, J., (2010) “Study Barriers to Entrepreneurship Promotion in Agriculture Higher Education”, in Procedia Social and Behavioral Sciences, 2, 1901-1905.

Yusuf, H. and Dada, A., (2016) “Impact of Teachers’ Qualification And Experience on The Performance of Students In Colleges of Education In Kaduna State Nigeria”, in The Online Journal of Quality in Higher Education, 3( 2), 52-61.

RESEARCH ARTICLE

# The effect of teachers' attitudes on students' personality and performance

**Muhammad Muzamil[1*], Kashif Iqbal[1], Sumaira Parveen[1], Yasir Imran[1]**

[1]Department of Sociology, University of Sargodha, Pakistan

Corresponding Author: Muhammad Muzamil, muhadmual@yahoo.com
Received: 10 March, 2022, Accepted: 29 April, 2022, Published: 01 May, 2022

**Abstract**

Emphasis on pupil-focused education frequently influences how instructors view students' achievements in subjects with a loss of lifelong vision development. An instructor who has his personal teaching techniques and further his attitude and conduct, offers his university students a healthy intellectual attitude and a clean new worldview by means of leaving memorable lines in them. This is a preparatory look to discover how 'attitudes of instructors affect the personality and performance of students'. On this experience this research has offered instructional perception and versatility in trainer-scholar relationships beyond the confined classroom and lecture rooms. The sample of the studies group incorporates a total of 100 students from diverse departments of the University of Sargodha Sub Campus Bhakkar. The data was collected by online survey. The most crucial findings was that the 'attitudes' of suitable instructors have a high quality effect on college students'' persona 'and performance in life.

**Keywords:** Attitude; Character; Performance; Students; University

## Introduction

"Teacher's behavior" is the word that is used to express the practical expression of the act of teaching, done to facilitate learning by a child or group of children. It therefore encompassesall the verbal and nonverbal approaches displayed by a teacher in an effort to deliver instruction within an academic setting. It has been observed that the teaching approaches and techniques applied by different teachers have different consequences for student performance. Hence, the teacher has to play a vital role in providing an encouraging learning environment for his students to excel academically. Therefore, a major part of quality education falls on the personality and attitude of the teacher. "Education" comes from the marriage of teaching and learning; therefore, learning is half as important as teaching and equals, if not more, the academic performance of the students. Learning attitudes and attitudes vary from student to student, but since the focus of this study is on the supply side of the education equation, therefore, we do not go into the details of the students' approach to learning and treat that subject as one big leave for various projects at this stage. There is an extensive literature on the various aspects of quality education as well as the central role of teaching within it. Emphasis as a means of effective teaching (Vegas & Petro, 2008). Along with the increase in enrollment, there should be more important efforts. Increase in the quality of education. With regard to academic achievement, Fredriks, Blumenfeld, and Paris (2004) argued that it is the study habits of students and their attitude towards them that matter.

Studies are, secondly, the two most important determinants of academic performance. The authors also confirm that a teacher's attitude can play a major role in enhancing students' learning ability and performance. They provide rigorous academic and practical advice. Capacity building of teachers not only helps teachers get the right teaching attitude, but ultimately also affects the learning ability and academic performance of students being taught by teachers (Capra, Barbanelli, Stecca, & Malone, 2006). The skills and characteristics that are important to being a great trainer are also the same elements that define excellent training. A good trainer has eight basic characteristics, which can be: material knowledge; ability to select; essential and trouble-solving abilities; reflection; identifying students and knowing the wishes of college students; using the new location in training; teaching and communication capability. We can group these houses under two headings (Erie, 2008: Five-6). Trainer who thinks seriously and is a self-governing coach. A coach, who feels that the character of information and skills directly affects its university students and the environment that takes responsibility for its own knowledge and skills, builds good relationships with its university students and allows them to work with college students can provide the greenest way (Erie, 2008). The influence of the teacher on this whole system within the personality development and fulfillment of the students is a reality that cannot be omitted. Through the trainer, overwhelming or negative, determines the shape of the mind and how it reflects it in verbal interactions with students (Khanal, 2021), which have a spectacular or terrifying effect on their lives, the

mentality shown to them or those close to them, the public in general, and influences communication, research, and improvements in the ability to innovate (Etownal, 2003).
The behavior and manner of the instructor are at once normal and copied by the college students, which places considerable liability on the teachers. Study Completed in a state-of-the-art day-to-day performance, it definitely shows an impact on students' interaction in teacher-student relations, the method of the teacher in relation to students, and mainly its perception through college students.
The purpose of this research is to study the attitude of teachers Learning/Performance of the students. With the help of appropriate research methods and the following questions were addressed in the statistical analysis: What are the teachers' perspectives? Considered by undergraduate and master students at Sargodha Sub-Campus University Bhakkar? What is the impact of teachers' attitudes on undergraduate and postgraduate students? Sargodha University Sub Campus Bhakkar? What is the general average of graduation and a master student at Sargodha University's sub-campus Bhakkar? What else is important difference of influence of teacher's perspective on student's learning when data is grouped section wise? Hypothesis: "There is no significant difference of effect of the teacher's perspective on student learning when the data is grouped by section."
Results are beneficial to the university - they can handle teachers negatively creates alternative reinforcement strategies to develop the competence of behavioral teachers approach terms and convert them into positive; Guidance consultants - they can join program of activities negative attitude of teachers will be used as the basis for new development programs for dealing with teachers with negative attitudes; Teacher - they can consider themselves attitudes, where negative attitudes can be reinforced and performance can be improved Student; Parents - they can develop awareness of negative attitude of sugarcane teachers So that they can approach such teachers in the best possible way to avoid conflict between parents teachers; Students - they can feel the result of their attitude towards learning to be directed to deal with the situation and its teachers; and researchers can use its results study in the form of their respective literature in their future research. Generally, teaching techniques affect how university students acquire academic knowledge with a pedagogy approach. It creates a classroom environment and a teacher-friendly mindset towards college students (Carroll et al., 2009). In order to achieve splendor, there is a need to create an environment in the form of real coaching, except for a few university students performing, as well as, on the other hand, attempting to locate the actual trainers to achieve a field of knowledge (Hatty, 2012). Furthermore, the study curve rises even as a scholar, an instructor, or an instructor thinks more like a student. In a problem presented by Wenglinsky (2000), this paves the way for a university to take steps to deepen a better concept of students' forward study room fashion, encouraging them to result in the progressive and divergent ideas that come with their unique record and skill set. Some teachers' behavior styles sincerely impress university students' motivational diplomas and, consequently, their famous universal performance. As an example, a trainer demonstrates coverage of an open door, answers questions from college students' sympathy to the students of the university college, and joins and strongly appreciates the students. All the paintings depict the presence of the same horrific teacher mentality.
University students' coach shares his record as a coach and particularly enjoys his positive attitude. In a scholarly effort, Gasser (2013) sheds light on the terrifying effects on students' general performance of an instructor who makes fun of or seeks out the failure of university students. This search will become more and more widespread at the same time as one visible through the lens of coaches' opinions on wrong decision-makers or about unusual or underperforming university college students, which means an overrated student need not be excessively a performer or an underperformer must necessarily be an underperformer (Uraine, 2015). Furthermore, dismissing discriminatory behaviour or favoritism within a trainer cannot be wrong in the case of a self-proclaimed admirable achiever who constantly overdoes it when it comes to low-ranking, underrepresented students (Bates & Nettelbeck, 2001; Begeni et al., 2008; Feinberg & Shapiro, 2003, 2009).

**Research Method**

The procedure adopted to conduct the study had been explained in this chapter the chapter had description of method and procedure of the study under following steps;

**Population of the study**

The population for this research was basic institution situated in the Bhakkar City with focus on University of Sargodha Bhakkar Campus students, 100 students were randomly selected out of 2000 students’ data about the effect of teacher’s attitudes on student’s personality and performance.

**Selection of the sample**

To get the sample of the study university in Bhakkar District (University of Sargodha Sub Campus Bhakkar) was selected. After those 100 students from university was selected. So total sample of the study was consisted of 100 students from university and were selected randomly. Only students were included in the sample.

**Development of research Tool**

Research study was descriptive in its nature so, the instrument for data collection was a questionnaire.

Researcher reviewed in depth literature regarding the effect of teachers' attitudes on students' personality and performance and after that research instrument was prepared. Present questionnaire was consisted of 32 items to get the responses from the participants. It was developed by using 5 points Liker scale from SA (Strongly Agree) to SDA (Strongly Disagree) and each scored on the basis of the weight age of these levels is as follows:
Strongly Agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2, Strongly Disagree (SDA) = 1

**Validity of the Tool**

The research tool was developed after the comprehensive study of related literature. The first draft of questionnaire was consisted of 51 items, with the guidance from experts of the department of education it was carefully scrutinized into 47 items, thus the final draft was prepared. The researcher refined the statements in the light of the feedback of the experts, and finalized the tool. It was designed in a way that was easily understood by the participants.

**Procedure of Data Collection**

Online Survey Questionnaire was developed for data collection, which were given to the students to know their opinions. Data was collected only through online survey questionnaires, not any other sources were used for it. I visited the selected University of Sargodha Sub Campus Bhakkar and we gave the Online Survey Questionnaires Links to the students of the selected university. They filled those questionnaires and I got back our data at the spot.

**Result and Discussion**

***Table 01: Demographic variable of respondents***

| Serial | Variable | Category | Frequency | Valid Percent |
|---|---|---|---|---|
| **1** | Gender | Male | 73 | 73.0 |
| | | Female | 27 | 27.0 |
| **2** | Age | 20 To 25 | 82 | 82.0 |
| | | 15 To 20 | 7 | 7.0 |
| | | 25 To 30 | 11 | 11.0 |
| **3** | Qualification | Graduation | 56 | 56.0 |
| | | Master | 40 | 40.0 |
| | | M.Phil | 2 | 2.0 |
| | | PhD | 2 | 2.0 |
| **4** | Marital Status | Unmarried | 7 | 7.0 |
| | | Married | 93 | 93.0 |

Table 01 illustrates that out of the 2000 students in basic institutions considered majority (100) were males representing 73.0% while the remaining 27.0% were females. The variable age of informal caregivers reveals that majority (82) of the students in basic considered were 20 To 25 years representing 82%, 7.0% were 15 To 20 years and 11.0% were 25 To 30 years. According to the caregivers' varying levels of education, 56.0 percent students were graduation, 40.0% had a master education, 2.0% had an M.Phil education, and 2.0 percent had a PHD education. The variable result for caregivers' marital status indicates that 93.0 percent were married, 7.0 percent were unmarried or single. Equal student number was sampled from each level.

***Table 02: Model Summary***

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .756[a] | .571 | .566 | 6.24801 |

a. Predictors: (Constant), TI

**Model Summary**

Correlation is the shown by R-value in the table 02. The R square value is the indicate that a unit/variable change of one independent variable would affect the same unit. According to the R square value 0.005 which indicate when and dependent variable change by 0.005. Thus a variance of .068 is explained by family structure is explained by independent variable Teacher's attitude; the modified R square indicates the population implication of the sample finding. The major difference between R square and adjust R square .571 adjusted .566. The sample results have a weak effect the larger difference weak effect on population.

*Table 03:* **ANOVA**

**ANOVA**[s]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 5088.306 | 1 | 5088.306 | 130.343 | .000[b] |
| | Residual | 3825.694 | 98 | 39.038 | | |
| | Total | 8914.000 | 99 | | | |

a. Dependent Variable: SD

b. Predictors: (Constant), TI

**Predictor variable or independent Variable**

An ANOVA table 03 is used to determine whether or not the model df the data well. When F value accede the significant value. There should less than 0.05 the model is considered to be well fitted.

***Table 04: Coefficients of the regression***

**Coefficients**[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.951 | 1.980 | | 2.500 | .014 |
| | TI | .829 | .073 | .756 | 11.417 | .000 |

a. Dependent Variable: SD

The above table 04 is used to calculate the influence of independent factor on the dependent variable (Student's personality& performance). The independent variable (Teacher's attitude) shows positive and significant. Relation with the dependent variable which is independent variable.

**Discussion**

The study findings show that while teachers' positive attitudes have positive effects on students' performance and personality developments, negative attitudes have a negative effect on both the performance levels and personality development of students. This in turn clearly shows that especially teachers surpass the boundaries of the classroom in individuals' educational lives and its evident how effective they can be during the whole life of the student. Teachers are the second-highest determining factor in the development of individuals, after the parents. It must not be forgotten that children take on role models while learning and that is why perhaps the behavior and attitude of teachers, which they spend the most time with apart from their parents, has an effect on their personality development and thus whether they will be successful or not. Teachers being good role models should precede classes because their views on life and behavior guide the student. In short, when education understanding in mentioned, education which gives the child confidence, questions him/her and gives him/her responsibility should come to mind.

**Conclusion**

This study estimated the impact of an educator's conduct in class, on the scholastic performance of the children at basic schools, Volta region of Ghana. In this examination, instructor's teaching conduct in a study hall setting was analyzed opposite eight classified arrangements of conduct, with every classification subdividing into various enlightening markers. Simultaneously, understudies current class score was recorded as a measure of their scholarly performance. The sixty spellbinding pointers of educator's conduct were recorded through Likert scale based on the reactions from the children. From the factual activities in the investigation, novel factors inside the instructors' conduct have been recognized and depicted; that have a clear significance for the scholarly performance of children. Under the suggestion of the examination's point, this exploration has the goal of corresponding sixty distinct proportions of educator's conduct, as seen by children in their study hall, against their very own scholastic performance, which has been estimated by the children's' self-pronounced current class scores. The discoveries from this study empower academicians, personnel, and senior administration of the varsity to energize those teaching practices that relate firmly with high scholastic accomplishments, while, simultaneously, dishearten or correct those practices that are related with low scholarly performance. Examination of information gathered under this investigation uncovers that two components of the independent factors, that is, clarity and speech have a profoundly significant positive association with scholastic performance, the dependent variable. While the instructors' conduct components of interaction, pacing, disclosure, and rapport has a significant association with class score.

**Recommendations**

In light of the discoveries from this research, the accompanying suggestions are made for academicians all in all and basic schools in educational specifically:

- Orientation for staff on the seven components of teacher conducts: The study stresses the significant effect of educator conduct on scholarly performance of the children. Among these components, more weight ought to be given to instructor' clarity, as these this has appeared to create a fundamentally positive increment in the class scores of the children. In this manner, every teacher may be undertaken through a brief orientation on the parts of instructor's conduct, with the goal that they may put a cognizant effort of presenting and improving the ideal conduct in their classroom.
- Female saw more clarity than males: Gender bifurcated responds uncovered that female saw altogether more clarity from the educators than male children. This may turn into a concerning matter, as looking back, it demonstrates that educators can't show clarity as viably to males children, as to female children. Sex mainstreaming in instruction and the utilization of sexually unbiased training practices ought to be accentuated for disposing of this distinction dependent on child's sex.

**Limitation of the study**

There were limited resources, time and money. We had to make some limitations because of limited money, time and resources. Because of these limited resources, we had to face many limitations as well. We could not select all the educational institutions that's why this study was delimited only one university of District Bhakkar in University of Sargodha Sub Campus Bhakkar

**Reference**

Bates, C., & Nettelbeck, T. (2001). Primary school teachers' judgements of reading achievement. *Educational Psychology*, 21(2), 177-187.

Begeni, P., & Csataryova, M. (2008). Catalog of Naked-Eye Observations of Sunspot from 1988 to 2007.

Capra, C, Allison, J., Amako, K., Apostolakis, J. E. A., Araujo, H. A. A. H., Dubois, P. A., Asai, M. A. A. M., ... & Yoshida, H. A. Y. H. (2006). Geant4 developments and applications. IEEE Transactions on nuclear science, 53(1), 270-278.

Feinberg, A. B., & Shapiro, E. S. (2009). Teacher accuracy: An examination of teacher-based judgments of students' reading with differing achievement levels. *The Journal of Educational Research*, 102(6), 453-462.

Gecer, A. (2013). Lecturer-student communication in blended learning environments. *Educational Sciences: Theory and Practice*, 13(1), 362-367

Hattie, J. (2012). Visible learning for teachers: Maximizing impact on learning. London: Routledge

Khanal, A. (2021). Sustainable Living in Schools: A Study of Vajra Academy, Lalitpur. *Current World Environment*, 16(2), 472-476.

Mulalic, A., Shah, P. M., & Ahmad, F. (2009). Perceptual learning styles of ESL students. *European Journal of Social Sciences*, 7(3), 101-113

Murray, H. G. (1983). Low-inference classroom teaching behaviors and student ratings of college teaching effectiveness. *Journal of educational psychology*, 75(1), 138

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307-332

Riahipour, P., Ketabi, S., & Dabbaghi, A. (2014). Iranian EFL Teachers' Perceptions of Traditional, Innovative and. *The Iranian EFL Journal*, 18(2), 268.

Ulug, M., Ozden, M. S., & Eryilmaz, A. (2011). The effects of teachers' attitudes on students' personality and performance. *Procedia-Social and Behavioral Sciences*, 30, 738-742

Urhahne, D. (2015). Teacher behavior as a mediator of the relationship between teacher judgment and students' motivation and emotion. *Teaching and Teacher Education*, 45, 73-82

Wenglinsky, H. (2000). How teaching matters: Bringing the classroom back into discussions of teacher quality.

RESEARCH ARTICLE

# Investigating the vowel mispronunciation of undergraduate students of the Faculty of Management and Commerce, South Eastern University of Sri Lanka

**Rifka Nusrath.GM[1*], Abdul Halik.AF**

[1]DELT, South Eastern University of Sri Lanka
[2]T/Mu/Al Hilal Central College, New Jetty Road, Mutur, Trincomalee, Sri Lanka

Corresponding Author: Rifka Nusrath.GM, rifkanusrath@gmail.com
Received: 27 April, 2022, Accepted: 01 June, 2022, Published: 05 June, 2022

**Abstract**
This study was conducted to investigate the vowel mispronunciation of undergraduate students of the Faculty of Management and Commerce, South Eastern University of Sri Lanka. The aim of this study was to identify the problems and difficulties faced by the students in pronouncing vowel sounds in their loud reading and speaking, and the factors which affects students' pronunciation development. It has been observed that learners encounter number of pronunciation problems and difficulties in speaking and loud reading. In this study, fifty 2nd year Students of the Faculty of Management and Commerce, South Eastern University of Sri Lanka were randomly selected as sample population for investigation. The primary data were collected using qualitative and quantitative methods, and the research instruments used in this study were oral pronunciation test, questionnaire and audio tape recording. The instruments enabled the researcher to identify vowel mispronunciation with their opinions about pronunciation. According to the data analysis, the findings show that the learners encountered difficulties in pronouncing vowel sounds such as /iː/ as /i/, /uː/ as /u/ and /əʊ/ as /ɔ/. Moreover, the opinion survey revealed that the learners show lack of interest in learning pronunciation and many factors that affect their pronunciation development. These pronunciation problems and difficulties can be overcome and improved through implementing pronunciation as a separate component like grammar and writing in English as a Second Language curriculum of Department of English Language Teaching of South Eastern University of Sri Lanka.

**Key words:** English as a Second Language; mispronunciation; South Eastern University of Sri Lanka; undergraduate

**Introduction**

Pronunciation of a language seems to be a very significant part to expose a language and convey ideas in oral communication clearly. But nonnative speakers of English who learn English as a second language (L2) or foreign language (FL) find a lot of difficulties in acquiring correct pronunciation. In this sense, Garcia (2007) says that English pronunciation is one of the most difficult skills to acquire and learners should spend lots of time improving their pronunciation. It is the problem not only in Sri Lanka but also in many Asian countries since there are fewer similarities between their first language (L1) and English Language.
However, in every country, English is being learned as L1, L2, or FL around the world. Therefore, more prominence has to be given to learning English and developing learners' speaking ability with pronunciation, because it is a global language. In Sri Lanka, English is being learned as a second language and in most educational institutions. English is taught as either a main or optional subject. Pronunciation challenges are a common problem among most ESL learners in Sri Lanka. As a result, the pronunciation was focused on investigating the problems and difficulties faced by ESL learners of Faculty of Management and Commerce at South Eastern University of Sri Lanka. Not only at the Faculty of Management and Commerce but also at other educational institutions such as private colleges, and schools, the learners have been reported to encounter numerous difficulties and problems in both speaking and pronunciation, since the very little emphasis is given for listening and speaking skills in the academic contexts. However, pronunciation plays vital role in communication that shapes the meaning of language in oral communication. Ruzkina et al (2016) point out that proper pronunciation; stress and intonation directly affect the appropriate communication in conversation. Always stress and intonation shape the meaning of the utterance produced by the speakers in oral communication.
Similarly, Wildan (2016) says "In order to be an understandable, people do have to deliver their speech with proper pronunciation. For instance, the word /liːv/ contains the sounds [l], [iː] and [v]. When the sound [iː] is pronounced [ɪ] that finally results in /lɪv/, the meaning is changed because /lɪv/ will be interpreted as the word /lɪv/. Then, the hearers will misunderstand the speech because the speaker is unintentionally misleading the speech by performing mispronunciation"

Therefore, producing appropriate sound is significant in oral communication. But learning pronunciation is quite difficult for Sri Lankan ESL learners. Ruzkina et al (2016) further state in their work that there are many challenges and barriers that hinder them to speak English with good pronunciation.

**Problem Statement**

ESL learners in Sri Lanka encounter a number of pronunciation difficulties in loud reading and speaking. It has been a crucial problem among primary, secondary and higher education students in Sri Lanka. Similarly, it was observed among the undergraduate students of the Faculty of Management and Commerce (FMC), South Eastern University of Sri Lanka (SEUSL) during lecture's hours that most of the students mispronounce segmental and suprasegmental sounds. However, in this study, only vowel mispronunciation of the undergraduate students were focused.
It was observed in lectures that the following sounds were mispronounced; the vowel [ɜː], as in the words '/bɜːd/', '/fɜːn/' and '/pɜːs/' is a mid-central vowel which was often mispronounced; vowel diphthong /əʊ/ was often mispronounced as short vowel /ɔ/, for instance, /əˈgəʊ/ as /əˈgɔ/, and /ʃəʊs/ as /sɔw/; the diphthong /eɪ/ was often pronounced as pure vowel /e/; short vowel /e/ was pronounced by most of the students as the short vowels/ə/ and long vowels /iː/ and /uː/was pronounced as short vowels /i/ and /u/. Therefore, this study was conducted to investigate the vowel mispronunciation of the undergraduate students and the factors which contribute to the vowel mispronunciation.

**Objectives of the research**
1.To identify the vowel pronunciation errors made by the 2nd year Students of the FMC, SEUSL.
2.To investigate the factors that cause pronunciation difficulties among the 2nd year students of the FMC, SEUSL.
3.To suggest suitable recommendations and remedies overcome the difficulties in pronouncing vowel sounds in loud reading and speaking.

**Research Questions**

1.Do the learners mispronounce the vowel sounds?
2.What does cause the difficulties in pronunciation?
3.What factors affect learners' pronunciation?

**Limitations of the Research**

The current research is concerned with only pronunciation problems since speaking is a vast area for investigation. This study focused only on the vowel mispronunciation. Many students at FMC, SEUSL often complained that they find difficulties in pronouncing vowel sounds in their speaking and loud reading. Therefore, this study was limited to the vowel mispronunciation, and focused on investigating why they face pronunciation problems in speaking and loud reading. Further, there are six faculties around SEUSL. Thus, Faculty of Management and Commerce was selected for carrying out this research, where over 1000 students continue their degree in English Medium; such as B. Sc in Management Information Technology (MIT), Bachelor of Commerce (B.Com) and Bachelor of Business Administration (BBA). According to the ESL curriculum of Department of English Language Teaching (DELT), SEUSL, the English Language is an in-separate course. Out of 400 students in second year Commerce degree holders, 50 ESL learners had been randomly selected for the investigation of pronunciation problems and difficulties from the degree of Bachelor of Commerce.

**Literature Review**

**English Vowels**

Mispronouncing vowel sounds is another problem observed among the learners initially in lecture's hours. This has been a common problem among ESL and EFL learners. Many studies have been carried out to investigate the vowel mispronunciation. Ambalegin and Arianto (2018) investigated the mispronunciation of English consonant and vowel sounds of the seventh president of the Republic of Indonesia. In their study, they state that English mispronunciation was found in the seventh president of the Republic of Indonesia's official English speeches. These mispronunciations were caused by some factors based on the respondent's background. They further say that the consonant sounds /θ/, /ð/, /v/, /z/, /ʃ/ were pronounced incorrectly, the vowel sounds /ə/, /ɒ/, /ɛ/, /i/, /e/, /ɪ/ were pronounced inconsistently, and the diphthongs sounds such as /ɪə/, /eɪ/, /əʊ/ and /aʊ/ were incorrectly pronounced. However, in lecture's hours, it was observed that the vowel sounds /e/, /əʊ/, and /eɪ/was mispronounced by the students of FMC.
Similarly, another research was conducted by Habibi (2016) investigating the segmental pronunciation problems encountered by advanced level students. In his study, he says that there were three vowel pronunciation problems encountered by the research subjects. First, they substituted some vowel sounds with other consonants. Second, they inserted a consonant sound between two consonant sounds. Third, they diphthongized a pure vowel sound. As above said, substituting the vowel sounds was one of the problems that were observed among the students in lecture's hours. They substituted /ə/ for /e/ and /ɔ/ for /əʊ/.
Further, Nsikan and Kusua (2017) say that English vowels are speech sounds that are less problematic to learners of the language as a second language. However, some vowel sounds constitute a serious problem to ESL students perhaps, as a result of the learner's linguistic and ethnic background whereas the problem in mispronouncing vowel sounds had been observed among most of the FMC students in SEUSL due to insufficient linguistic

knowledge and social background. Therefore, the linguistic background of the students is likely to be one of the factors that influence learners' mispronunciation mostly.

A study had been conducted by investigating the problems in using English consonants. In this study, Yuniarti (2009) says that a pronunciation problem occurs when the sound is not really difficult as such, but the learners are misled by the spelling. For instance, some words like '/ʌp/' /Λ/, '/wʊl/' /ʊ/, '/θriː/' /iː/, '/blæk/' /æ/, '/skaɪ/' /ai/, and '/haʊ/' /aʊ/ are not pronounced as they are written, so learning pronunciation is not easy for students. Similarly, many FMC students mispronounce certain sounds although they were good at writing words without making any spelling errors.

**Factors Influencing Pronunciation**

L1 interference plays a vital role in affecting learners' pronunciation. Due to dissimilar pronunciations between L1 and L2, ESL/EFL learners find difficulties in acquiring correct pronunciation. Likewise, there is a number of differences between Tamil and English in all aspects including pronunciation. Some sounds do not exist in Tamil which exists in English. Several studies point out that mother tongue interference highly influences learners' pronunciation. In this sense, Ruzkina et al (2016) in their research state that there are several factors influencing the pronunciation of second language learners. They further say that through the observations in our study, it has been found that the learner's L1 (Tamil) influences the pronunciation of the target language (English) and is a remarkable factor in accounting for foreign accents. Accordingly, English and Tamil languages consist of various distinctions in phonological and phonetic features.

Learners' age is an important factor in the acquisition of pronunciation. Adult learners encounter problems in acquiring correct pronunciation. Several studies investigated the learners' age, in which it is reported that adult ESL/EFL learners find difficulties in pronunciation. Senel (2006) reports that age plays a vital role in learning or improving pronunciation abilities. He further says that if learners can pronounce a second language with a native-like accent, they must have probably started to learn it during their childhood since they started their second language learning in a target language-speaking environment.

Another important factor commonly observed among the learners was lack of pronunciation practice. Ruzkina et al (2016) say that loud reading is the greatest way to practice pronunciation because this is an opportunity for them to correct their pronunciation errors. However, Ismail and Ilmudeen (2011) argue that most of the students do not practice accurate pronunciation because they write the pronunciation of English words in Tamil. Students do not read the correct pronunciation of words, instead, they read Tamil pronunciation without referring to English pronunciation. As discussed above, loud reading practice can improve learners' pronunciation whereas lack of pronunciation practice is one of the causes of pronunciation difficulties for adult learners.

**Other Relevant Studies**

Ruzkina et al (2016) investigated that pronunciation problems among Tamil-speaking undergraduates of South Eastern University of Sri Lanka. In this study, adult university students were taken as samples. 150 undergraduate students and instructors were taken as a sampling population. A qualitative method was used in this study, and the primary data were collected by using observation, interviews, and questionnaires that contained open-ended questions. Some errors were identified in consonant and vowel sounds, initial consonant clusters, and complex words.

Another research was conducted related to the pronunciation problems and difficulties in Ampara District by Ismail and Ilmudeen (2011), in which they investigated that the pronunciation difficulties made by Grade 10 & 11 students from two selected schools of Akkaraipattu Zonal Educational Division. In this study, 100 students were selected as a sampling population similar to the above study. The data were collected using a questionnaire containing open-ended questions. In this study too, an open-ended questionnaire was used for data collection.

Problems and difficulties were identified in consonant and vowel sounds as this research was limited with segmental sounds. According to the data analysis, 85% of students found difficulties due to mother tongue interference. As already discussed in the previous review, interference of Tamil Language highly influenced in the acquisition of pronunciation. They mentioned some causes for pronunciation difficulties such as mother tongue interference, the inexperience of phonology, lack of knowledge in English phonetic script, inappropriate teacher's guidance, and lack of practice.

A study was conducted by Afsana and Hoque (2016) with the aim of investigating some problematic English vowel and consonant sounds the tertiary students often make. 35 tertiary level students from various districts in Bangladesh were taken as a sampling population for this study. In this study, some problems with consonant and vowel sounds, minimal pair, elision, stress, and intonation were identified. These are common problems for most ESL/EFL learners.

According to the data analysis, it was revealed that 70% of teachers agreed that pronunciation problems could be improved by learners' effort. Some recommendations were given to overcome the problems; such as the use of modern learning aids and drill practice and to improve stress and intonation. Drill practice can improve learners' pronunciation. This method was used in the audio-lingual teaching method, which gave more emphasis on listening and pronunciation.

**Methodology**

This part discusses the methods used in this study for collecting primary data. It includes a sample of the study, research design, research instruments, and data collection.

**Sample of the study**

The sample of this study consists of 50 ESL learners from B.com undergraduates who learn English as a Second Language at FMC through DELT. The sample was randomly selected out of 400 B.com students.

**Research design**

This study was designed to investigate pronunciation problems faced by the ESL learners of FMC. This study was a survey research, and qualitative and quantitative methods were used for data collection. They were used to identify the pronunciation problems and difficulties encountered by ESL learners and to collect their opinions concerning pronunciation.

**Research instruments**

Some research instruments were used to collect primary data in this study: English pronunciation test (the test was on elements of pronunciation), a questionnaire which was used to collect data about the background information of the participants and opinions with regard to pronunciation and audiotape recording (by a recording of the performance of the oral pronunciation test). Then, their recordings were listened to identify their errors.

**Data collection**

In this study, primary data of this research were directly collected by oral pronunciation test and questionnaire, and the secondary data of this research were collected from research papers, journals, theses, articles, books, and reliable websites. Some steps were taken to collect the data. The first step was conducting an oral pronunciation test, while the second step was audiotape recording which was used to record the performance of oral pronunciation test and their pronunciation errors were noted. The last step was giving a questionnaire to collect data on information of the participants and opinions about pronunciation.

**Results and Discussion**

**Analysis of Oral Pronunciation Test**

The oral pronunciation test was the first method of collecting data. The test consists of some set of words and short sentences, which were taken based on vowel sounds. In this test, all the participants (50) were involved, and they actively responded to the test. They were asked to pronounce the words and sentences aloud, and their errors were recorded using an audio tape recorder. Later, the responses were analyzed one by one.

According to the responses with regard to vowels, 42 of the participants (84%) incorrectly pronounced the words given whereas 8 of the participants (16%) correctly pronounced all the 16 words given. The analysis shows that out of 42 participants who incorrectly pronounced, 14 of the participants (28%) incorrectly pronounced all the 16 words given. 8 of the participants (16%) mispronounced between 1 – 5 words. 6 of the participants (12%) mispronounced 6 – 10 words. Moreover, 28 of the participants (56%) mispronounced between 11 – 16 words. These are the some of the words based on vowel sounds given in the test in which most of the participants faced difficulties to pronounce them: /gəʊ/, /ˈəʊvər/, /ˈəʊpən/, /ˈɔːlsəʊ/, /ˈsɛkʃən/, /fəˈgɛt/, /bleɪm/, /geɪt/, /deɪt/, /leɪk/, /ˈɪnkriːs/ and /rɪˈpiːt/. They are: /iː/ as /i/, / eɪ / as / æ /, /e/ as /ə/ and /əʊ/ as /ɔ/. The following graph (4.1) shows participants' responses to the words given with regard to vowels.

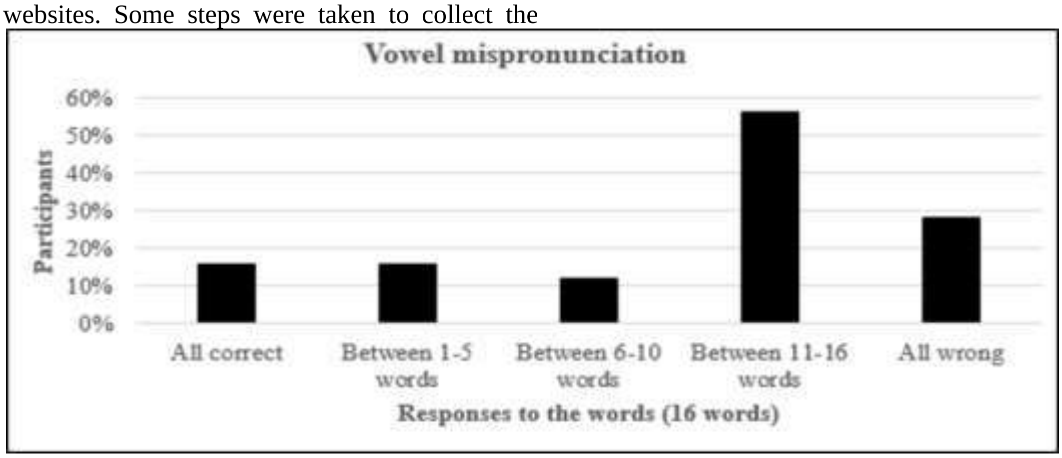



Fig 4.1 (Vowel mispronunciation)

According to the findings of vowel mispronunciation, certain problems were found in pronouncing vowel sounds among the participants. They mispronounced some vowel sounds; /iː/ as /i/, /uː/ as /u/, /e/ as /ə/, /əʊ/ as /ɔ/ and /eɪ/ as /ae/. In a similar study reviewed in chapter 2, Ambalegin & Arianto (2018), (2.4) pointed out some vowel mispronunciation such as short vowels /ə/, /ɒ/, /ɛ/, /i/, /e/, /ɪ/ and diphthongs /ɪə/, /eɪ/, /əʊ/ and /aʊ/. However, in the current study, the participants incorrectly pronounced certain vowel sounds. Due to time limitation, all such their errors could not be focused during the investigation.

Nawaf (2017), Afsana and Hoque (2016), (2.9) in their study reviewed in chapter 2, the consonant and vowel mispronunciation were investigated. According to the researchers' suggestion and opinion, these problems can be overcome and their pronunciation can be improved by giving extensive listening and speaking practice with sufficient phonological and phonetics components to the learners. The problem can be overcome when the learners have sufficient knowledge of consonant and vowel sounds, and they practice loud reading.

**Analysis of Questionnaire**

The questionnaire was the second data collection instrument, which consists of two parts: background information and close-ended questions. The closed-ended questions were given to collect the opinions of the participants concerning pronunciation. The questionnaire was distributed among all the participants with clear instruction. Part two consists of 7 questions including Multiple Choice Questions (MCQs) and yes-no questions.

**Focus on elements of English**

The first question was regarding the elements of English. A question was asked about the elements of English the participants like the most to study. All the participants responded to the question. According to the opinions given, 26 of the participants (52%) like grammar the most, and 10 of the participants (20%) like reading the most. 8 of the participants (16%) like writing the most. However, just 6 of the participants (12%) like pronunciation the most. The following graph (4.2) shows participants' preference for elements of English.

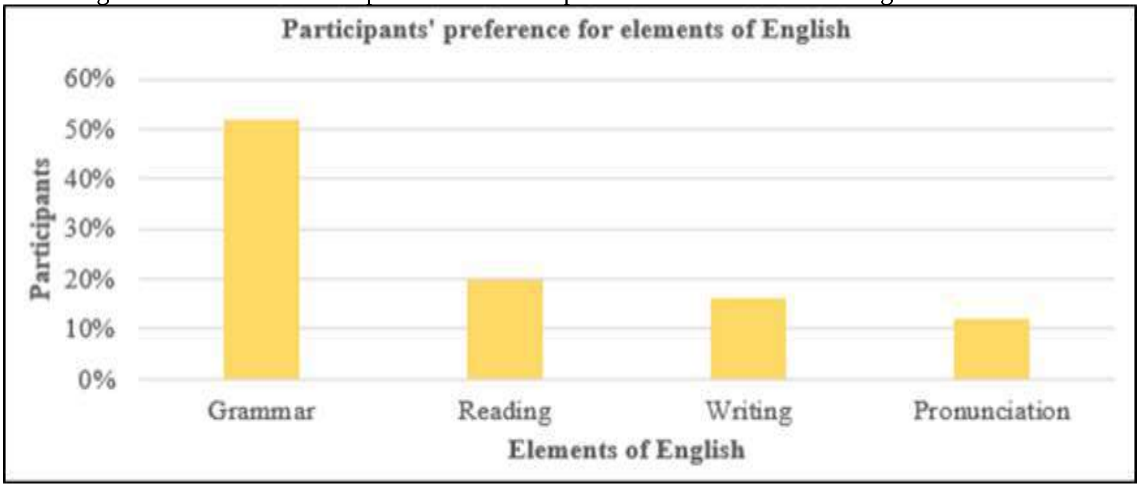



**Fig 4.2** (Participants' preference for elements of English)

This findings can be concluded that students do not prefer to learn pronunciation and they do not give importance although they make a number of pronunciation errors in their loud reading and speaking. Pronunciation errors are not considered in ESL classroom from schools.

As a result, students do not care about pronunciation errors like other reading, writing and grammatical errors. Therefore, most of the students prefer other components rather than pronunciation.

**Focus on factors that affect learners' pronunciation development**

This question concentrates on the factors which affect learners' pronunciation development. The question was asked about the factors. Some factors were given to select a factor that affects their pronunciation development. According to their opinions, 11 of the participants (22%) selected 'mother tongue interference'. 13 of the participants (26%) selected 'lack of practice'. 15 of the participants (30%) selected 'insufficient phonetic rules. Moreover, 11 of the participants (22%) selected 'adult age'. The following graph (4.3) shows the factors affecting learners' pronunciation development.

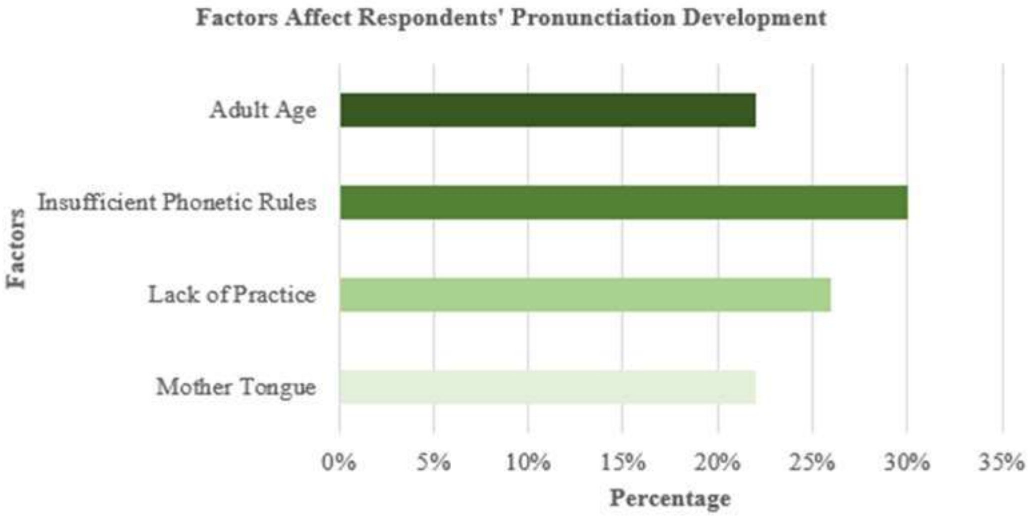



**Fig 4.3** (Factors affecting learners' pronunciation)

As discussing the factors influencing learners' effective pronunciation, The findings of the opinions with regard to factors that affect participants' pronunciation show that the highest number of the participants opted both insufficient phonetic and phonological knowledge, and lack of practice which were the major factors for them to find difficulties in pronunciation, because pronunciation was not taught separately at schools. As a result, they did not have any previous knowledge about phonetics and phonology. The findings of several previous studies too show that insufficient phonetic and phonological knowledge is one of the factors which affect ESL/EFL learners' pronunciation.

As reviewed in chapter 2, Ismail and Ilmudeen (2011), (2.8.4) carried out a study regarding the pronunciation problems of grade 10 & 11 students in Ampara District, in which they point out that students have lack of knowledge in phonetic. They possess lack of knowledge in reading the phonetic scripts in the dictionary. Further, lack of practice was another factor for finding difficulties in pronunciation. As mentioned in chapter 2, in a previous study, Ruzkina et al (2016), (2.8.5) say that loud reading is a great way to practice pronunciation because this is an opportunity for them to correct their mispronunciation. As far as adult age is concerned, almost all the ESL learners of NAITA are adult learners who are above 18. Most of the participants encountered problems and difficulties in pronunciation. Therefore, acquiring natural pronunciation seems to be difficult for adult English learners. According to the theories and researches, it is revealed that natural pronunciation of second/foreign language can be easily acquired before the age of 13 (before puberty). As mentioned in chapter 2, Senel (2006), (2.8.2) says that if learners can pronounce a second language with a native-like accent, they must have probably started to learn it during their childhood since they started their second language learning in target language speaking environment

The rest of the questions in the questionnaire were yes-no questions. The third question focuses on teaching pronunciation as a separate component in ESL classes. The participants were asked whether their teachers at school taught pronunciation as a separate part of the lesson. According to the responses to the question, 42 of the participants (84%) responded 'no' whereas 8 of the participants (16%) responded 'yes, because at government schools in Sri Lanka, pronunciation is not taught as a separate component in ESL classes. Further, in the school ESL curriculum, pronunciation is not a separate component to be taught like grammar, reading and writing. Moreover, at schools, time is not allocated for pronunciation practice.

Similarly, the fourth question was with regard to correcting pronunciation errors. The participants were asked whether their teachers corrected pronunciation errors in their loud reading and speaking activities. According to the responses to the question, 38 of the participants (76%) responded 'no' whereas 12 of the participants (24%) responded 'yes, because in most of the ESL classes, learners' pronunciation errors are not corrected by teachers. The ESL teachers at most of the schools in the Eastern Province may not have sufficient knowledge of pronunciation rules since they conduct English classes in mother tongue.

Further, the sixth question focuses on learners' age for language acquisition, since the participants of this study were adults. The participants were asked whether their adult age makes them find difficulties in developing pronunciation. According to the responses given, 37 of the participants (74%) responded 'yes' whereas 13 of the participants (26%) responded 'no'. The seventh question concentrates on motivation for pronunciation development, in which the participants were asked whether they were positively motivated by their teachers to give more focus on improving pronunciation. According to the responses given, 45 of the participants (90%) responded 'no' whereas 5 of the participants (10%) responded 'yes, because in most of the ESL classes, especially at schools, the participants were not motivated by teachers to give more focus in improving pronunciation. Since teachers at government schools in the Eastern Province teach English using grammar translation method (GTM), they give less emphasis for listening and speaking in the classroom. So the learners are not motivated to learn pronunciation.

**Conclusions**

This study was conducted with the aim of investigating vowel mispronunciation and the factors which contribute to the pronunciation errors among the undergraduate students of FMC , SEUSL. According to the data presentation and results of the oral pronunciation test, the findings show that 39 participants found difficulties in pronouncing in pronouncing vowel sounds. They incorrectly pronounced certain sounds such as /iː/, /e/, /eɪ/ and /əʊ/. Further, according to the participants opinions, most of the students do not prefer to learn pronunciation. Regarding the factors affecting learners' pronunciation, insufficient phonetic rule is a significant factor which affect their pronunciation development. Moreover, pronunciation was not taught as separate component at schools and the participants were not motivated to learn pronunciation and correct pronunciation errors. Finally, learners' adult age plays a significant role in affecting their pronunciation development.

**Recommendations**

Previous studies have pointed out that various recommendations and remedies to overcome pronunciation difficulties and to improve their pronunciation skill. Similarly, according to the results of the findings of this study, 84% of the participants said that pronunciation was not taught as a separate part of the lesson at schools. Therefore, it is suggested to include pronunciation or phonology as a separate component in English lessons like grammar, reading, and writing among FMC Students at SEUSL. The ESL curriculum designers can implement pronunciation as a separate component in the ESL curriculum of FMC students and other educational institutions in Sri Lanka.

When grammar is taught in ESL class, the rules of grammar are presented so that learners can build up their own mental system of grammar in the target language. Similarly, if the pronunciation is taught in ESL classes, the rules of pronunciation can be presented so that it will facilitate learners to build up their own mental system of pronunciation. By implementing pronunciation as a separate part of English subject, the followings can be included in the curriculum and implemented in ESL classrooms:

Pronunciation rules can be taught to improve pronunciation.

Various pronunciation practices with drilling can be used.

More emphasis can be given to listening practices and pronunciation games in ESL classes.

Pronunciation errors can be corrected as correcting other components like writing and other activities.

**Acknowledgement:** We shower our massive thanks to the students of Faculty of Management and commerce at South Eastern University of Sri Lanka for giving their ultimate support.

**Funding:** The research is carried out with our own cost.

**References**

Afsana, B., & Hoque, A. M. (2016). English Pronunciation Problems of the Tertiary Level Students in Bangladesh: A Case Study. Journal of Arts, Science & Commerce, 6(4), 50.

Ambalegin., & Tomi, A. (2018). English Vowels and Consonants Mispronunciation of the Seventh President of Republic of Indonesia in His Official English Speeches and Its Influencing Factors Language Literacy. Journal of Linguistics, Literature and Language Teaching, 2(2), 111-125. https://10.30743/ll.v2i2.678

García, A. C. (2007). The Role of Phonetic Training in L2 Speech Learning [Paper presentation]. Proceedings of the Phonetics Teaching and Learning Conference, University College, London.

Ismail, M. B. M., & Ilmudeen. (10th & 11th December, 2011). Pronunciation difficulties confronted in Akkaraipattu Zonal Educational Division: A special reference on two selected schools of Grade 10 &11 students (Paper presentation). National Conference on Regional Development, Faculty of Arts & Culture, South Eastern University of Sri Lanka.

Nawaf Al-Zayed, N. (2017). Non-Native Pronunciation of English: Problems and Remedies, American International Journal of Contemporary Research, 7(3), 86-90.

Nsikan, S., & Kusua, S. (2017). English Vowel Pronunciation and Its Implications for Speech Communication among Secondary School Students in Uyo Nigeria. International Journal of English Language and Communication Studies, 3(3), 27-41.

Ruzkina, R. F., Nizla, M. L. F., Marjiya, M. I. F., Arjiya., & Rushda, M. R. F. (2016). A Study of Pronunciation Problems among Tamil Speaking English Learners in Sri Lanka. 6th Intsymposium (Symposium). South Eastern University of Sri Lanka, Sri Lanka.

URI: http://ir.lib.seu.ac.lk/handle/123456789/2032

Senel, M. (2006). Suggestions for beautifying the pronunciation of EFL learners in Turkey. Journal of Language and Linguistic Studies, 2(1), 111-125.

Wildan Habibi, M. (2016). English Pronunciation Problems Encountered by Indonesian Advanced Students (Published bachelor degree thesis). Maulana Malik Ibrahim State Islamic University of Malang, Indonesia.

Yuniarti, D. A. (2009). A Study on the Pronunciation of English Vowels by the English Department Students. [Published bachelor dissertation]. FKIP Muhammadiyah University of Surakarta.

https://doi.org/10.56556/jssms.v1i3.158

RESEARCH ARTICLE

# Investigating the Perceptions of Educational Stakeholders on the Introduction of Chinese as a foreign language in Zanzibar: Taking Mkoani District of Pemba as an Example

**Saleh Mussa Alawi[1*]**

[1]East China Normal University International Center for Teacher Education, Minhang Campus: 500 Dongchuan Rd. Shanghai, China

Corresponding Author: Saleh Mussa Alawi, bimtengoo@yahoo.com
Received: 01 April, 2022, Accepted: 06 June, 2022, Published: 10 June, 2022

**Abstract**
This paper aimed at probing the perception of education stakeholders on the introduction of the Chinese language in Zanzibar, the challenges, and its effects on Zanzibar culture. The study employed both qualitative and quantitative approaches. Questionnaires, focus group conversation, and interviews were used in data collection. A sample of 62 repliers was involved in the study including 20 students, 34 teachers, 6 head teachers, and 2 educational officers. The study employed stratified sampling and purposive sampling techniques in opting the samples. Purposive sampling was used to select the teachers, head teachers, and the educational officer while stratified sampling was used to sample the students. Interviews were conducted with head teachers and educational officers whereas focus group discussions and questionnaires were taken to students and teachers respectively. The data collected through the questionnaires were interpreted using software (SPSS) version 20; while information collected using interviews as well as focus group discussion was analysed qualitatively. The results were unambiguous as about 92.78% of respondents accepted the idea of introducing Chinese as a foreign language at secondary schools in Zanzibar. Meanwhile, the findings showed that the preface of the Chinese language would be faced with a myriad of challenges similar as a deficit of competent Chinese subject teachers, deficit of educational coffers, employing traditional style of tutoring and the final study revealed that the introduction of foreign language has little negative effects on the Zanzibar culture, in the meantime paper mentioned that the language literacy and culture has a great relation between. The study recommended that Chinese as a foreign language can be introduced at secondary schools in Zanzibar but the use of ultramodern tutoring style; frequent training of Chinese subject teachers and teaching Chinese subjects unhappy environment must be admired for better performance.

**Keywords:** Stakeholders; Educational Stakeholders; Foreign Language; Chinese Language

## Introduction

Nowadays understanding second languages is very essential. The famous language spoken includes English, French, and German. Currently, Chinese is well-known and commonly practiced as a foreign language by several inhabitants around the globe (Victoria 2021). The perception of native inhabitants on the introduction of a foreign language increased dramatically. At present, foreign languages happen to have great significance among the people in different nations and they have started to learn foreign languages gradually. Understanding a second language is exceptionally valuable, in both aspects of economic and social matters. Proficiency in speaking a foreign language helps to influence a good relationship with other people. Many countries around the globe are progressively attracted to speaking two or more two languages because of the effect of globalization (Imam, 2005). Different countries such as Korea, Japan, Thailand, India, the United Kingdom, the United States of America, and Pakistan have established foreign language programs in their education system due to the influence of international communication (Humphreys 2011).In the United Kingdom, Chinese as a foreign language was established many years ago. The British Academy (2013) noted that sustainable strategies are needed to improve proficiency in the language in the fields of negotiation, international relations, and defense.

Apart from that, the Department of Defense of America has initiated programs to develop the ability of language skills which is required by the citizens to interpret written information, and website materials, supervise internet information and social media, also to translate oral communication at the international level (Wolfowitz 2005).

Australia, a foreign language was established and recognized as valuable and worth maintaining. They consider Chinese as a more preferred language to be introduced into the educational system. They realized that is a useful language and must be given special consideration in Australia. The previous study by Jane(2017) indicated that there is an increase in the number of citizens who learn the Chinese language in Australia when compared with other languages taught mainly in primary school.

In Africa, most countries have already established foreign languages in the system of education including the Chinese language. The Chinese language was introduced in different countries in Africa due to the influence of Chinese investments, trade, and good historical background in between China and African countries. Some countries from Africa introduced Chinese as a foreign language in their educational system. Zhang (2014) argued that African countries increased their desire to learn the Chinese language due to their economic status and rising engagement in investment between them. Nigeria and Zimbabwe are among African countries that introduced this language. Zimbabwe had a strong relationship with China for sixteen centuries ago. Their relationship makes the two governments work hard to motivate their people to study the Chinese language to overcome the problem of the language barrier when conducting business among them. Zimbabwe students started to learn the Chinese language, however, there are some challenges facing the process of delivering mechanism and knowledge-based content to the students.

In Tanzania, the Chinese language was not intergraded in the education system but rather taught in some language learning centers, and a few universities introduced a course in the department of language. The government of Zanzibar opened the door for the introduction of foreign languages, and different foreign languages were established and taught in schools and universities. English and Arabic are dominant languages taught in primary and secondary schools as a subject. Furthermore, the Zanzibar Education policy (2006) provides emphasis to the people of Zanzibar to learn a different language to increase the chance of employment opportunities in the private sector. Based on the Zanzibar Education policy (2006), learning the different languages widens and enhances the interaction of the cultures.

**Statement of the problem**

Many countries around the world increased their interest to teach a foreign language in their schools (Dixon et al., 2012). This is because of the influence of the English language international and the demand for the remaining common language such as Mandarin Chinese (Hu, 2007). Nowadays proficiency in more than one language is measured as extremely more than just essential. Understanding a second language is considered valuable. Different nations globally are progressively considered foreign languages as important because of the effects of globalization (Imam, 2005).

In Zanzibar secondary schools in particular and Tanzania in general, the situation of the Chinese language is extremely dire. The syllabi for ordinary secondary education avowed nothing about the Chinese language, however, the people of Zanzibar have a long historical relationship with China and they have great interaction through business activities. Therefore, this interaction influenced them to learn and speak the Chinese language. Currently, Chinese is not established in Zanzibar government schools as well as private. However, some the Universities such as The State University of Zanzibar (SUZA) introduced the diploma course in education and the Chinese language to prepare the graduate to be competent in the Chinese language. Moreover, an informal center that teaches Chinese courses was established in a different area of Zanzibar, particularly in the urban west region, therefore some of the people have started to learn Chinese at a low level. Also, Zanzibar's education policy opens the door for both residents and foreigners to establish different foreign languages in Zanzibar and it emphasized the local community to learn a foreign language to meet the conditions of employment in an international market (Educational Policy 2006). However, there is little information on the perceptions of educational stakeholders about the introduction of the Chinese language in Zanzibar schools, its challenges, and its effect on the culture of Zanzibar. This paper vividly tries to investigate the perception of education stakeholders on the introduction of the Chinese language in Zanzibar schools.

**Literature review**

The literature review of this paper is based on three aspects which are education stakeholders' perceptions of the introduction Chinese language, its effects on social ethics, and challenges faced by the introduction. More clarification on the literature review will explain hereunder

**Educational stakeholders Perceptions' on the introduction of Chinese as a foreign language**

The introduction of a foreign language was viewed positively worldwide. The native inhabitants agreed on the introduction of a foreign language. This argument was supported by Imam( 2005) said that many countries in the world are progressively becoming bilingual or multilingual as a result of the impact of globalization, hence, there are varieties of languages introduced globally, and Chinese was included. Foreign languages were introduced into the educational system of different countries internationally due to the influence of international communication. The government and businesses of south Korea Japan, Thailand, India, and Pakistan are taking this chance seriously and are systematically training huge sectors that are already English- speaking workforce to be proficient in Chinese. This was supported by a British Academy report published in 2013 that pointed out an urgent need to develop high-level language skills in the fields of diplomacy, international relation, and security is needed(Humphreys 2011). This indicates that the United king dome supports the idea of the introduction of foreign languages in different countries. Also, the united states department of defense has stepped into faster the development of high-level language skills which it needs in people to translate documents including website materials, monitor internet contact, and social media, and interpret public and private meetings (Wolfowitz 2005).

In Australia, a foreign language was established and recognized as valuable and worth maintaining and it is not being suggested here that other languages should not be prioritized, they considered Chinese as a more preferred language when compared with other languages within the education system and were seen as a priority language in Australia. The number of people who learn the Chinese language increased when compared with other languages offered particularly in primary school. In 2015 there were about 369,4101 students attending school in Australia about 1728,7847 of them were learning Chinese (Jane 2007).

Victoria shows that students learning the Chinese language rose accordingly whereas the liberal government introduced it as a compulsory subject to study in the formal system. The number of people studying Chinese in government schools wares increased quickly from 1900 to 40000 between 2013 and 2015 which equates to about 25% of all primary students in the state. David et al (2012) argued that recently has been a flurry of Chinese programs opening as the result of federal government incentives. The language has been taught in some schools in Victoria for more than 40years.

In New South Wales, a variety of foreign languages were established, Chinese language is a major language that receives initiative from the government. The middle stream ware improved in recent years. The different strategies were adopted and can help to improve the ability to speak Chinese as a foreign language (Jane 2007). The Chinese language is spoken by a great number of people in the world, it is estimated about a 40million foreigners learning Chinese the globally and the number is still rising very fast. In addition, the second most fluently language spoken by those living on USA soil is Chinese followed by Spanish, it was estimated about two million American speak Chinese at home (Duff and li 2008).

In Africa, the majority of countries already established foreign languages in the educational system. Chinese is taught as a foreign language by many African countries due to the great influence of Chinese investments, trade as well as the good relationship of China with African countries.

Currently, China is the biggest trading partner with Africa, and this relationship increased the demand for the African people to learn the Chinese language. Hence some countries in Africa already introduced Chinese as a second language in their formal system. Zhang (2014) argued about the Chinese economic ascent and the increasing investment between China and Africa. These two factors raise the need for Africans to learn the Chinese language. Among African countries that introduced Chinese as a foreign language are Nigeria and Zimbabwe. Zimbabwe had a strong relationship with China for sixteen centuries. Their relationship makes the two governments work hard to promote the Chinese language. So both parties can do business together without a language barrier and reduce suspicion. In doing so the Chinese government has established some Chinese learning centers in Zimbabwe. Zimbabwe students started to learn the Chinese language. However, there are some challenges facing the teaching and learning process.

According to the Zanzibar education policy (2006), Zanzibar opened the door for the introduction of foreign languages. Different foreign languages are established and taught in schools and universities. English and Arabic are taught in primary and secondary schools whereby France language is taught in some institutions of higher education. The institution of Kiswahili with foreign language which is a part of the State University of Zanzibar offers diploma courses in English French, Arabic, Spain, Portuguese, etc. Meanwhile, the policy emphasizes the people of Zanzibar learn a different foreign language to increase their chances of employment in the private sector.

Also, the policy of education provides a special privilege to private schools to introduce foreign languages. Education policy (2006) argued that the learning of different languages influences the interaction with people of different cultures and the growing tourism industry Globalization. Finally, economic integration is forcing people to learn more foreign languages in Zanzibar.

**Effects of the introduction of Chinese as a foreign language on the local culture**

Language and culture are intertwined and go simultaneously. It's difficult to separate language from culture because it's interdependent and working collaboratively. The argument was emphasized by Kuo and Lai (2006) who said that one cannot separate culture during learning of foreign language. Again Mohammed (2020) said that culture is a part of language and language is a part of the culture, these two things are strongly dependent and should be taught in that way as well.

Likely the culture of a given society will affect the process of learning a foreign language. The previous study by Mohammed (2020) mentioned that mastering language requires students to master culture in the context in which compulsory social acts occur because it conveys warm feelings and solidarity among speakers and is categorized in the social use of language. Language is an instrument of transmission of feelings and thoughts within society. The culture of certain communities and their language have the same characteristics, any language must reflect the traditional values of society in which language is spoken and reversely are true. One of the aspects of culture is language; they have a great relationship between them. Culture plays a great role throughout the process of language teaching and learning. The successful learner must develop an awareness of and sensitivity toward the values of the people whose language is being studied (Beamer1992). Cultural competency is necessary to carry out fruitful communication (Aptekim 1993 ). The process of teaching a foreign language in any country can bring a great influence on local culture because languages are associated directly with traditional aspects like greeting, apologies, requests agreement/ disagreement, etc. Scholars and researchers in the field of applied linguistics as well as teachers who teach language address the need to incorporate cultural knowledge into foreign language teaching (Robinso 1985). Sometimes the language use is heavily ruled by the cultural value and norms of the society. The speaking style can affect the culture of the community. There is a great relation between language and culture because is interdependent, therefore the introduction of any language in the county can provide an effect on the culture of a given society. However, this effect cannot bring massive change to the community but can be recognized learning factor of language but language learning has few impacts on the cultural identity (Zhenguo 1994).

**Challenges of introducing Chinese as a foreign language in Zanzibar**

Many countries in the world introduced foreign languages into the education system. The foreign language will influence international relations and communication with other countries. The introduction of a foreign language has great challenges in different aspects. These include social and economical aspects. The challenges are teachers related, student-related challenges, and subject-related challenges. Teachers are the one who instructs the people. Various responses can be found in class related to these problems, especially in the attitude of students during the learning process, and in the learning environment. A conducive learning environment is required for students to achieve the desired objective. Thus learners need to be given many opportunities to be actively engaged and interact with others, as occurs when learning the first language. This can be quite a challenge in the foreign language classroom as typical children learn a second language. Foreign language contexts have little exposure to the language outside of the classroom. One way to remedy this is to utilize the new technologies to enhance learning by giving children opportunities to interact and engage with native speakers innovations in technologies are serving a growing and increasingly important role in early childhood education in the world. Apart from that, there are challenges of pedagogical or delivery mechanism availability and applicability of instruction materials for learners, teachers, and administrators. Logical costs of hiring teachers of foreign languages were noted as challenges mentioned by (Usman 2015)

The introduction of the foreign language needs enough money that can be used in different aspects such as training teachers and buying resources teaching delivery needs specialist teachers who are more successful in teaching foreign languages and who have received training in foreign language pedagogy.

Another challenge that accounts for the learner's lack of preparation for verbal interaction with native speakers in their own culture. In society, people not only speak different dialects but also use radical different ways (Wierzbicka1997). Also need to consider individual factors that influence the learning of a foreign language these include the attitude of the individual, personality, age, learning style, and motivation which all affect language learning (Tabors 1997). Motivation, interest in learning, and communicating in a foreign language are important factors for the student to succeed in language learning. Tabors (1997) said that it is essential for children to be motivated and interested in learning and communicating in a second language. By creating joint activities in partner classrooms meaningful and motivating reasons for communicating can be established in most cases. Teaching and learning a foreign language in schools and kindergartens may be the more traditional and teacher-centered approach, teachers may be more preoccupied with formal teaching and the delivery of the curriculum. Tang and Maxwell (2007) found when studying two Chinese kindergartens that the favored approach was to teach the whole class using a more formal teaching approach. Large class size is one reason reported for why teachers adopt this approach when teaching across different cultures and different styles of teaching and class management are likely to emerge. This means that when teachers are jointly planning and devising lessons together they need to be adaptable and open to different styles and approaches to teaching

### Data Collection Methods

Primary data was collected substantially using both quantitative and qualitative style to gain in-depth information on the study variables. Well-organized questionnaires were used to collect quantitative data. 34 teachers were given questionnaires that contained unrestricted and open-concluded questions. Also, qualitative information was collected through focus group conversation and interviews. The data collected through focus group discussion was attained from the 4 groups of five respondents each. Questions were discussed in different sessions in which advanced-level students participated. Using this system data was collected. The experimenter used tricky questions that allowed repliers to come up with envisaged responses and excellent answers. The interview was conducted effectively. A aggregate of 8 repliers were involved in an interview, namely 6 head teachers and 2 educational officers. The interview was guided by structured schedules with both closed and open-ended questions administered by the researcher. The study used semi-structured interviews to insure effective data collection.

### Data Analysis Techniques

The data attained from the field were analyzed using qualitative and quantitative methods. The information collected was separated and interpreted in descriptive and numerical forms. The data collected by using interviews, focus group discussions and open-ended questionnaire particulars were grounded on content analysis. Whereby the information gathered by quantitative method ware presented in numerical form. The study substantially used qualitative analysis such as content analysis of the texts and the content of the study was analyzed to identify the main themes provided by respondents, which related to the objectives and questions of the study. Moreover, the study used a quantitative method to analyze data. Some information ware interpreted with aid of computer software known as SPSS version 20 and others were analyzed manually. This is because the number of variables analyzed was useful for calculating frequencies, statistical tables, graphs, and percentages for easy interpretations and understanding.

## Discussion of the Results

### Educational stakeholder's perceptions of the introduction of the Chinese as a foreign language in Zanzibar

The results showed that the educational stakeholders viewed the introduction of the Chinese language in Zanzibar as a substantial stage in bilingualism. The study showed that the majority of the respondents agreed with the idea of introducing the Chinese language. According to Wang (2013), the number of learners of the Chinese language has been increasing rapidly as Chinese is a foreign language. Based on the interest in learning the Chinese language globally the demand for Chinese teachers increased fast. It was estimated that about four million Chinese teachers are needed. Also noted is that the demand for learning Chinese was increased late 20 century when the subject considered an academic independent discipline (Xing 2006). The data indicated that 92.78% agreed with the introduction of this language in Zanzibar. The respondents considered the introduction of the Chinese language will provide a great contribution to the development of society in varieties aspects. One teacher quoted said:

"My Views it better to introduce the Chinese language in Zanzibar because it can help in different aspects of economic, social and foreign relations"

According to the Ministry of education of China estimated more than a 100million citizens worldwide ware learning the Chinese language as a subsequent language since 2006(CME 2011) Also, Students who study Chinese in Australian schools were about 84,000 from 319 schools in 2008, the data were increased periodically(Orton, 2011). Respondents agreed with the introduction of the Chinese language in Zanzibar because many people of Zanzibar are conducting business in China whereby the Chinese language is being used as a business language so its simplifies communication. In addition, the demand for maintaining historical international relations between China and Zanzibar which started early in 1964 influenced the introduction of the Chinese language. It was indicated in the present study that, the Chinese are becoming a strong economic nation in the world, and the Chinese language will be a popular and wide uses language over the world. Therefore, the introduction of this language is considered to be extremely essential in Zanzibar situation. Scrimgeour (2014) said that the rapid economic growth in China tend China to be among the strong nation soon and the Chinese language will be frequently used language globally, so the need to leaning it was increased. Likewise, Hu and Feng (2012) mentioned that the economic level in China has abruptly changed in recent years when compared with other Asian countries, so the demand for learning Chinese was increased internationally. In general speaking, the introduction Chinese language was accepted by the majority in Zanzibar. Many respondents consider that the Chinese language can be a popular language over the world because the Chinese become among the strong economic nation in the world's near future.

### The cultural effects of the introduction of Chinese as a foreign language in Zanzibar

This study indicated that there is no effect on Zanzibar culture by introducing the Chinese language, although, culture and language have a great relationship between them and they affect each other. Byram (1994) emphasized that there is a great relation between language and culture, and it's obvious that language learning cannot be exempted from the impact of the culture of a native speaker of the language. This is because culture is a multifaceted phenomenon that includes the speaking style of the native. The majority of respondents explained that culture will not be affected by an introduction to the Chinese language in the Zanzibar community. Byram, (1989) believed that the people learn a language, study the culture of the spoken language, they learn speaking style and the way natives behave when speaking with people of different ages and statuses. This concept was evidenced by different theorists who try to explain their ideas from various perspectives. One expert who tried to support this caption was Kramsch(1993) said that the objective of learning a foreign language is a way of making cultural statements and the new way of making communication. Meanwhile, remaining theorists emphasized the importance of understanding culture for a better way of language understanding. Again, Byram (1994) complained that the language can be very comprehensive and understandable when the contexts of the culture of the native speakers are well understood. Generally speaking, the study identified that culture and language cannot be separated, without cultural integration learning a language will be difficult for learners to master in the required language. The study revealed that the culture of Zanzibar will not be affected in any aspects such as dressing style, marriage, speaking style of native language, rituals, changing of behaviors, norms (e.g. smoking and drinking behavior), values, working ethic, and artifact by the introduction of the Chinese language. Consequently, the study finding supported the ideas of different scholars that it is difficult to separate the language learning and culture of the native speakers. Therefore, Chinese as a foreign language can be introduced in Zanzibar without any negative effects on the culture of native speakers.

### The challenges of introducing Chinese as a foreign language in Zanzibar Schools

The result indicated that the introduction of the Chinese language in Zanzibar will face various challenges. The study mentioned that the majority 64.47% of respondents refocused out that mastering of Chinese language is delicate because of the complexity of the language. This argument was supported by (Stevens, 2006), according to him said that learning the English language is simple three times when compared with Chinese for the native of French or Spanish. Also, Foreign Service Institute languages mentioned the Chinese language as the first difficult language to understand for the English native speakers.

Again, the study indicated that learning Chinese is difficult because of the pronunciation and nature of characters. For English speakers writing style and pronunciation of Chinese words are complex because the understanding of orthographic form doesn't readily indicate how Chinese characters are pronounced. A study by Swihart (2004) argued that the jotting style of the Chinese language has been cited as a challenge that learners will face in learning the Chinese language. In addition, he emphasized that learning to speak French is more easer for English native speakers when compared with the Chinese language. The traditional jotting system was associated with the difficulty of mastery Chinese language (DeFrancis, 1984). The result indicated that the majority of respondents about 65.63% agreed that the writing style of Chinese is a challenge for second language learners. The caption supported by Hoosain (1991) said that the Chinese language is neither phonetic nor character- grounded , their characters signify three effects which are sound, the aural reality of meaning, and concrete or abstract experience with the world and the symbols and characters carry both sound and meaning. The scholars further explained that the challenge is also told by the number of characters that the Chinese language has. Taylor and Taylor (1995) said that this challenge was due to the various characters that the Chinese language has. Also, the Chinese language contains so numerous characters roughly 50,000 in general but natives of the Chinese language are anticipated to fate and produce about 6,000 Chinese characters for diurnal life used.

In addition, respondents indicated the difficulty in tone pronunciation in the Chinese language is a challenge for foreign language learners. Utmost of the students 76.84% agreed that pronunciation of Chinese tone is a major challenge for Chinese language learners. DeFrancis (1984) points out that to learn Chinese characters learners must study three effects coincidently, pronunciation (Pinyin form), form ( writing characters), and meaning. The position of difficulty in learning the Chinese language challenges the learners, especially people whose native language is associated nearly with the alphabet (Cong 2012). Also, the Office of Chinese Language Council International noted that Chinese language learners at the beginning level to intermediate level learners should master about 2,000 to 2,200 most commonly used Chinese characters, and advanced level learners should master 700-900 less commonly used Chinese characters. (Li, 1998)

Likewise, insufficient resource (teachers and learning materials) was cited as a common challenge during the introduction of a foreign language. Data from the field mentioned among common challenge that will be faced by learners/programs was the shortage of resources both human and financial. This fact was supported by Zhang &Li, (2010), who said that relatively slow development in studying the Chinese language is caused by many factors such as textbooks, reference books, experts and experienced Chinese teachers, and lack of teacher's development programs. Factual, these challenges of inadequate resources during the introduction of the foreign language in Zanzibar are caused by inadequate financial resources allocated by the ministry of education and Vocational training – Zanzibar, So, the government through the ministry of education must put emphasize the significance of education and increase the amount fund for educational sectors.

Typically, primary stage of everything in the society is counted as a complicated part of the program. The introduction of Chinese as a foreign language also has its challenges as mentioned in the study. Among the main challenges as linked by respondents are inadequate resources both fiscal and human resources, mastering of Chinese language is difficult, and pronunciation of Chinese tones.

**Conclusion and Recommendations of the Study**

Based on the study the introduction of Chinese as a foreign language in Zanzibar was accepted by the majority of educational stakeholders'.The introduction of the Chinese language will influence the economical development of society and international relations. These views are based on the acceptability of the Chinese language local and international. The Chinese language will be an alternative way of increasing international relations between China and Zanzibar and it can help to solve the problem of communication barriers in both parties' countries, particularly traders who conduct business in China. It is intensely that the Chinese language is well internationally recognized due to the strong economic power that has been achieved; hence the Swahili language will be well known worldwide. Likely introduction of the Chinese Language in Zanzibar will open the door for the people of Zanzibar to enjoy many opportunities provided by the Chinese government to the developing nation. In addition, the Chinese language has no negative effect on the Zanzibar culture in any aspect of culture. But though, the introduction of the Chinese language in Zanzibar is disadvantaged by many challenges including a lack of Chinese proficiency teachers, technological learning materials, shortage of financial resources, and a conducive environment for learning a foreign language. To have an effective and efficient Chinese language program in Zanzibar, the government must allocate enough funds to prepare teachers who can teach this language and buy teaching /learning resources.

**Recommendations of the Study Findings**

Introducing Chinese as a foreign language is not a simple task. It needs clear commitment and preparation for the better fruitful. Consequently, government institutions responsible for education must put into consideration the following recommendations:

i. The government should provide training for Chinese language teachers before starting the program to have knowledgeable teachers that can help the student to master the Chinese language during the program. It was mentioned in the study that one of the challenges facing foreign language learners is proficiency and competent language, teachers. This can help the students to be motivated and actively participate in learning the

Chinese language which is cited as a difficult language to master.

ii. Technological learning materials such as computers, projectors, and flip charts must be enough for the student to access it, these can help learners to practice and pronounce Chinese words correct. Learning materials will be providing an opportunity for the learners to use much time to practice the Chinese language effectively; it can influence the good pronunciation of Chinese words.

iii. The revolutionary government of Zanzibar requested Chinese language teachers from the Republic government of Chine to provide training for Chinese language teachers in Zanzibar.

iv. Chinese language must be established in Zanzibar Colleges and Universities to prepare enough teachers.

v. The government should establish a special motive for the Chinese people to live in Zanzibar and invest in education sectors. This will provide an opportunity for the learners to have a chance of practicing the Chinese language with native speakers of the Chinese language.

**References**


Alptekin, C. (1993). Target-language culture in EFL materials. ELT Journal:**47**(2):136-143.

Angela, G. (2013). Seven hundred reasons for studying languages. International Journal of Language Academy,**3**(2):56-68.

Arda, A and Butuner, F. (2015). Reasons behind young learners' learning of foreign languages. International Journal of Language Academy, **3**(2):56-68.

Bray, M., Hallak, J.andCaillods, F.(1999). The shadow education system: Private tutoring and its implications for planners. UNESCO, International Institute for Educational Planning, Paris.

Byram, M. (1994). Teaching and Learning Language and Culture. Bridgend: WBC Ltd.

Byram. M. (1989). Cultural Studies in Foreign Language Education, Great Britain: WBC Print Ltd.

Cong, W. (2012) How Culture Effects on English Language Learners (ELL's) Outcomes, with Chinese and Middle Eastern Immigrant Students AniDerderian-Aghajanian International Journal of Business and Social Science,**3**(5):172.

DeFrancis, J. (1984). The Chinese language: Fact and fantasy. Honolulu, Hawaii: University of Hawaii Press.

Diaz, R. (1983). Thought and two languages: The impact of bilingualism on cognitive development. Review of Research in Education,**10**(1): 23-54.

Dixon, L, et al (2012). What we know about second language acquisition: A synthesis from four perspectives. Review of Educational Research, 82, 5-60.

Duff, O. and Li, D. (2008). The issue in Chinese Heritage Language Education and Research at the Post-Secondary Level. Social Sciences and Humanities Research Council of Canada,**2(**3**)**:14-27

Ellis, R. (1994). The Study of Second Language Acquisition. Oxford: Oxford University Press.

Fasold, R and Connor-Linton J. (2006). An Introduction to Language and Linguistics. Cambridge: Cambridge University Press.

Godfrey, C. (2015). The influence of Chinese Culture on Learning Chinese as a Second Language. A case study of Zimbabwe Students learning Chinese as a Second Language. International Journal of Language and Linguistics, **3**(2): 33-39.

Hoosain, R. (1991). Psycholinguistic implications for linguistic relativity: A case study of Chinese. Hillsdale, NJ: Lawrence Erlbaum Associates.

Hu, G. (2007), The juggernaut of Chinese-English bilingual education. In A. Feng(Ed.), Bilingual education in China: Practices, policies, and concepts (pp. 94–126). Clevedon, UK: Multilingual Matters.

Hu,X.,andFeng,L.(2012).Duiwaihanyujiaoxuexueshuxingshuoshijiuyeqingkuangdiaochayufenxi. YunnanShifan. DaxueXue.

Humphrys, J. (2011). Lost for words. Hachette. The UK.

Imam, S. (2005). English as a global language and the question of nation-building education in Bangladesh. Comparative Education,**41**(4):471-486.

Kramsch, C. (2001). Language and culture. Oxford. Oxford University Press.

Kuo, M., and Lai, C. (2006). Linguistics across cultures: The impact of culture on second language learning. Journal of Foreign Language Instruction1. (1). Retrieved from http://www.eric.ed.gov/PDFS/ED496079.pdf

Li, D. (1998). Discussing the importance of teaching Chinese characters from the two characteristics of the Chinese language. Journal of143Peking University, **3**(35): 128-132.

MoEVT.(2006).Education Policy 2006.Revolution Government of Zanzibar. Zanzibar.

Mohammed, M (2020). The Impact of Culture on English Language Learning. "International Journal on Studies in English Language and Literature (IJSELL), 8,21-27

Ömer, K and Ali, D (2011). The Effect of Culture Integrated Language Courses on Foreign Language Education, US-China Education Review,**8**(3):257-263.

Orton, J. (2011). Educating Chinese language teachers - Some fundamentals. In L. Tsung and K.

Cruickshank (Eds.), Teaching and learning Chinese in global contexts, London, Continuum

Orton, J. (2016). Building Chinese Language Capacity in Australia, Australia-China Relations Institute, Ultimo, Australia.

Orton, J., Tee, J. and McRae, D. (2012). Profile of Chinese Language Program in Victoria School. China Teacher Training Center. Victoria Australia,**3**(2)2-12.

Rafael, D. (1983). Thought and two Languages: The impact of Bilingualism on Cognitive Development. Review of Research in Education,**10(40)**:23-54.

Richards, J. and Schmidt, R. (2013). Long man dictionary of language teaching and applied linguistics. Rout ledge.

Robinson, G. (1988). Cross-cultural understanding. Prentice-Hall.

Scrimgeour, A. (2010). The yin-yang of Chinese language teaching in Australia: The challenges of native speaker trainee teachers face in the Chinese classroom. In Languages in Australian education: Problems, prospects, and future directions. Newcastle upon Tyne: Cambridge Scholars.

Steinberg, D. (1991), Psycholinguistics: Language, Mind and World, London: Longman.

Stevens, B. (2006). Is Spanish so easy? Is Arabic so hard? Perceived difficulty in learning Arabic as a second language. In K. Wahba, Z. Taha & L. England (Eds.).

Swihart, D. (2004). Success with Chinese: A communicative approach for beginners: Listening and Speaking Level 1. Boston, MA: Cheng antisuit Company, Inc.

Tabors, P. (1997). One child, two languages. Baltimore, MD: Paul H. Brookes. (ERIC Document No. ED405987)

Taylor, I. and Taylor, M. (1995). Writing and literacy in Chinese, Korean and Japanese. Philadelphia: John Benjamins.

Usman, L. (2015). Globalization of China and Nigerian's Language Educational Policy: A Case Study .US-China Education Review **5**(7):411-434.

Wang, D., Maloney, R., and Li, Z. (2013) Towards Internationalizing the Curriculum: A Case Study of Chinese Language Teacher Education Programs in China and Australia. Australian Journal of Teacher Education,**38**(6):116-135.

Wierzbicka, A. (1997). Understanding cultures through their keywords: English, Russian, Polish, German, and Japanese, Oxford University Press.

Wolfowitz, P. (2005). Defense language transformation road map. Washington DC, Office of the Secretary of Defense.

Xing, Z. (2006). Teaching and learning Chinese as a foreign language: A pedagogical grammar. Hong Kong: Hong Kong University Press.

Xun, L. (2011). Chinese language proficiency tests becoming popular in Mexico. Xinhua **27(3):** 2011-2006.

Zhang, G. and Li, L. (2010). Chinese language teaching in the UK: Present and future. Language Learning Journal, **38**(1): 87-97.

Zhang, O. (2014). China –Zimbabwe Relations: A model of China Relation,**205**(3):43-57.

Zhenguo, X. (1994). Impact of Cultural Identity upon Foreign Students Motivation about learning Chinese: A case study of China University of Geosciences (Wuhan). Modern Language Journal,**78**(5):273-284.

Journal of Social Sciences and Management Studies ISSN: 2957-8795
https://doi.org/10.56556/jssms.v1i3.159

RESEARCH ARTICLE

# Prospects and Challenges of Lean Manufacturing Deployment within Manufacturing SMEs in Nigeria: A Literature Review

**Mohammed Inuwa[1*], Aisha Usman[2]**

[1,2]Department of Business Administration, Bauchi State University Gadau Nigeria

Corresponding Author: Mohammed Inuwa, mrdemotint@gmail.com
Received: 10 May, 2022, Accepted: 09 June, 2022, Published: 11 June, 2022

**Abstract**

Small and medium enterprises (SMEs) played a vital role in manufacturing goods for consumer and industrial purposes, making them instrumental in business growth and economic development. However, issues of poor quality and substandard products prevail due to limited technical knowledge that hindered them from competing locally and globally in Nigeria—arising from the lack of lean manufacturing deployment and implementation. Therefore, the study aims to provide an insight into the prospect and challenges of manufacturing SMEs in Nigeria as it relates to the deployment of lean manufacturing tools and techniques. The study would aid manufacturing SMEs in better comprehending their potentials and problems, hence, deploying lean manufacturing initiatives successfully. The study applied a literature review approach through past empirical and conceptual studies from reputable journals and reports. Based on the available literature, the study finds that though manufacturing SMEs in Nigeria are faced with numerous issues, e.g., poor leadership, lack of qualified personnel, and inadequate funds , they have shown higher prospects of deploying lean manufacturing successfully. The study concludes that manufacturing SMEs should bank on potentials like flexible organizational culture and structure, easy access to customers and suppliers, and flexible manufacturing system to deploy lean manufacturing, which will further aid in waste elimination, value addition, customer satisfaction, and enhanced performance. The study serves as the foundation for further empirical research on issues related to lean manufacturing deployment within SMEs, thereby proffering solutions to the quality challenges they are facing.

**Keywords:** Lean manufacturing; small and medium enterprises; prospects; and challenges

## Introduction

Lean manufacturing is often used interchangeably with Lean management, Lean production, or Lean system, defined by Shah & Ward (2007) as a socio-technical system that removes waste by concurrently lessening or minimizing customer, supplier, and internal variability". It has been proven that Lean manufacturing is an effective technique and a bedrock in the actualization of operational superiority and excellence in manufacturing as it aids firms in removing all forms of wastages in human effort, inventory, time to market, and manufacturing space (Shah & Ward, 2007; Womack & Jones, 1997; Womack & Jones, 2003). The successful implementation of Lean manufacturing by its originators, the Toyota Motors of Japan, brought about an increased interest in the area (Lean manufacturing) in recent years by both Scholars and business practitioners on the possibility of implementing Lean not only in large enterprises but also in manufacturing SMEs successfully, e.g., (Al-Najem, Dhakal, Labib, & Bennett, 2013; Belhadi, Bin, Sha, Touriki, & Fezazi, 2018; Moya, Galvez, Muller, Camargo, & Moya, 2019).

Nevertheless, despite numerous research conducted in the past, Small and medium-sized enterprises continue to face obstacles in changing their organizations into Lean organizations (Maware, Okwu, & Adetunji, 2021; Ogah, Ogbechie, & Oyetunde, 2020). This results from poor comprehension of aspects of Lean readiness that require proper scrutiny by most change agents before Lean deployment due to non-holistic examination and appraisal of Lean readiness factors and organizational willingness to change to Lean before implementation. Further, Lean applications can be simple for SMEs in. SMEs Yadav, Jain, Mittal, Panwar, & Lyons (2019) have simple structures, fewer employees, a unified organizational culture with better access to customers and suppliers, and faster process flows that enhance organizational readiness for change Lean. However, it can also be problematic because both managers and employees lack a basic understanding of Lean and its advantages to their organization and its compatibility with their characteristics (Pearce, Pons, & Neitzert, 2018). Consequently, for manufacturing SMEs to be Lean ready, it will be essential to have a compelling value chain that facilitates and enhances supplier relations, process flows within the organization and greater customer satisfaction which will, in turn, result in just in time as well as pull production thereby reducing waste and maximizing efficiency.

SMEs are an essential part of the Nigerian economy contributing to 76% of the entire country's workforce and

49% **of** GDP contribution (PWC, 2020). Studies show that approximately SMEs represent about 90% of the manufacturing/ industrial sector in terms of the number of enterprises (Ministry of Budget & National Planning, 2017; PWC, 2020). According to the Bank of Industry (2018), Nigeria's manufacturing SMEs majorly engage in less advanced manufacturing, simple to manufacture. Products that SMEs in the manufacturing sector manufacture tend to target end consumers rather than other businesses. It is said that SMEs in Nigeria have significant untapped growth potential with solid export and employment potentials which can be achieved through the right amount of economic enabling (Olaore, Bimbo, & Udofia, 2020; Oyelaran-oyeyinka, 2020). However, despite SMEs' potential to soon constitute a significant portion of GDP, Nigeria has historically shown a lack of commitment to building a strong SME sector (PWC, 2020). The industry continues to be weighed down with challenges that ultimately impact the nation's growth (Oyelaran-oyeyinka, 2020). In countries at the same levels of development as Nigeria, SMEs contribute a much higher proportion to GDP than currently observed in Nigeria compared to other emerging markets (Central Bank of Nigeria, 2019; Oyelaran-oyeyinka, 2020). Manufacturing SMEs in Nigeria contribute approximately 1% of GDP compared to 40% in Asian countries and 50% in the US or Europe (PWC, 2020).

The country's economy depends highly on crude oil, making it a single commodity for economic activities. Crude oil renders more than 95% of exports and exchange in foreign incomes, while the manufacturing sector contributes only less than 1% of total exportations (PwC, 2018). Also, fierce competition for the Nigerian manufacturing industry comes predominantly from Asia. Studies show that less than 20% of SME manufacturers export their products (Oyelaran-oyeyinka, 2020; World Bank Group, 2020). Recent World Bank statistics have also shown that Nigeria has13 % manufacturing value-added in terms of GDP, which is lower than China and Malaysia with 26% and 22%, respectively (World Bank Group, 2020).

Further, a recent United Nations Industrial Development Organization (2020) report ranked Nigeria 99th in the Competitive Industrial Performance Index out of 152 countries. The said report also ranked Nigeria 116th in Manufacturing Value Added Per capita Index. World Economic Forum (2018) backed the above, ranking Nigeria as 115th out of 140 countries globally in competitiveness and industrialization. Thus, reasons for the sector's decline were -1.5% in 2015, -4.3% in 2016, -0.2% in 2017, 2.1% in 2018, to 0.8 in 2019, as reported by the Central Bank of Nigeria (2019). Furthermore, the 2016 Global Manufacturing Competitiveness Index, as postulated by Deloitte Touche Tohmatsu Limited and US Council on Competitiveness (2016), shows that Nigeria descent to number 38th out of 40 countries, with an index ranking of 23.1% out of 100%. The report further projects that Nigeria will remain in the exact status of 38 positions up to 2020. Also, the country's dependence on imported goods worsens the patronage of locally manufactured goods (Oyelaran-oyeyinka, 2020; PwC, 2018). This further shows that Nigeria's manufacturing sector is highly volatile and lacks the capacity and technical know-how to compete favorably at the local and global levels despite its potentialities. Therefore, the study aims to identify the assess the prospect and challenges of manufacturing SMEs in Nigeria as it relates to deployment of lean manufacturing initiatives.

**Concept of Lean Manufacturing**

Comprehensive research on Lean manufacturing was first done by Womack et al. (1990) in their book titled The Machine That Changed the World. It was the authors of this book that took their time in collaboration with other American, Japanese and European auto manufacturers, government institutions, and financial agencies to thoroughly research and investigate how the Toyota production system works (Emiliani, 1998, 2006; Martínez-lorente, Dewhurst, & Dale, 1998). These researchers' work first identifies how to change from the obsolete mass production system to modern-day Lean manufacturing after five years of research in the Western automotive industry (Samuel, Found, & Williams, 2015).

This situation led to global acceptance and further understanding of Lean manufacturing; firms all over began to adopt the Lean manufacturing technique and were able to succeed and achieve long term sustainability and growth through continuous improvement and waste removal (Dennis, 2010; Womack & Jones, 1997; Womack et al., 1990; Womack & Jones, 2003). Resulting in more outstanding quality, customer satisfaction, enhanced supplier relationship, and cost-effectiveness. Lean tools and techniques include Just in Time (JIT), total preventive maintenance (TPM), continuous improvement (kaizen), comprehensive quality management, and pull production (Akter & Yasmin, 2015; Belekoukias, Garza-Reyes, & Kumar, 2014; Masuti & Dabade, 2019). It also includes practices of 5s; set, sort, standardize, shine and sustain (Ito, 2019; Valentine & Gupta, 2019).

Further, Lean manufacturing has no single definition; several authors define it differently. For instance, Carreira (2005) is that Lean manufacturing is a technique that aims to identify non-value-added activities and convert them to value-added activities that are geared toward customer satisfaction, cost-saving, and improved efficiency. Lean is a systematic methodology that aims at identifying and eliminating waste through continuous improvement, following the product at the pull of the customer in pursuit of perfection (Choudhary, Kaushik, Nirmal, & Dhull, 2012). Also, Chiarini (2013) defined Lean manufacturing as a system that seeks to "flush out" and fight waste in every process: from marketing to production processes, from administrative to strategic ones. Additionally, Earley (2016) sees Lean manufacturing as the absolute minimum set of mandatory activities to achieve the desired result.

Shah & Ward (2007) coined it as an integrated socio-technical system whose main objective is to eliminate waste by reducing or minimizing supplier internal customer variability, among the popular definitions of Lean manufacturing. This concept of Lean manufacturing seems more appropriate to the context of this research. As discussed earlier, Lean manufacturing initiatives have not been fully implemented by manufacturing SMEs in Nigeria despite quality challenges faced by local manufacturers (Ogah et al., 2020; Udofia et al., 2021). Most manufacturing SMEs in Nigeria are having a challenge regarding basic managerial and quality management skills that will enable them to effectively run their enterprises (Eniola & Entebang, 2015). This situation further brings about a lack of employee relations, poor planning and control systems, and ineffective supplier and customer integration strategy, leading to poor set-up and absence of a transparent operational system (Oyelaran-oyeyinka, 2020; PWC, 2020; Tarurhor & Emudainohwo, 2020). Also, many SME owners go for cheaper machines and equipment that are obsolete and inefficient, thereby setting the stage for lower-level productivity and production of poor quality goods, which negatively impacts overall product output, market penetration, and acceptance (Onugu, 2005). The issues above require manufacturing SMEs to deploy Lean manufacturing practices, examining their prospects and challenges before full deployment to avoid failure.

**Principles of Lean Manufacturing**

To further understand Lean manufacturing and be successful in readiness for change, it is imperative to comprehend the system's basic principles (lean manufacturing). Therefore, the principles of Lean are discussed in detail in this section. As posited by Womack & Jones (2003), five fundamental Lean principles are: to specify a value from the point of view of the customer, identify the value stream, make the identified value flow, and set the pull system, which means only make as needed and finally perfection in producing what the customer wants and by when it is required in the correct quantity with minimum waste. Businesses of all forms and sectors must ensure that they have the core principles of Lean before undertaking a Lean journey or applying Lean tools and techniques. These principles set the pace for effective quality initiatives and continuous improvement in the organization.

**Value Specification**

Value is what the customers pay to acquire a product or service to satisfy their wants and immediate needs (Carreira, 2005; Earley, 2016). It necessitates the need for a firm to ensure that what the customer want (value) is manufactured on time and of the right quality (Mohd & Mojib, 2015; Vinodh, Somanaathan, & Arvind, 2013). In this regard, Lean focuses its attention on specifying value based on customer viewpoint and hence views any activity that the customer does consider valuable or not willing to pay for as waste that needs to be removed (Garza-Reyes, Betsis, Kumar, & Radwan Al-Shboul, 2018; Shafiq & Soratana, 2020). Firms that aim to implement Lean and be successful have to become more customer-centric or customer-oriented than product-oriented (Bhat & Darzi, 2016).

Customer-oriented firms give more priority to the voice of the customer and effectively build a strong customer relationships management that can enable the firms to understand the customer in a better way and deliver value to them (Garza-Reyes, Arturo, Wong, Lim, & Kumar, 2016). Such organizations are known for their commitment to ensuring that they specify and deliver value to the customer (Fercoq, Lamouri, & Carbone, 2016). However, many unexciting and sophisticated activities that producers do to provide a product are generally of little or no interest (value) to customers (Emiliani, 1998). Therefore, value specification in Lean emphasizes the need to identify value from customers' views, and what remains of it that does not create value is seen as waste or non-value-added activities (Mahendran & Senthil Kumar, 2018). Such non-value-added activities cause unwanted resource exhaustion and hinder effective and efficient flow in the production process (Jaffar, Abdulhalim, & Yosoff, 2012).

**Value Stream Identification**

Having specified a value from the customer's point of view is the first fundamental principle of Lean. The next step is to identify the value stream in all processes and operations to fully streamline the needed value for the customer (Womack & Jones, 2003). In Lean production, the value stream implies comprehensively understanding all procedures required to manufacture a specific product and then optimizing the entire process from the customer's viewpoint (Emiliani, 2006; Shokri, Waring, Nabhani, Shokri, & Waring, 2016). It is important to note that the value stream is all-encompassing in the sense that it integrates the entire supply chain, which implies that firms, while streamlining value, should not limit it to internal processes alone, but rather the overall value chain (Čiarnienė & Vienažindienė, 2012).

One significant way of identifying value stream is using single-piece flow in the manufacturing process (Ohiomah & Aigbavboa, 2015; Shamah, 2013). One-Piece Flow, also known as single-piece flow or continuous flow, refers to moving one workpiece at a time between operations within a work cell (Enoch, 2013; Rüttimann & Stöckli, 2015). Attaining one-piece flow aid manufacturing firms achieve holistic just-in-time manufacturing (Ramadas & Satish, 2018). The needed component can be readily available when requested in the exact quantity (Seifermann et al., 2018). Therefore, identifying a value stream in manufacturing processes or the overall value chain can significantly impact a firm's performance and can aid in the realization of operational excellence. Also, value stream mapping can help firms identify value streams in the whole process and eliminate another form of waste that can hinder effective value delivery to the customer.

**Flow Maximization**

Flow means cutting back the amount of time to zero for any work sitting idle and waiting for someone to attend to it; flow involves the overhauling work process to achieve the desired result (Liker & Meier, 2006). Creating an adequate flow of value processes throughout the supply chain will ensure that all processes involved in production from start to finish add value to the customer and eliminate unwanted costs. Such a flow will do away with a bottleneck that can hamper quality and efficiency, thereby creating a smooth, accessible, and timely movement of business resources from one point to the other (Kang & Ju, 2017). The essence of creating flow is not just to have material and information moving timely but to also link people and processes together so that problems can be easily traced and tracked through continuous improvement (Liker & Morgan, 2006; Marley & Ward, 2013).

To achieve adequate flow, production smoothening utilizing Kanban is one of the methods used. It allows each process to go to its preceding process and withdraw the necessary goods at the time required in the required quantities (Monden, 1994; Samuel et al., 2015). Further, maximizing flow is not all about total waste elimination, decreasing inventory and cost; it can make an organization more agile by paving the way for flexibility that can lead to effective responsiveness to the demand of the customer (Kumar et al., 2017; Soltan & Mostafa, 2015). Hence, flow is about keeping everything moving steadily through the process from start to finish. Maintaining a steady flow is all about maintaining the balance between demand and capacity.

**Setting up Pull System**

Keeping inventory based on projected or even assured demand always results in chaos and running out of the very products the customer wants results in excess inventory, rework, and costs (Liker & Meier, 2006). In pull production, the manufacturer only produces when on the customer's demand (Randhawa, 2015), reducing the need for excessive production and eliminating all forms of waste (Andersson, Eriksson, & Torstensson, 2006; Shamah, 2013). In a pull system, the customer activates manufacturing and material withdrawal. The pull production system is ignited by the external customer and initiated back through the production process by each operation's downstream or internal customer. It is a market-in approach to production. Techniques for achieving an effective pull system include Kanban cards for pulling through the supply chain and the closely related JIT system for inventory reduction (Liker & Morgan, 2006; Saumyaranjan & Yadav, 2018). Also, Heijunka, the Japanese word that connotes production leveling and schedule, is the primary instrument for realizing pull system and inventory minimization (Nikiforova & Bicevska, 2018). Setting up a well-organized pull system is essential to give much attention to human resources as the employees are regarded as the main drivers of such a manufacturing system (Bayraktar, Tatoglu, Jothishankar, & Teresa, 2007). Adopting a pull system as a principle in Lean will aid firms in achieving; effectiveness in cost reduction, efficient utilization of employees, and ease in problem identification that require improvement (Jones, 2002).

**Aiming for Perfection**

Having meticulously implemented the first four principles of Lean manufacturing with success and positive results, perfection's final principle will automatically evolve within the whole production system (Womack & Jones, 2003). The only thing that will flow throughout the production process and entire value chain will be nothing but what will ultimately add value to the customers and reduce the cost to the firm by producing products with higher quality, zero defects, and delivered just in time. Perfection is a significant distinctive competency that can make an organization unique in its operations and lead the market by capturing more customers than other competing firms (Thomas, 1995). Also, aiming for perfection in Lean production implies the prospect of improvement and a systematic waste elimination capable of reducing costs for firms' operations and fulfilling the customer desire at value and low cost (Yadav, Rahaman, & Lal, 2017).

Their ultimate aim is to achieve peak operational efficiency and effectiveness for Lean organizations. All organizations' resources are geared towards creating what gives value to the customer with the lowest minimum resources (Belekoukias et al., 2014). Striving to achieve perfection is not as easy as it seems to be because it requires total integration of the overall supply chain and ensuring that all stakeholders play their needed roles (Mourtzis, Papathanasiou, & Fotia, 2016). This implies that the whole business ecosystem has aligned itself to Lean and ensures adequate information sharing to enhance timely productivity and performance (Ghobakhloo & Hong, 2014). Aiming for perfection should be seen as an indispensable aspect of Lean manufacturing because achieving entails that a firm's value chain is highly responsive to the customer; hence it can make a firm perfectly out-compete other rivals in the industry (Dora, Kumar, & Gellynck, 2016).

However, aiming for perfection comes with its significant challenges, particularly when it comes to supplier reliability and outsourcing of other aspects of the business to businesses that are non-Lean or partially implementing

Lean (Pakdil & Moustafa, 2014). In such events, loopholes may arise that can create a bottleneck at some point in the supply chain, which may hamper the overall value chain and impede perfection (Martínez-Jurado & Moyano-Fuentes, 2014). Therefore, a broader business ecosystem that is reliable and highly responsive is critical for achieving a hitch-free flow of value to the whole process (Kang & Ju, 2017).

**Prospect of Lean Manufacturing in SMEs in Nigeria**

While on the one hand, manufacturing SMEs are faced with barriers to successful Lean deployment, on the other hand, some researchers believe that manufacturing SMEs have fewer barriers to succeed in Lean deployment (Alexander et al., 2019; Maneesh Kumar & Antony, 2008; Pearce, Pons, & Neitzert, 2018). According to Al-Najem, (2014), SMEs have a better chance of adapting to change than large companies, as they can internalize and crystallize information across departments more efficiently (Achanga, Shehab, Roy, & Nelder, 2006; Koponen, 2019). Moreover, SMEs are less hierarchical and bureaucratic than large firms, which means they are better at responding to change (Al-Najem et al., 2013).
Similarly, Rymaszewska (2014) suggested that SMEs have the potential and dynamism to adopt any form of continuous improvement initiative like Lean manufacturing or Lean six sigma. They are characterized by strengths that offer them higher advantages and faster communication. The quick decision-making process, unified organizational culture, greater flexibility, and quicker response to the customer means that they do not need radical change and can take what they want from Lean tools and techniques, and have a low resistance to change; and their ambitiousness to learn, which allows them to compete in the market and adopt new systems to stay alive (Al-Najem et al., 2013). These enabling factors are discussed in detail below.

**Faster Communication**

Manufacturing SMEs have better and more smooth communication channels due to the small size of organizations, and communication bottlenecks are easily identified and resolved timely (Rymaszewska, 2014). Faster communication allows for effective exchange and sharing of data and information within and outside the firms, resulting in more rapid decision-making (Aminu & Shariff, 2015). By implication, Lean requires a timely and efficient exchange of information at different levels of production and processing, which will enhance customer satisfaction through JIT delivery (Brunswicker & Vanhaverbeke, 2015). Also, effective communication can serve as a foundation for Lean readiness. It also facilitates better harmony between operational staff and management staff, thereby committing to change and improvement (Al-Balushi et al., 2014).

**2.2.2. Flexible Organizational Culture**

Eniola, Olorunleke, Akintimehin, Ojeka, & Oyetunji (2019) showed that quality initiatives apply to SMEs as they can build the required culture in terms of leadership and workforce involvement much more quickly than large companies since they have relatively little functional differentiation, which makes the management very close to workers. Koponen (2019) shared the same view, suggesting that the organizational culture in SMEs is full of energy and that they are willing to "learn and change" rather than "control"; the SME culture is more friendly since relationships between workers and top management are loose and informal. They are more flexible, respond quickly, have versatile human resources, and suffer less bureaucracy than larger organizations. In Nigeria, a study was carried out by Eniola et al. (2019) within the SME manufacturing sector; the study's findings reveal that organizational culture is an essential factor for performance. Shuaib & He (2021) also conducted research within manufacturing SMEs in Nigeria to assess the impact of organizational culture on quality management and innovation practices among manufacturing SMEs in Nigeria; the study reveals that clan culture and market culture were positively related to quality management, while adhocracy and hierarchy cultures were discovered to be negatively associated with quality management.

**Simple Organizational Structure**

Another distinction is that SMEs' organizational structure is flat, and decision-making is shorter due to fewer management layers, which leads to a better organization between departments and less resistance to change than in larger organizations (Al Badi, 2019). SMEs are also simpler to implement Lean initiatives as they are less bureaucratic than large organizations, making coordination and communication between staff effective (Alkhoraif, Rashid, & Mclaughlin, 2019). SMEs within the Nigerian context SMEs are also characterized by the flexible organization due to their smallness and nature of production, as they primarily engaged in the manufacturing of less advanced products and consumable items (Bank of Industry, 2018)

**Easy Access to Customers**

Most SMEs, by nature, have fewer customers compared to their larger counterparts, which gives them the upper hand to have direct contact and interaction with customers daily and understand their preferences (Alkhoraif et al., 2019). Impliedly, SMEs can take that advantage and build better customer relationships, enabling success in Lean readiness and deployment (Al-Najem et al., 2018). Also, fewer customers can allow customers to meet JIT more efficiently because they can easily predict their daily sales target and produce what is needed by the customer, thereby curtailing the wastage of resources (Antonelli & Stadnicka, 2018). In Nigeria study carried out within manufacturing SMEs to examine organizational readiness for change to Lean proposes a positive and significant relationship between customer relations and organizational readiness for change (Inuwa & AbdulRahim, 2020). Research carried out among manufacturing SMEs in Nigeria to examine strategic management practices on performance finds that customer relations and engagement significantly impact enterprise performance (Omelogo, 2019). Additionally, customer relations were found to have a positive and significant effect on s Nigerian manufacturing SMEs ' performance (Amin, 2021).

**Easy Access to Suppliers**

In manufacturing SMEs, suppliers are believed to have little bargaining power as they depend upon the tiny niche of the market (SMEs) to serve (Alkhoraif et al., 2019). This gives the SMEs the advantage of the bargain and sets rules for their suppliers' transactions. Also, because SMEs are at an early phase of the supply chain, it gives them direct access to numerous suppliers that procure raw materials at even lower costs than their larger counterparts (Jain, Bhatti, & Singh, 2015). Such a scenario can enable SMEs to acquire raw material timely and at a lower price which will, in turn, bring about JIT as well as cost minimization and hence serve as an enabler for Lean deployment and implementation (Yawar & Seuring, 2020). In the Nigerian context, a study conducted with quoted food and beverages manufacturing firms finds that supplier relationship management through supplier appraisal, supplier development, and supplier involvement has a positive and significant relationship on firm performance (Ajayi, Arogundade, & Opaleye, 2021). Also, a study carried out in Nigeria to estimate how supply chain activities of manufacturing firms influence their firm performance concludes that supplier management has a substantial impact on performance (Amole, Adebiyi, & Oyenuga, 2021).

**Better Teamwork and Group Cohesion**

Due to their size nature, SMEs have a more significant advantage in collaboration and group cohesion, enabling them to manage disputes effectively and work harmoniously (Al-Najem, Garza-Reyes, & ElMelegy, 2019). Unlike large-scale enterprises with numerous units and departments, which are complex to manage due to many employees and various channels of decision making, SMEs can efficiently work as a team and deliver more effectively. This characteristic of SMEs gives them an enabling chance to deploy Lean since teamwork is regarded as necessary in Lean practice (Seth, Seth, & Dhariwal, 2017). Further, working as a team facilitates early problem detection and enhances effective communication among team members, resulting in fewer errors and mistakes and promoting creativity and innovation (Ceptureanu, 2015).

**Challenges of Lean Manufacturing in SMEs in Nigeria**

Manufacturing SMEs are slow at embracing Lean initiatives, which can be a result of inhibiting factors like; resource constraints, dearth of skilled workforce, the poor customer and supplier relationships, which is seen as an essential requirement to succeed in Lean deployment (Alkhoraif et al., 2019; Belhadi, Bin, Sha, Touriki, & Fezazi, 2018). Also, SMEs face considerable difficulties in deploying Lean in terms of financial constraints and other required resources (Achanga et al., 2006). Some of the major inhibitors to Lean deployment in SMEs are discussed below:

**Lack of Top Management Commitment**

Management commitment is a crucial ingredient for the success of any new initiative (Pearce et al., 2018). Lack of management commitment leads to a swarm of other problems, like restricted access to resources, delays in decision-making processes, and improper communication (Achanga et al., 2006; Al-Najem et al., 2018). Lean readiness strictly requires consistent involvement, encouragement, and supervision of the top management (Alkhoraif et al., 2019; Panizzolo, Garengo, Sharma, & Gore, 2012). The top management has to set the vision, strategy, goals, and a direction to keep the project (Gurumurthy, Mazumdar, & Muthusubramanian, 2014; Uluskan, McCreery, & Rothenberg, 2018). Especially in the SME context, this factor is highly relevant due to the direct involvement of top management in regular operations, direct supervision, and deliveries (Yadav et al., 2018). By implication, top management needs to involve and commit itself assiduously for SMEs to be Lean ready and successfully deploy Lean initiatives (Habidin & Yusof, 2013). Within the context of Nigeria, a study carried out by Onogu (2005) reveals that lack of leadership commitment is among the key factors that hinder the success of SMEs in Nigeria. Similarly, poor leadership training and lack of expertise from SMEs' managers are significant failure factors for the successful implementation of lean initiatives within SMEs in Nigeria (Ogah et al., 2020; Oyelaran-oyeyinka, 2020; PWC, 2020).

**Lack of Employees' Involvement**

The inability of organizations to assess the readiness of their workforce before Lean deployment is seen as one of the major causes of Lean deployment failure (Yadav et al., 2018). Employees are critical to the organization's change initiative as they will be affected the most by the changes (Mueller, Jenny, & Bauer, 2012; Panizzolo et al., 2012). Therefore, successful Lean transformation requires that employees be carried along in setting organizational vision, goals, and values. Also, partaking of employees enhances the flow of ideas and information capable of contributing to problem-solving. The involvement of employees and management acts as cement in the wall (Saumyaranjan & Yadav, 2018; Yadav et al., 2018). In Nigeria, a study was carried out to examine the pains and gains of manufacturing SMEs; the study's finding reveals poor employee training and development is a significant barrier to SMEs' success (Olaore et al., 2020). Similarly, a survey conducted within Nigerian SMEs to investigate the role of servant leadership and the work climate created by the leader in reducing employee turnover; discovered that a high employee turnover rate is among the significant challenges SMEs face (Amah, 2020). In the same vein, it was found that employee management is among the key factors hindering the performance of SMEs in Nigeria (Adewale, Henry, 2021; Udofia et al., 2021).

**Poor Communication and Feedback**

Lack of effective communication between all levels of organizational hierarchy and between internal and external stakeholders inhibits Lean readiness among manufacturing SMEs (Yadav et al., 2018). This creates a gap in information exchange between management and their subordinates at the operational units, hindering performance and creating a bottleneck that lowers productivity (Gupta & Jain, 2013). Therefore, proper communication between the organization and its external customers is the critical success factor in Lean readiness (Vakola, 2014). Having a foundation for perpetuating successful Lean efforts, a communication strategy to acknowledge progress and exhibit reward efforts and work is essential to this readiness factor (Al-Balushi et al., 2014).

**Resistance to Change**

The sudden introduction of new methods makes employees uncomfortable because they are more comfortable with the traditional techniques, which made middle management and shop floor workers provide a "resistance to change" during Lean implementation (Azuan & Ahmad, 2013; Yadav et al., 2018). However, the reasons for resistance to change may be different for managers and workers. Fear of failure was of concern among managers, while workers were more apprehensive about their jobs (Mohamad Al-Najem et al., 2013). Similar observations were made of SMEs due to lack of knowledge about Lean may also create a negative mindset for employees (Belhadi et al., 2018; Shokri, Waring, & Nabhani, 2016). This shows that lack of readiness can lead to frustration among employees, resulting in resistance to change at various levels across the business and confusion due to the lack of fear of the unknown.

**Poor Organizational Culture**

An organization's culture may be defined as rules and behaviors covering trust, hierarchy, working environment, and fellow feelings (Dora et al., 2016). It is highly desirable to have an excellent organizational culture regarding communication skills, long-term focus, and strategic team while intending to deploy a Lean initiative. While most large organizations are cognizant of this, regardless of their choice of cultural models or success in using them, many SMEs, by default, reflect in their culture the personality of the owner/manager and are constrained by this in terms of the changes they may be able to undertake (Achanga et al., 2006).

**Inadequate Training and Skill of Human resources**

Trained and skilled employees are considered an asset for successful Lean deployment, as it strictly enhances the basic knowledge of Lean (Dora et al., 2016; Papazoglou, Elgammal, & Krämer, 2018). However, lack of training and skills is considered one of the reasons for a low degree of Lean implementation in SMEs (Chaple, Narkhede, Akarte, & Raut, 2018). Further, most SMEs sidestepped training programs due to financial and time constraints. This, in turn, results in employees' insufficient skill, thereby becoming an obstacle to succeeding in Lean deployment (Ping-yu, 2009). It is believed that poor knowledge of Lean concepts of SMEs, owner-managers, and employees is one of the significant factors that cause resistance to change from the operational level and lack of commitment from the top management (Alhuraish & Robledo, 2014). Organization members' prior knowledge of Lean practices, tools, and techniques can serve as an essential readiness factor for the successful deployment of Lean in manufacturing SMEs (Al-Najem et al., 2018; Al-Najem et al., 2013). It will mitigate the issue of resistance and lack of commitment to change in the overall organization, thereby paving the way for successful Lean deployment. It is argued that if the benefits of any new initiatives are clear to the stakeholders, they become motivated to adopt the industry (Yadav et al., 2018). Additionally, measuring improvements also motivate the stakeholders (Bhasin, 2012). However, in Nigerian manufacturing SMEs, a study aimed to determine SME managers' human resource management practices found that employee relations are among the main challenges SMEs face (Felicia & Ibeneme, 2019). Also, in similar research, it was found that human resources management due to poor motivation is a critical factor that hinders the performance of SMEs (PWC, 2020). Moreover, Adewale (2021) conducted a study on human resource management among SMEs in Nigeria; the study's findings reveal that lack of employee training and involvement is a significant hindrance to growth.

**Lack of Supplier Involvement**

Suppliers are an essential and integral part of a company (Yadav et al., 2018). They have seen the backbone of a manufacturing firm's survival and need to be fully involved and aware of organization supply schedules to avoid delivery failure, which may hinder production (Tasdemir & Gazo, 2018). Consequently, to endure and grow in today's dynamic and highly competitive environment, suppliers should be regarded and treated as an extension of the organization (Panizzolo et al., 2012; Yadav et al., 2018). It is necessary to extend the Lean implementation to their supply chain partners; however, it is difficult for SMEs to develop an integrative Lean supply chain as most SMEs have poor relationships with their suppliers (Afonso & Cabrita, 2015; Ai, Bakar, Hamid, Rasli, & Baharun, 2012). In other findings by Yadav et al. (2018), it was revealed that the suppliers were not actively involved in Lean deployment within manufacturing SMEs.

**Backsliding to Old Methods and Short-Term Planning**

Inability or neglect of organizations to assess overall organizational readiness for change before Lean deployment is the primary reason behind backsliding to old ways. Such situations arise in anticipation that new quality initiatives may result in workers' retrenchment (Emiliani, 1998; Wong & Wong, 2014). Similarly, the major problem in Lean implementation is the propensity to revert to traditional practices when difficulties are encountered (Randhawa & Ahuja, 2017; Ruffa, 2008). It was revealed that the supervisors and workers stuck to their old methods and did not follow the new techniques suggested by the consultants (Yadav et al., 2018). Most SMEs are characterized by short-term planning, hindering them from successfully deploying Lean and reaping its benefits (Wang & Liu, 2013). The Lean initiative is seen as a continuous improvement journey requiring proper planning and persistence and a long-term strategy to be released (Pakdil & Leonard, 2017). Most SMEs fail in lean deployment because of their attitude toward achieving quick results and cutting costs, which will not improve sufficiently with the Lean implementation journey (Chaple et al., 2018). Also, the paradox of seeing the need for change and being reluctant to introduce new ways of thinking might block the introduction of Lean manufacturing. Short-termism often makes companies unprepared for the changes; therefore, their reactions would mostly be chaotic and inadequate (Rymaszewska, 2014).

**Discussion and Conclusion**

**T**he study aims to identify the prospect and challenges of lean manufacturing deployment within SMEs in the Nigerian manufacturing sector. The study indicates that Nigerian manufacturing SMEs display numerous potential to deploy lean and reap its benefits successfully. Some of the possibilities include flexible organizational culture and structure, which gives them the ability to make faster decisions, unlike their large counterparts. Ease of customer access also offers a good prospect for deploying lean manufacturing within SMEs. Due to their small size and few customers, SMEs have direct contact with their customers, allowing them to share and exchange information faster and effectively, leading to higher customer satisfaction and involvement. It also shows that manufacturing SMEs within Nigeria have a flexible and better organization favorable for the deployment of lean initiatives. The findings correspond with studies of (Eniola et al., 2019; Shuaib & He, 2021).

However, despite the prospect of successful lean manufacturing deployment within SMEs in Nigeria, challenges persist, which serves as a bottleneck. Lack of leadership commitment due to poor knowledge of lean initiative and techniques made most SME managers fear deployment due to fear of unknown outcomes that may lead to loss. Lack of employee involvement and training is also among the factors hindering successful lean deployment; most employees within Nigerian manufacturing SMEs are unskilled workers and lack the basic knowledge of continuous improvement. Also, SMEs cannot afford to train their employees due to limited financial resources. Further, the change resistance is also among the challenges SMEs face in Nigeria; most SMEs prefer to use obsolete production methods, resulting in wastage and poor quality. Similar findings were made in the studies of (Ogah et al., 2020; Oyelaran-oyeyinka, 2020; PWC, 2020).

Consequently, the study concluded that top management and leadership should prioritize training and educating employees on crucial aspects of quality practices and continuous improvement initiatives that further improve their skills in relationships with customers and suppliers. Numerous studies have reiterated the role of employee relations in successful performance lean deployment. Though, SMEs may not have the financial resources to train and retrain their employees due to limited funds availability. It advised that the government, through its agencies, should collaborate with SMEs and provide and fund training on quality practices that can further facilitate Lean readiness and successful deployment of Lean in SMEs. The government can play a significant role in uplifting SMEs in the manufacturing sector and further contributing to industrialization.

**Recommendations for Future Research**

The current study is a literature review; therefore, it is recommended that future studies should conduct qualitative, quantitative, or mixed-method research to verify the literature further. Also, the prospective analysis can compare manufacturing and service SMEs for a better understanding of the peculiarities of lean manufacturing.

**References**

Achanga, P., Shehab, E., Roy, R., & Nelder, G. (2006). Critical success factors for lean implementation within SMEs. Journal of Manufacturing Technology Management, 17(4), 460–471.

https://doi.org/10.1108/17410380610662889
Adewale, Henry, O. (2021). Human resource management practices and small and medium scale business in nigeria. Nuevos Sistemas de Comunicación e Información, 9(2), 2013–2015.
Afonso, H., & Cabrita, M. D. R. (2015). Developing a lean supply chain performance framework in a SME: A perspective based on the balanced scorecard. Procedia Engineering. https://doi.org/10.1016/j.proeng.2015.12.389
Ai, T., Bakar, A., Hamid, A., Rasli, A., & Baharun, R. (2012). Adoption of supply chain management in SMEs. International Congress on Interdisciplinary Business and Social Science 2012 (ICIBSoS, 65(ICIBSoS), 614–619. https://doi.org/10.1016/j.sbspro.2012.11.173
Ajayi, O. M., Arogundade, K. K., & Opaleye, M. A. (2021). The Effects of Environmental Uncertainties on Performance of Quoted Food and Beverage firms in Nigeria. International Journal of Business Innovation and Research, 1(1), 1. https://doi.org/10.1504/ijbir.2021.10040695
Akter, S., & Yasmin, R. (2015). Implementation of kaizen for continuous improvement of productivity in garment industry inBangladesh. American Academic &Scholarly Research Journal, 7(3), 229–243.
Al-Balushi, S., Sohal, A. S., Singh, P. J., Hajri, A. Al, Farsi, Y. M. A., & Abri, R. Al. (2014). Readiness factors for lean implementation in healthcare settings – a literature review S. Journal of Health, Organisation and Management, 28(2), 135–153. https://doi.org/10.1108/JHOM-04-2013-0083
Al-Najem, M., Garza-Reyes, J. A., & ElMelegy, A. (2019). Measuring the lean readiness of Kuwaiti manufacturing industries . Measuring the lean readiness of Kuwaiti manufacturing industries. International Journal of Business Performance Management. https://doi.org/10.1504/IJBPM.2019.096467
Al-Najem, M, Jose Arturo, G.-R., & Ahmed, E. (2018). Measuring the lean readiness of Kuwaiti manufacturing industries. International Journal of Business Performance Management, 20(1), 70–92. https://doi.org/10.1504/IJBPM.2019.096467
Al-Najem, Mohamad. (2014). Investigating the factors affecting readiness for lean system adoption within Kuwaiti small and medium- sized manufacturing industries. University of Portsmouth.
Al-Najem, Mohamad, Dhakal, H., Labib, A., & Bennett, N. (2013). Lean readiness level within Kuwaiti manufacturing industries. International Journal of Lean Six Sigma, 4(3), 280–320. https://doi.org/10.1108/IJLSS-05-2013-0027
Al Badi, K. (2019). Implementation of marketing concept and organizational culture in SMEs in Al Buraimi – Oman. Benchmarking, 26(7), 2401–2414. https://doi.org/10.1108/BIJ-05-2018-0136
Alexander, P., Antony, J., Rodgers, B., Alexander, P., Antony, J., & Rodgers, B. (2019). Lean Six Sigma for small- and medium-sized manufacturing enInternational Journal of Quality & Reliability Managementterprises : a systematic review. International Journal of Quality & Reliability Management, 36(3), 378–397. https://doi.org/10.1108/IJQRM-03-2018-0074
Alhuraish, I., & Robledo, C. (2014). Key Success Factors of Implementing Lean Manufacturing and Six Sigma. 17th Toulon- Verona International Confernence Excellence in Service, 1–16. Liverpool: Liverpool John Moores University.
Alkhoraif, A., Rashid, H., & Mclaughlin, P. (2019). Lean implementation in small and medium enterprises : Literature review. Operations Research Perspectives, 6(July 2018), 100089. https://doi.org/10.1016/j.orp.2018.100089
Amah, O. E. (2020). The effect of servant leadership on employee turnover in SMEs in Nigeria : the role of career growth potential and employee voice. Journal of Small Business and Enterprise Development, 27(6), 885–904. https://doi.org/10.1108/JSBED-01-2019-0009
Amin, H. J. (2021). Influence of Marketing Strategies on the Performance of SMEs: Evidence from Abuja SMEs. Journal of Economics and Business, 4(1), 294–307. https://doi.org/10.31014/aior.1992.04.01.338
Aminu, I. M., & Shariff, M. N. M. (2015). Determinants of SMEs Performance in Nigeria: A Pilot Study. Mediterranean Journal of Social Sciences, 6(1), 156–164. https://doi.org/10.5901/mjss.2015.v6n1p156
Amole, B. B., Adebiyi, S. O., & Oyenuga, O. G. (2021). Multi-Criteria Decision Analysis of Supply Chain Practices and Firms Performance in Nigeria. Logistics, Supply Chain, Sustainability and Global Challenges, 12(1), 17–30. https://doi.org/10.2478/jlst-2021-0002
Andersson, R., Eriksson, H., & Torstensson, H. (2006). Similarities and differences between TQM, six sigma and lean. TQM Magazine, 18(3), 282–296. https://doi.org/10.1108/09544780610660004
Antonelli, D., & Stadnicka, D. (2018). Combining factory simulation with value stream mapping : a critical discussion. Procedia CIRP, 67, 30–35. https://doi.org/10.1016/j.procir.2017.12.171
Azuan, S., & Ahmad, S. (2013). Culture and Lean Manufacturing: Towards a Holistic Framework. International Journal of Business and Management, 1(1), 1–5.
Bank of Industry. (2018). Bank of Industry: Propelling Growth for a Sustainable Future.
Bayraktar, E., Tatoglu, E., Jothishankar, M. C., & Teresa, T. (2007). Evolution of operations management: Past, present and future. In Management Research News (Vol. 30).

https://doi.org/10.1108/01409170710832278

Belekoukias, I., Garza-Reyes, J. A., & Kumar, V. (2014). The impact of lean methods and tools on the operational performance of manufacturing organisations. International Journal of Production Research, 52(18), 5346–5366. https://doi.org/10.1080/00207543.2014.903348

Belhadi, A., Bin, Y., Sha, M., Touriki, F. E., & Fezazi, S. El. (2018). Lean production in SMEs : literature review and reflection on future challenges. Journal of Industrial and Production Engineering, 35(6), 368–382. https://doi.org/10.1080/21681015.2018.1508081

Bhasin, S. (2012). Performance of Lean in large organisations. Journal of Manufacturing Systems. https://doi.org/10.1016/j.jmsy.2012.04.002

Bhat, S. A., & Darzi, M. A. (2016). Customer relationship management: An approach to competitive advantage in the banking sector by exploring the mediational role of loyalty. International Journal of Bank Marketing. https://doi.org/10.1108/IJBM-11-2014-0160

Brunswicker, S., & Vanhaverbeke, W. (2015). Open Innovation in Small and Medium-Sized Enterprises (SMEs): External Knowledge Sourcing Strategies and Internal Organizational Facilitators. Journal of Small Business Management, 53(4), 1241–1263. https://doi.org/10.1111/jsbm.12120

Carreira, B. (2005). Lean Manufactuirng that works: powerfull tools for dramatically reducing waste and maximizing profits (First). New York: American Management Association.

Central Bank of Nigeria. (2019). Central Bank of Nigeria Annual Report 2019.

Ceptureanu, E. G. (2015). Research regarding change management tools on eu smes. Business Excellence and Management, 5(2), 28–32.

Chaple, A. P., Narkhede, B. E., Akarte, M. M., & Raut, R. (2018). Modeling the lean barriers for successful lean implementation: TISM approach. International Journal of Lean Six Sigma, pp. 1–23. https://doi.org/10.1108/IJLSS-10-2016-0063

Chiarini, A. (2013). Lean Organization: from the Tools of the Toyota Production System to Lean Office. https://doi.org/10.1007/978-88-470-2510-3

Choudhary, R., Kaushik, P., Nirmal, N., & Dhull, V. (2012). An Empirical Study on Role of Lean Manufacturing in Manufacturing Industry. International Journal of Engineering Technology, 3(1), 185–192.

Čiarnienė, R., & Vienažindienė, M. (2012). Lean manufacturing : theory and practice. Economics and Management Journal, 17(2), 726–732.

Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index. (2016). 2016 Global Manufacturing Competitiveness Index rankings by country (Vol. 2016). Retrieved from https://www2.deloitte.com/global/en/pages/manufacturing/articles/global-manufacturing-competitiveness-index.html#

Dennis, P. (2010). The Remedy: Bringing Lean Thinking Out of the Factory to Transform the Entire Organization. In Journal of Chemical Information and Modeling.

Dora, M., Kumar, M., & Gellynck, X. (2016). The Management of Operations Determinants and barriers to lean implementation in food-processing SMEs – a multiple case analysis. Production Planning & Control, 27(1), 1–23. https://doi.org/10.1080/09537287.2015.1050477

Earley, J. (2016). The Lean Book of lean: A concise guide to lean management for life and business. In John Wiley (First). West Sussex: John Wiley & Sons, Inc,.

Emiliani, M. L. (1998). Lean behaviors Outstanding Paper Award Winner ! Management Decision, 36(9), 615–631.

Emiliani, M. L. (2006). Origins of lean management in America: The role of Connecticut businesses. Journal of Management History, 12(2), 167–184. https://doi.org/10.1108/13552520610654069

Eniola, A. A., & Entebang, H. (2015). SME Firm Performance-Financial Innovation and Challenges. Procedia - Social and Behavioral Sciences, 195, 334–342. https://doi.org/10.1016/j.sbspro.2015.06.361

Eniola, A. A., Olorunleke, G. K., Akintimehin, O. O., Ojeka, J. D., & Oyetunji, B. (2019). The impact of organizational culture on total quality management in SMEs in Nigeria. Heliyon, 5(8). https://doi.org/10.1016/j.heliyon.2019.e02293

Enoch, O. K. (2013). Lean Six Sigma Methodologies and Organizational Profitability: A Review of Manufacturing SMEs in Nigeria. American Journal of Industrial and Business Management, 03(06), 573–582. https://doi.org/10.4236/ajibm.2013.36066

Felicia, N., & Ibeneme, O. T. (2019). Determination of Human Resource Management Practices of Managers of Small and Medium Enterprises in Anambra State , Nigeria. European Journal of Human Resource Management Studies, 3(2), 106–120. https://doi.org/10.5281/zenodo.3596979

Fercoq, A., Lamouri, S., & Carbone, V. (2016). Lean / Green integration focused on waste reduction techniques. Journal of Cleaner Production, 137. https://doi.org/10.1016/j.jclepro.2016.07.107

Garza-Reyes, Arturo, J., Wong, K.-K., Lim, M. K., & Kumar, V. (2016). Measuring the level of lean readiness of the Hong Kong's manufacturing industry. Proceedings of the 26th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM).

Garza-Reyes, J. A., Betsis, I. E., Kumar, V., & Radwan Al-Shboul, M. A. (2018). Lean readiness – the case of the European pharmaceutical manufacturing industry. International Journal of Productivity and

Performance Management, 67(1), 20–44. https://doi.org/10.1108/IJPPM-04-2016-0083

Ghobakhloo, M., & Hong, T. S. (2014). IT investments and business performance improvement : the mediating role of lean manufacturing implementation. International Journal of Production Research ISSN:, 52(18), 5367–5384. https://doi.org/10.1080/00207543.2014.906761

Gupta, S., & Jain, S. K. (2013). A literature review of lean manufacturing. International Journal of Management Science and Engineering Management. https://doi.org/10.1080/17509653.2013.825074

Gurumurthy, A., Mazumdar, P., & Muthusubramanian, S. (2014). Graph theoretic approach for analysing the readiness of an organisation for adapting lean thinking: A case study. International Journal of Organizational Analysis, 21(3), 396–427. https://doi.org/10.1108/IJOA-04-2013-0652

Habidin, N. F., & Yusof, S. M. (2013). Critical success factors of lean six sigma for the malaysian automotive industry. International Journal of Lean Six Sigma, 4(1), 60–82. https://doi.org/10.1108/20401461311310526

Inuwa, M., & AbdulRahim, S. (2020). Lean readiness factors and organizational readiness for change in manufacturing SMEs: The role of organizational culture. Journal of Critical Reviews, 7(5), 56–67. https://doi.org/10.31838/jcr.07.05.10

Ito, S. (2019). Enhancing shitsuke : a planned change intervention model for convenience stores in Japan. The TQM Journal, 31(1), 70–93. https://doi.org/10.1108/TQM-05-2018-0070

Jaffar, A., Abdulhalim, N. H., & Yosoff, N. (2012). Effective Data Collection and Analysis for Implementation of of Standardized Work (SW). Engineering, Journal of Mechanical, 9(1).

Jain, A., Bhatti, R. S., & Singh, H. (2015). OEE enhancement in SMEs through mobile maintenance: A TPM concept. International Journal of Quality and Reliability Management, 32(5), 503–516. https://doi.org/10.1108/IJQRM-05-2013-0088

Jones, S. (2002). Pull Production for the Shopfloor. Retrieved from http://www.taylorandfrancis.com

Kang, Y., & Ju, F. (2017). Identifying Bottlenecks in Serial Production Lines with Geometric Machines: Indicators and Rules. IFAC-PapersOnLine, 50(1), 13952–13957. https://doi.org/10.1016/j.ifacol.2017.08.2217

Koponen, E. A. (2019). LEADERSHIP FACTORS FOR A SUCCESSFUL LEAN IMPLEMENTATION IN MANUFACTURING SMEs.

Kumar, M., & Antony, J. (2008). Comparing the quality management practices in UK SMEs. Industrial Management & Data Systems. https://doi.org/10.1108/02635570810914865

Kumar, V., Sindhwani, R., Kalsariya, V., & Salroo, F. (2017). Adoption of Integrated Lean-Green-Agile Strategies for Modern Manufacturing Systems. Procedia CIRP, 61, 463–468. https://doi.org/10.1016/j.procir.2016.11.189

Liker, J. K., & Meier, D. (2006). The Toyota Way Feild Book: A practical guide for implementing toyota 4Ps (3rd ed.). https://doi.org/10.1036/0071448934

Liker, J. K., & Morgan, J. M. (2006). The Toyota Way in Services: The Case of Lean Product Development. Academy of Management Perspectives, 20(2), 5–20. https://doi.org/10.5465/AMP.2006.20591002

Mahendran, S., & Senthil Kumar, A. (2018). Implementing lean manufacturing principle in an automobile valve manufacturing industry with simulation analysis - A case study. Journal of the Balkan Tribological Association, 24(3), 600–607.

Marley, K. A., & Ward, P. T. (2013). Lean management as a countermeasure for "Normal" disruptions. Operations Management Research, 6, 44–52. https://doi.org/10.1007/s12063-013-0077-2

Martínez-Jurado, P. J., & Moyano-Fuentes, J. (2014). Lean management, supply chain management and sustainability: A literature review. Journal of Cleaner Production, 85. https://doi.org/10.1016/j.jclepro.2013.09.042

Martínez-lorente, A. R., Dewhurst, F., & Dale, B. G. (1998). Total quality management: origins and evolution of the term. The TQM Magazine, 10(5), 378–386.

Masuti, P. M., & Dabade, U. A. (2019). Materials Today : Proceedings Lean manufacturing implementation using value stream mapping at excavator manufacturing company. Materials Today Proceedings, (xxxx), 1–5.

Maware, C., Okwu, M. O., & Adetunji, O. (2021). A systematic literature review of lean manufacturing implementation in manufacturing-based sectors of the developing and developed countries. International Journal of Lean Six Sigma, ahead-of-p(ahead-of-print). https://doi.org/10.1108/ijlss-12-2020-0223

Ministry of Budget & National Planning. (2017). Economic Recovery & Growth Plan 2017-2020. Retrieved from https://yourbudgit.com/wp-content/uploads/2017/03/Economic-Recovery-Growth-Plan-2017-2020.pdf

Mohd, J., & Mojib, S. (2015). Production line analysis via value stream mapping : a lean manufacturing process of color industry. Procedia Manufacturing, 2(February), 6–10. https://doi.org/10.1016/j.promfg.2015.07.002

Monden, Y. (1994). Toyota Production System: An Integrated Approach to Just-In- Time. In The Roots of Logistics (Second). https://doi.org/10.1007/978-3-642-27922-5_14

Mourtzis, D., Papathanasiou, P., & Fotia, S. (2016). Lean Rules Identification and Classification for Manufacturing Industry. Procedia CIRP, 50, 198–203. https://doi.org/10.1016/j.procir.2016.04.097

Mueller, F., Jenny, G. J., & Bauer, G. F. (2012).

Individual and organizational health-oriented readiness for change Conceptualization and validation of a measure management intervention. International Journal of Workplace Health Managemen, 5(2), 220–236. https://doi.org/10.1108/17538351211268872

Nikiforova, A., & Bicevska, Z. (2018). Application of LEAN Principles to Improve Business Processes : a Case Study in Latvian IT Company. Baltic Journal of Modern Computing, 6(3), 247–270.

Ogah, M., Ogbechie, R., & Oyetunde, K. (2020). Ethical Challenges of Lean Implementation in Nigerian Manufacturing Industry : An Exploratory Study. Journal of Business and Social Science Review, 1(5), 29–39.

Ohiomah, I., & Aigbavboa, C. (2015). Lean Manufacturing Adoption and Implementation in. In F. Kongoli, T. Havlik, F. Pagnanelli, F. 2015, & LEAN (Eds.), 2015 SUSTAINABLE INDUSTRIAL PROCESSING SUMMIT (Vol. 11, pp. 385–390). FLOGEN 2015.

Olaore, G. O., Bimbo, A. O., & Udofia, E. E. (2020). The gains and pains of small and medium-scale enterprises ( SMEs ): the way forward for entrepreneurship development in Nigeria. Rajagiri Management Journal, 15(1), 53–68. https://doi.org/10.1108/RAMJ-09-2020-0056

Omelogo, Felicia, U. (2019). Strategic management and enterprise performance in small and medium enterprises: a study of selected smes in Nigeria. Interdisciplinary Journal of African & Asian Studies, 5(2), 51–64.

Onugu, B. A. N. (2005). Small and medium Enterprises (SMEs) in Nigeria: Problems and Prosepects. https://doi.org/10.1109/FITME.2010.5654703

Oyelaran-oyeyinka. (2020). SME: Issues, Challenges and Prospects. Abuja, Nigeria.

Pakdil, F., & Leonard, K. M. (2017). Implementing and sustaining lean processes: the dilemma of societal culture effects. International Journal of Production Research. https://doi.org/10.1080/00207543.2016.1200761

Pakdil, F., & Moustafa, K. (2014). Criteria for a lean organisation : development of a lean assessment tool. International Journal of Production Research, 52(15), 4587–4607.

Panizzolo, R., Garengo, P., Sharma, M. K., & Gore, A. (2012). The Management of Operations Lean manufacturing in developing countries : evidence from Indian SMEs. Production Planning and Control, 23(10–11), 769–788. https://doi.org/10.1080/09537287.2011.642155

Papazoglou, M. P., Elgammal, A., & Krämer, B. J. (2018). Collaborative on-demand Product-Service Systems customization. CIRP Journal of Manufacturing Science and Technology. https://doi.org/10.1016/j.cirpj.2018.08.003

Pearce, A., Pons, D., & Neitzert, T. (2018). Implementing lean—Outcomes from SME case studies. Operations Research Perspectives, 5, 94–104. https://doi.org/10.1016/j.orp.2018.02.002

Ping-yu, Y. (2009). The barriers to SMEs implementation of lean production and its countermeasures–based on SMEs in Wenzhou. Reform Strategy, 1(2), 148–151.

PwC. (2018). Nigeria: Economic Outlook - Top 10 themes for 2018. Retrieved from https://www.pwc.com/ng/en/assets/pdf/nigerias-economic-outlook-2018.pdf

PWC. (2020). PwC' s MSME Survey 2020 (Vol. 1).

Ramadas, T., & Satish, K, P. (2018). Identification and modeling of employee barriers while implementing lean manufacturing in small- and medium-scale enterprises. International Journal of Productivity and Performance Management, 67(3), 467–486. https://doi.org/10.1108/IJPPM-10-2016-0218

Randhawa, J. S. (2015). 5S – a quality improvement tool for sustainable performance : literature review and directions. International Journal of Quality and Reliability Management, 34(3), 334–361. https://doi.org/10.1108/IJQRM-03-2015-0045

Randhawa, J. S., & Ahuja, I. S. (2017). Evaluating impact of 5S implementation on business performance. International Journal of Productivity and Performance Management, 66(7), 948–978. https://doi.org/10.1108/IJPPM-08-2016-0154

Ruffa, S. (2008). Going Lean (First). New York: American Management Association.

Rüttimann, B. G., & Stöckli, M. T. (2015). Reasons for Operational Excellence Deployment Failures and How to Avoid Them. Journal Of Service and Management, (August), 612–618.

Rymaszewska, A. D. (2014). The challenges of lean manufacturing implementation in SMEs. An International Journal, 21(6), 987–1002. https://doi.org/10.1108/BIJ-10-2012-0065

Samuel, D., Found, P., & Williams, S. (2015). How did the publication of the book The Machine That Changed The World change management thinking ? Exploring 25 years of lean literature. International Journal of Operations & Production Management, 35(10), 1386–1407. Retrieved from https://www.emeraldinsight.com/doi/abs/10.1108/IJOPM-12-2013-0555

Saumyaranjan, S., & Yadav, S. (2018). of Indian manufacturing firms Lean implementation in small- and medium-sized enterprises An empirical study of Indian manufacturing firms. 25(4), 1121–1147. https://doi.org/10.1108/BIJ-02-2017-0033

Schwab, K., & World Economic Forum. (2018). The Global Competitiveness Report 2014-2015. In World Economic Forum Reports 2014. https://doi.org/ISBN-13: 978-92-95044-73-9

Seifermann, S., Böllhoff, J., Schaede, C., Kutzen, M., Metternich, J., & Schaede, C. (2018). Novel method to systematically implement Novel method to systematically implement lean production in machining areas A new methodology lean to analyze the functional and areas physical architecture of production in machining ex. Procedia CIRP, 78, 61–66. https://doi.org/10.1016/j.procir.2018.09.059

Seth, D., Seth, N., & Dhariwal, P. (2017). Application of value stream mapping (VSM) for lean and cycle time reduction in complex production environments: a case study. Production Planning and Control, 28(5), 398–419. https://doi.org/10.1080/09537287.2017.1300352

Shafiq, M., & Soratana, K. (2020). Lean readiness assessment model – a tool for Humanitarian Organizations' social and economic sustainability. Journal of Humanitarian Logistics and Supply Chain Management. https://doi.org/10.1108/JHLSCM-01-2019-0002

Shah, R., & Ward, P. T. (2007). Defining and developing measures of lean production. Journal of Operations Management, 25, 785–805. https://doi.org/10.1016/j.jom.2007.01.019

Shamah, R. A. M. (2013). Measuring and building lean thinking for value creation in supply chains. International Journal of Lean Six Sigma, 4(1), 17–35. https://doi.org/10.1108/20401461311310490

Shokri, A., Waring, T. S., & Nabhani, F. (2016). Investigating the readiness of people in manufacturing SMEs to embark on Lean Six Sigma projects: An empirical study in the German manufacturing sector. International Journal of Operations and Production Management, 36(8), 850–878. https://doi.org/10.1108/IJOPM-11-2014-0530

Shokri, A., Waring, T. S., Nabhani, F., Shokri, A., & Waring, T. S. (2016). Investigating the readiness of people in manufacturing SMEs to embark on Lean Six Sigma projects An empirical study in the German manufacturing sector. https://doi.org/10.1108/IJOPM-11-2014-0530

Shuaib, K. M., & He, Z. (2021). Impact of organizational culture on quality management and innovation practices among manufacturing SMEs in Nigeria Impact of organizational culture on quality management and innovation. Quality Management Journal, 0(0), 1–26. https://doi.org/10.1080/10686967.2021.1886023

Soltan, H., & Mostafa, S. (2015). Lean and agile performance framework for manufacturing enterprises. Procedia ManufacturingManufacturing, 2(February), 476–484. https://doi.org/10.1016/j.promfg.2015.07.082

Tarurhor, E., & Emudainohwo, O. (2020). Lean Manufacturing and Firm Performance in the Palm-Oil Industries in Delta State, Nigeria. International Journal of Economics and Business Administration, VIII(Issue 4), 319–331. https://doi.org/10.35808/ijeba/590

Tasdemir, C., & Gazo, R. (2018). A Systematic Literature Review for Better Understanding of Lean Driven Sustainability. Journal of Sustainability. https://doi.org/10.3390/su10072544

Thomas, P. (1995). Total Quality Management as Competative Advantage: A Review and Empiricak Study. Strategic Management Journal, 16(1), 15–37. Retrieved from http://links.jstor.org/sci?=0143-2095%29

Udofia, E. E., Adejare, B. O., & Olaore, G. O. (2021). Direct and indirect impact of quality management on the integrated performance of medium-scale manufacturers. The TQM Journal, (February), 1754–2731. https://doi.org/10.1108/TQM-08-2020-0174

Uluskan, M., McCreery, J. K., & Rothenberg, L. (2018). Impact of quality management practices on change readiness due to new quality implementations. International Journal of Lean Six Sigma, 9(3), 351–373. https://doi.org/10.1108/IJLSS-05-2017-0049

United Nations industrial Development Organization. (2020). Competitive Industrial Performance Report 2020. Retrieved from https://stat.unido.org/content/publications/competitive-industrial-performance-index-2020%253a-country-profiles

Vakola, M. (2014). Lack of communication. Effective communication between all levels of organisational hierarchy as well as between internal and external stockholders is mandatory for any management initiatives including lean. It works as cement between bricks. A proper com. Leadership and Organization Development Journal, 35(3), 195–209. https://doi.org/10.1108/LODJ-05-2012-0064

Valentine, K., & Gupta, K. (2019). Implementation of Shitsuke for Sustaining with 5S Culture in a Mechanical Workshop. Proceedings of the International Conference on Industrial Engineering and Operations Management, 808–819. Pilsen, Czech Republic.

Vinodh, S., Somanaathan, M., & Arvind, K. . (2013). Development of value stream map for achieving leanness in a manufacturing organization. Journal of Engineering, Design and Technology, 11(2), 129–141. https://doi.org/10.1108/JEDT-01-2010-0007

Wang, C., & Liu, X. B. (2013). Integrated production planning and control: A multi-objective optimization model. Journal of Industrial Engineering and Management, 6(4), 815–830. https://doi.org/10.3926/jiem.771

Womack, J, & Jones, D. (1997). Lean Thinking-Banish Waste and Create Wealth in Your Corporation. The Journal of the Operational Research Society, 48(11), 1148. https://doi.org/10.1057/palgrave.jors.2600967

Womack, James, Jones, D., & Roos, D. (1990). The Machine That Changed The World. In The Machine That Changed The WORLD (pp. 1–11).

Womack, P., & Jones, D. (2003). lean Thinking: Banish waste and create wealth in your Corporation (Revised Edition) (Second). New York: Free Press Inc.

Wong, W., & Wong, K. (2014). Synergizing an ecosphere of lean for sustainable operations. Journal of Cleaner Production, 85, 51–66. https://doi.org/10.1016/j.jclepro.2014.05.093

World Bank Group. (2020). World Bank national accounts data, and OECD National Accounts data files. Retrieved from https://data.worldbank.org/indicator/NV.IND.MANF.ZS?locations=NG-MY-CN-EU

Yadav, O. P., Rahaman, M., & Lal, V. (2017). Lean Implementation and Organizational Transformation: A Literature Review. Engineering Management Journal, 29(1), 1–16. https://doi.org/10.1080/10429247.2016.1263914

Yadav, V., Jain, R., Mittal, M. L., Panwar, A., & Lyons, A. C. (2019). The propagation of lean thinking in SMEs. Production Planning and Control, 30(10–12), 854–865. https://doi.org/10.1080/09537287.2019.1582094

Yadav, V., Jain, R., Mittal, M. L., Panwar, A., & Sharma, M. K. (2018). An appraisal on barriers to implement lean in SMEs. Journal of Manufacturing Technology Management. https://doi.org/10.1108/JMTM-12-2017-0262

Yawar, S. A., & Seuring, S. (2020). Reviewing and conceptualizing supplier development. Benchmarking, 27(9), 2565–2598. https://doi.org/10.1108/BIJ-01-2020-0018

Journal of Social Sciences and Management Studies
https://doi.org/10.56556/jssms.v1i3.172 ISSN: 2957-8795

RESEARCH ARTICLE

# Water Demand among Hostel Residents in Tertiary Institutions in Calabar, Cross River State, Nigeria

**Salvation Eteng[1*] , Mary Mount Zion[2]**

[1]University of Uyo Nigeria

Corresponding Author: Salvation Eteng, salvationeteng@gmail.com
Received: 04 May, 2022, Accepted: 27 June, 2022, Published: 01 July, 2022

**Abstract**

Water is life and living things depend on it for survival. The role water plays in determining survival has made it a very essential commodity. At the household level, water is needed for several reasons including personal hygiene, food preparation, laundry, drinking and general sanitation. Occupants of hostels in tertiary institutions demand water for the reasons listed above and more hence, the study focused on analysing water demand among hostel occupants in tertiary institutions in Calabar, Nigeria. Data for the study were elicited using copies of questionnaire, interviews and personal observations. A total of 400 copies of questionnaire were distributed in five (5) hostels where students in tertiary institutions reside in the study area. Specifically, data were obtained to ascertain the water demand and supply situation in hostels while the determinants of water consumption in hostels were also addressed. Data were analysed using various statistical approaches such as means/averages, simple percentages, frequencies and Pearson product moment correlation based on statistical package for social sciences (SPSS). The study established a strong positive relationship between water demand and supply in the hostels. Hence, it was observed that water consumption is influenced by supply/availability. The study further observed that the determinants of water consumption in the study area include environmental factors, source of water, gender, among others. Notably, it was deduced from the study that residents of hostels consume water in larger quantity when the temperature is high. Based on the findings, it was suggested that access to improved water be maximized in hostels. The need to ensure regular appraisal on the water demand/supply situation in hostels was also buttressed in the study.

**Keywords:** Residential hostels; source of water; traveling distance; water consumption; quantity/quality of water

## Introduction

Water is a very essential commodity. It influences the survival of all living things. The importance of water has made it to be regarded as one of the basic necessities of life (Eteng and Ajom, 2021). Considering the importance of water, access to remains a very important feature. According to the World Health Organization (2018), water that should be consumed has to be from clean, safe and healthy sources. This implies that people should have access to safe and potable water for consumption from improved sources and within considerable walking distances from water sources to homes of consumers. Against this assertion, access to potable water is measured by the number of people that can obtain water in required quantity and quality on daily basis from healthy sources. Eteng and Ajom (2021) further define access to water incorporating variables such as considerable walking distance to water source, considerable tariff from water vendors, obtaining water that is of good water quality and in sufficient quantity from source of water supply.

From the foregoing, it is clear that water demand is ever increasing among humans. Holistically, there are indicators to water consumption. For instance, population/household size, activities embarked upon, pattern of water consumption and general behavior of people define largely the pattern of water consumption in a particular area (Eteng, 2021). Hence, scholars have found a relationship between household size and water consumption, walking distances, income of consumers and household activities and water consumption among people in various cities of the developing world (Ofem, Atser and Nwagbala, 2019; Okah, Peter and Allain, 2019; Eteng, 2021). Across places, water demand/consumption differs based on activities, water availability and accessibility to water hence, water provision has become a very vital subject of interest in recent studies considering human dependence on it and the ever increasing nature of human population which only deepens the extent to which water is consumed. Furthermore, water is reguired for consumption in homes, offices, schools and administrative institutions. However, the level to which water demand differs across institutions has not been given attention in available studies especially as it relates to educational institutions specifically in residential halls that are provided for students in tertiary institutions. Arising from existing studies and observations, it is obvious that in several tertiary institutions, accommodation is provided by school authorities to students in residential halls. Water being an indispensable commodity is largely demanded for consumption in residential halls for varied purposes. Available studies (Sattar, Afridi, Afridi and Khan, 2019; Ugwoha and Nwike, 2019; Daud and Abdullah 2020) have shown that water is a serious necessity for students in residential halls in tertiary institutions across the world. The studies reported that students demand/consume water at varying levels depending on body system, activities, seasons and preferences.

Earlier, findings in existing studies posit that among facilities and services needed to be made available and accessible to students in tertiary institutions so as to make residential hostels in tertiary institutions enjoyable, water is a very essential commodity. They opined that when students have access to basic amenities and services, they are likely to be in better state of health to face their academics (Eteng, Mfon and Okoi, 2022; Dare nd; Igudia and Agbonifoh, 2019). The studies above showed that when residents in hostels in tertiary institutions are not provided with sufficient water and at required quantity, their attitude towards sanitation becomes a problem. Generally, sanitation and water availability tend to be intertwined as the earlier tends to depend on the later to a large extent. Eteng *et al.*, (2022) further used water accessibility and water availability as a variable in determining the level of housing satisfaction of students in tertiary institutions. Okoi, Okoi and Eteng (2022) showed that access to facilities and amenities in schools influences the academic performance of students to a large extent. Buckley (nd) pointed out that students in residential halls demand water for laundry, sanitation/personal hygiene, cleaning of surfaces and drinking. Sattar, Afridi, Afridi and Khan (2019) were of the view that water consumption in student hostels is increasing astronomically and it patterns of consumption is tied to activities, water availability and so on.

Apart from water accessibility, another important feature that is concerned with water consumption is water quantity and quality. This is because the quality and quantity of water influences water demand (Eteng, 2021). Notably, when available water for consumption is not sufficient in terms of quantity and of quality, consumers are likely to turn to other sources in order to satisfy water needs. However, water consumption is mostly predicated upon activities, household size, income and seasons (Eteng and Ajom, 2021). Across the globe, water demand/consumption differs. For instance, residents of United States of America consume at least 200 litres of water per person on daily basis and 50 litres per person per day is required for people in India (Eja, Otu, Atu and Edet, 2011). The WHO and UNICEF (2008) suggest the consumption of at least 50 litres of water for domestic use on daily basis. The World Health Organization (WHO) (2010) further suggested at least 50 litres of water for daily use. They explained that, 5 litres is required for drinking, 20 litres is expected to take care of daily hygiene and sanitation, 15 litres is required for bathing and 10 litres should be used for food preparation. Ugwoha and Nwike (2019) showed that hostel residents in Port Harcourt depend on borehole for water needs. Their study revealed that water quality largely influence water consumption. In Calabar, Nigeria, there are several tertiary institutions that provide residential accommodation to their students. These hostel residents demand water for domestic use. For instance, they demand water for laundry, sanitation, personal hygiene and other purposes. Despite the obvious nature that students in residential halls consume water, the level to which they demand water has not been given adequate attention in available studies. This implies that there is a gap on knowledge that needs to be filled. Against this backdrop, this study was conceived.

**Literature Review**

Water is a very essential commodity. Due to the importance of water, various policy pronouncements have been made in time past by relevant government agencies, development partners and institutions globally. Notably, the United Nations (UN) posited that by the end of 2015, water supply problems will be conquered. The institution captured improved water supply as one of the millennium development goals which were expected to be fully implemented by the end of 2015. Long after 2015, developing countries are still battling with water crisis. Residents especially in rural areas are deprived while contaminated and poorly treated water is continually supplied to urban residents in major towns and cities of developing world (Eteng and Ajom, 2021).

At present, access to water from safe, healthy and improved sources remain a serious problem. Specifically, the World Health Organization (WHO) and United Nations Children Emergency Fund (UNICEF) explained that of 1.1 billion persons representing 17 percent of the world's population do not have access to improved and safe water. The above statistics are applicable where access to water is measured in terms of availability of at least 20 litres of water per person per day from potable and improved water sources within a distance of 1 kilometre. Therefore, access to water is a challenge.

In Nigeria, current realities explain water supply inadequacies in terms of quality and quantity. This is against earlier pronouncements by the Nation that water supply will be largely funded and facilitated by governments at all levels. Atser and Akpabio (2015) pointed out that policies have been generated to facilitate funding for the supply of water. Holistically, the ability of a system to function maximally depends to a large extent on the availability of funds, thus, the National Water Supply policy in Nigeria made provision for the funding process in water supply to be shared across the three tiers of government and the host communities. As reported by Atser and Akpabio (2015), the Federal government is expected to handle 50 percent of the bulk of cost required for the development of water supply systems in both rural and semi-urban areas while 30 percent of the cost is to be shouldered by the federal government in the urban areas. The state government is to take 25 percent of the cost in rural areas while 30 percent of the cost is shouldered in semi urban area. The state government also foot 60 percent of the cost required to supply water in the urban areas. The Local Government bears 20 percent of the cost in rural areas and 15 percent of cost in semi-urban areas. The community further bear 5 percent of the bills required to supply water. Sadly, the policies contradict with current realities as the pronouncements have only remained in principle with little or no attempts to ensure implementation same.

Institutions of learning are not without being affected from the inability of the government and relevant agencies to ensure adequate water supply as noted in existing studies. In studies bordering around water supply in educational institutions, scholars have shown that in spite of the importance and necessity of water to life, there is inadequacies in it supply thus affecting the general consumption/demand of water. Along this line, Igudia and Agbonifoh (2019) observed that sanitation practices among students residing in Ugbowo campus of University of Benin students are poor. The poor sanitation practices are not unconnected with the water supply situation which is worrisome. The quantity of water that is expected to be provided is not met hence, the students are forced to manage the little that is made available thereby constraining their attitude to sanitation. It should be noted that sanitation is a serious derivative of the water supply situation being that it is almost impossible to ensure proper hygiene without application of water in the sanitation process. Igudia and Agbonifoh further observed that sanitation practices among the students is equally influenced by gender and age of the students. For personal hygiene, toilet and environments to be clean, the place of water cannot be over emphasized. Aggregating the quantity of water that should be made available for students in residential hostels, Daud and Abdullah (2020) posited that demand/consumption of water by students in residential halls has long surpassed 250 litres hence, there is need to improve on the water quantity that is supplied. Otaki, Otaki, Sugihara, Mathurasa, Pengchai and Aramaki, (2008) showed that water that is required for personal hygiene per head surpasses 124.8 litres where it can be classified as the highest residential water consumption activity compared with other. Apart from personal hygiene, water is equally demanded for meal preparation, drinking, washing of clothes among others hence, water demand among students need to be given adequate attention in residential hostels.

In related studies, Yagoub, AlSumaitu, Ebrahim, Ahmen and Abdulla, (2019) in United Arab Emirates University (UAEU) appraised water consumption for three years (2016, 2017, and 2018). Their study applied geographic information system (GIS) in determining where water use is high within the university, when and why water is used, who uses it, and how to minimize its usage. They were of the view that water use is directly proportional to the number of students and is lower during winter. They modelled the relationship that exist between water use and number of students in academic buildings using least squares regression. Their results indicated a low correlation between water use and the number of students. They attributed the outcome of their results to centralized usage of academic buildings and movement of students between them. They equally observed that water use within the institution is higher in residential halls of students. Their study showed average water consumption to be 47.5 percent averaging 81.7 litres per person per day. The outcome of their study show lower metrics for residential halls of students in the United States which depict 121 liters per person per day and Europe that indicate 143 liters per person per day (Yagoub *et al*., 2019). Furthermore, Dare, (nd) made similar observations in Kogi State University, Nigeria. Dare’s study revealed that only 62 percent of students were satisfied with the water supply situation in the residential halls of the school. He noted that students are facing difficulties in accessing water hence, their consumption of the commodity is proportionally affected.

## Materials and Methods

### Study Area

Calabar metropolis is the study area. It is the Capital city of Cross River State, Nigeria. It is situated between Longitudes 8 º18` East and 8º26` East of the Greenwich meridian and Latitudes 4º50’ North and 5º67’ North of the Equator. It is bordered in the North with Odukpani Local Government Area and in the West with the Calabar River. In the East, it share boundaries with the Great Kwa River and in the South, it share boundaries with the Atlantic Ocean. Calabar is an ancient city with very interesting and fascinating history. The residents of the Calabar had early contact with the colonial masters and as such, there is massive literacy in the area (Bassey, Amba and Eteng, 2022). Between 1882 and 1906, Calabar served as the first administrative capital of Nigeria. The city has been growing astronomically over the years. Going by the population trend, the city had a total of 82,100 in 1975 while in 1978, the population had increased to 159,599. The total number of persons increase to 140,200 in 1985 and by 1991, the population was 217,800 320,862. The 2006 population census results put the total number of humans at 375,196 (Agbor *et al.*, 2022). The bulk of the population is made up of migrants from rural areas. Migration into the city has become inevitable due to disparity in the provision of facilities and services of the area when compared to the adjoining rural areas. The people are largely engaged in commercial, industrial, educational and small scale farming activities. Being the first administrative headquarters of Nigeria, the residents of Calabar had early contact with the colonial masters therefore, literacy level is very high. Presently, there are several tertiary institutions in Calabar Most of the schools provide hostel accommodation for it students.

Due to the nature of the study, data were obtained from 5 (five) tertiary institutions in the study area. Data on the quantity of water demand per head was obtained using copies of questionnaire. Data on water supply situation in the study area were elicited from water regulation units in the institutions. Therefore, the main instrument for data collection in the study was questionnaire. However, observations, linear measurements and interviews with authorities that are concerned with water supply in the institutions aided data availability. In order to determine the quantity of water that is consumed by students in residential halls, data related to water demand/consumption among students were obtained for seven days then, averages/mean were taken on the total water consumption and used in the analysis (Eteng, 2021). To this end, respondents in the study consist of both students and representatives of the school authorities that are concerned with water supply to the students. In all, 400 copies of questionnaire were purposively distributed. Specifically, 80 copies of questionnaire were purposively distributed in each of the 5 schools to help in collecting data on the water consumption, demand and supply situation. Questionnaire adopted various approaches in obtaining responses closed and open ended questionnaires. Information were entered into the SPSS environment and analysed appropriately. Furthermore, data for the study were presented using tables while analysis were operationalized using descriptive statistics, simple percentages and Pearson product moment correlation based on statistical package for social sciences. Data on water demand/consumption among students were compared with the quantity that is supplied using averages in order to establish the strength of the relationship between the variables.

**Findings and Discussions**

**Quantity of water demand and supply**

The Pearson Product Moment Correlation was used in examining the association between the quantity of water demand and supply in residential hostels within tertiary institutions in Calabar. The results are shown in Table 1. The results indicate a positive relationship between the variables. Furthermore, the magnitude of the Pearson correlation coefficient determines the strength of the correlation such that a Pearson correlation coefficient ($r = 0.978$) suggests a strong relationship. The level of statistical significance (i.e., the -p-value) is shown in the second row of the matrix. Its value can range from -1 for a perfect negative linear relationship to +1 for a perfect positive linear relationship while a value of 0 (zero) indicates no relationship between two variables.

In order to analyse the linear relationship between the variables in the sample population, the level of statistical significance was tested. However, it was shown that the level of statistical significance (p-value) of the correlation coefficient was 0.004. This imply that there is a relationship between the two variables. The sample size, n (i.e., the number of observations) shown in the third row of the matrix/ box, indicates that there are 5 samples. In other words, the sample size of 5 was used in this study. The results of the test align with earlier findings. For instance, Eteng (2021) observed a relationship between water demand and supply. His study noted that the relationship is not without disparities in the quality of water that is supplied to respondents. Ofem *et al*., (2019); Eteng and Ajom (2021) in separate studies also reported similar findings. They attributed the relationship to be due to the fact that in spite of the failure of government institutions in supplying water, consumers demand alternative means so as to satisfy their water needs. Eteng and Ajom specifically established that water consumers will explore every available options to obtain water so as to satisfy their needs since water is a necessity of utmost importance. This finding therefore imply that while students may not have access to improved and safe water sources, they may turn to unhealthy sources only to ensure that their water demands are satisfied.

**Determinants of Water Demand**

The determinants of water demand/consumption in residential halls within tertiary institutions were assessed and presented in Table 2. As noted in the table most water consumers in hostels were identified to be females. However, males consume less water when compared to the females as noted in the table. Differences in water consumption among students on the basis of gender were earlier carried by Daud and Abdullah (2020). Their findings revealed a difference in the water consumption of both males and females and there agreed that females consume larger water quantity. Dare (nd) opined that water influence sanitation among students and females demand more water quantity to be able to maintain personal hygiene. Furthermore, Mohammed (2014) argued that female water consumption outweigh that of the males being that females engage in more activities that result in cleaning, personal hygiene among others that require large water quantities.

Table 1: Relationship Between Water Demand and Supply in Tertiary institutions in Calabar

| | | Water demand | Water supply |
|---|---|---|---|
| Water demand | Pearson Correlation | 1 | .978** |
| | Sig. (2-tailed) | | .004 |
| | Sum of Squares and Cross-products | 702.800 | 2050.000 |
| | Covariance | 175.700 | 512.500 |
| | N | 5 | 5 |
| Water supply | Pearson Correlation | .978** | 1 |
| | Sig. (2-tailed) | .004 | |
| | Sum of Squares and Cross-products | 2050.000 | 6250.000 |
| | Covariance | 512.500 | 1562.500 |
| | N | 5 | 5 |

Statistical Computations, 2022

The study also indicated that the dominant age bracket of water consumers was observed to be those between 18 years and 25years. In earlier studies (Sattar *et al.*, 2019; Okoi *et al.*, 2022 and Eteng *et al.*, 2022) were of the observation that university hostels are predominantly occupied by students within the age bracket of 18 and 25years. By extension, people within this age bracket tend to be the most consumers of water. Furthermore, the predominant ages of those that demand water in hostels are within the very active ages and as such, can be involved in varying activities that are capable of demanding water in large quantity. The table further revealed that students depend mainly on borehole in order to satisfy water needs. This is due to the fact that other water sources are largely unstable. That is, water sources such as rain-harvest, water board among others are unstable hence, attention has long been turned by school authorities to ensure the drilling of boreholes for it students. Mohammed (2014) made similar observations when he pointed out that poor regulatory frameworks for supply of water and the bundle of costs required in treating water has long made government agencies to prefer the idea of supplying water that is drilled. In most cases, the water from boreholes is not treated before use hence, there are indications that it quality is likely to be poor and it may be unhealthy and unsafe for drinking and general consumption (Ugwoha and Nwike, 2019).

Equally, it was observed that residents in the halls mainly consume larger water quantities during early hours. This variation in water consumption is occasioned by the need for preparation of meals, personal hygiene/sanitation and many other activities by students in residential halls that demand water. It was also observed that environmental factors such as weather, climate and seasons determine water consumption to a large extent. For instance, the quantity of water demand during periods of high temperature exceeds water demand during normal temperature.

Table 2: Determinants of Water Demand

| Variables | Categories | Percent |
|---|---|---|
| Gender | Female | 51 |
| | Male | 49 |
| Age | Below 18 | 32 |
| | 18-25 | 41 |
| | 25 – above | 27 |
| Water source | Borehole | 100 |
| | Rain harvest | - |
| | Water board | - |
| Period of intense water use | Morning | 49 |
| | Afternoon | 16 |
| | Evening | 35 |
| Environmental factors | Yes | 100 |
| | No | - |

Source: Field Survey, 2022

**Conclusion and Recommendations**

The study analysed water demand among students in residential halls in tertiary institutions in Calabar, Nigeria. Holistically, water is of immense importance and there is need to ensure that students in tertiary institutions are given maximum access to water especially those that are residents of hostels. This is because it is difficult to meet up with needs such as sanitation, personal hygiene and even house chores including food preparation, laundry and so on without sufficient water. Furthermore, residents of hostels in tertiary institutions in the study area demand water at varying quantities depending on their gender, environmental factors and needs. For instance, students drink and consume larger water quantity when the temperature is high than in days of moderate temperature. Water availability plays a very significant role in water consumption. For instance earlier studies (Eteng 2021; Eteng and Ajom, 2021) which the study align with have shown that water demand is significantly tied to water availability/sufficient supply. The issues bordering inadequate water supply are disastrous. For instance, when students are not given access to adequate water and in required quantity, there are indications that health problems will be unavoidable. Equally, when the quality of water that is available is not fit enough for consumption, the health of the public and indeed the residents of tertiary hostels will be threatened. From the study observation, it is obvious that there is need to ensure that water supply has to be maximized and that good quality water should be made accessible to students as the quality of water consumed play a very significant role in determining the state of health of students. It is therefore inferred that water that is made available to students be treated appropriately using best global standards. Furthermore, water should be made available in sufficient quantity so as to help students maximize water use while carrying out personal hygiene, sanitation and satisfying other water needs. Finally, the institutions should carry out regular appraisals and review of the water supply situation in the hostels within tertiary institutions. This will help check water leakages, pipe damage and other problems that may arise in the water provision process in the hostels.

**References**

Agbor, E. A., Inah S. A and Eyo, E. I (2022). Comparative analysis of major crimes in Calabar Municipality and Calabar South Local Government Areas, Cross River State, Nigeria. International Journal of Innovative Research and Advanced Studies, 9(2): 102-111

Atser, J and Akpabio, U (2015). Appraisal of public policy on water supply in Akwa Ibom State, Nigeria. Journal of Environmental Design, 10(2): 73 - 84

Bassey, S. I., Amba, N. E and Eteng, S. U (2020). Assessment of domestic solid waste transportation to approved dumpsite in Calabar, Nigeria. International Journal of Research and Sustainable Development, 7(3): 165 – 185

Buckley, R. A (nd). https://nature.berke Water Use Characteristics of College Students. ley.edu/classes/es196/projects/2004final/buckley.pdf

Eja, E. I., Otu, J. E., Atu, J. E and Edet, E. O (2011). Urban water supply as a catalyse for socio-economic transformation of Port Harcourt City, Nigeria. International Journal of Humanities and Social Science, 1(2): 89 – 94

Eteng, S. U (2021). Analysis of water demand and supply in rural areas of Yakurr Local Government Area of Cross River State, Nigeria. MURP Dissertation. University of Uyo. 123p

Eteng, S. U and Ajom, S. K (2021). Household characteristics and water consumption among residents of Calabar, Cross River State, Nigeria. International Journal of Scientific & Engineering Research, 12(3): 565-571

Eteng, S. U., Mfon, I. E and Okoi, B. J. (2022). Housing satisfaction among students in tertiary institutions in Calabar, Cross River State, Nigeria. Journal of Environmental Science and Economics, 1(3):15-22

Igudia, E. O and Agbonifoh, J. A (2019). Sanitation practices among undergraduate students at the University of Benin, Nigeria. Makerere Journal of Higher Education,11(183-93)

Mohammed, N. (2014). Management of domestic water by women in parts of Kano State, Nigeria. Academic Research International, 5(4): 360 - 369

Ofem, B. I., Atser, J and Nwagbala, M. C (2019). Household income and water consumption rate in Uyo Urban, Nigeria. Journal of Environmental Design, 14(2): 66 – 74

Oka, I. A., Peter, O. H. and Alain, I. S. (2019). Sources and accessibility of potable water in Yakurr Local Government Area, Cross River State, Nigeria. International Research Journal of Public and Environmental Health, 6(5): 82 - 88.

Okoi, B. J., Okoi, C. E and Eteng, S. U (2022). Influence of school environment on academic performance of secondary school students in Calabar Metropolis, Cross River State, Nigeria. Journal of Social Sciences and Management, 1(3): 16 – 22

Otaki, Y., Otaki, M., Sugihara, H., Mathurasa, L., Pengchai, P., & Aramaki, T. (2008). Microcomponents survey of residential indoor water. Drinking Water Engineering and Science, 21- 23.

Sattar, A., Afridi, A., Afridi, A and Khan, I (2019). Investigation of water consumption pattern in students hostels. . J. of Mech. Cont. and Math. Sci., 14(2): 427 - 445.

Ugwoha, E and Nwike, C.O. (2019). Assessment of water quality of boreholes in Choba campus hostels of University of Port Harcourt. Uniport Journal of Engineering and Scientific Research, 2(1): 41-47

WHO (2018) Drinking-water. World Health Organization fact sheets. https://www.who.int/en/news-room/fact-sheets/detail/drinkingwater (Retrieved 3rd September, 2019).

World Health Organization (WHO) and United Nations Children Emergency Fund (UNICEF), (2008). Joint monitoring programme for water supply and sanitation (Retrieved October 2019, from www.wssinfo.org).

World Health Organization (WHO) and United Nations Children Emergency Fund (UNICEF), (2008). Joint monitoring programme for water supply and sanitation (Retrieved April, 2022, from www.wssinfo.org).

World Health Organization (WHO), (2010). Global Water Supply and Sanitation Assessment Joint Monitoring Program for Water Supply and Sanitation Series Reports. New York, WHO.

World Health Organization (WHO), (2010). Global Water Supply and Sanitation Assessment Joint Monitoring Program for Water Supply and Sanitation Series Reports. New York, WHO.

Yagoub, M. M., AlSumaitu, T, S., Ebrahim, L., Ahmen Y and Abdulla, R (2019). Pattern of Water Use at the United Arab Emirates University. Available at https://www.mdpi.com/2073-4441/11/12/2652/htm (Retrieved 5th May, 2021)

Journal of Social Sciences and Management Studies ISSN: 2957-8795
https://doi.org/10.56556/jssms.v1i3.178

RESEARCH ARTICLE

# The Relevance of E-Aesthetics in The Sustainability Of Nigerian Libraries In The Digital Era

**Bakare, Oluwabunmi Dorcas[1], Ogunbanjo Emmanuel 'Gbemisola.S[2*]**

1Department of Information Management, Faculty of Communication & Information Sciences
Lead City University Oyo-State, Nigeria
[2]College Library, Ogun State College of Health Technology, Ilese-Ijebu, Nigeria

Corresponding author: Ogunbanjo Emmanuel 'Gbemisola.S, Shmily.gbemisola@hotmail.com
Received: 20 June, 2022, Accepted: 01 08 July,2022, Published: 10 July, 2022

**Abstract**

The digital library brought with it several challenges which do not fully erode the traditional libraries in developing countries such as Nigeria as most libraries have become a complex entity with the operation of both the traditional and the digital libraries. Therefore, as library service providers are trying to guarantee the smooth operation of the physical library, they are also struggling to ensure a seamless digital library. Therefore, various aspect of the design such as the aesthetic condition which include the e-aesthetics need to be put into consideration in designing the digital library web pages respectively. It was on this premise that this study focused on the relevance of e-aesthetics in the sustainability of Nigerian Libraries in this digital era. The study adopted an interpretivist research paradigm hinged on the a systematic literature review strategy of journal articles, books, and other online materials in addition to focusing on empirical studies between year 2000 and 2021 from Google Scholar. A content analysis was deployed and information resources obtained were grouped into the major themes to address the objective of the study. The findings of this study revealed that as aesthetic conditions and facilities were of high relevance and significance in the traditional library operation towards ensuring increase usage and sustainability, so the relevance of e-aesthetics in the sustainability of Nigerian Libraries in the digital era cannot be underestimated if Nigeria libraries must keep abreast to the global effect of digital transformational effect on the library and information service system. It recommends that e-aesthetic issues should be taken into considerations in the development of digital library webpages to create a user-friendly environment and also ease of usage is of high premium in ensuring increase usage and sustainability of Nigerian library.

**Keywords:** Aesthetic; E-Aesthetic; Digital Library; Traditional Libraries; Nigeria Libraries

## Introduction

The global transformation of the library and its activities by the development of the digital technologies is no more a myth which has given rise to digital libraries. A major challenge brought about by the operation of digital library is that in the past, the traditional library operates through the development and management of various collection which include books, journals, articles, among others towards making such available, accessible, manage and preserve it (Council on Library and Information Resources, 2021). However, in recent times, the Information and Communication Technology (ICT) has progressively transformed the traditional methods of information collection, storage and retrieval leading to the operation of the digital library (**Ali,** Hussain & un-Nisa, **2017).** A major challenge that the digital library poses is that, it does not fully erode the traditional libraries. Ogunsola (2011) noted that the existence of digital libraries implies that users do not have to visit a building to meet their information needs but users still need some assistance in locating the some needed information.

Leeder (2013) tends to approach the effect of digital library on traditional library from two perspectives and providing two schools of thoughts. The first is that, when approached rhetorically as an institution, which focused on the traditional library as physical spaces and materials, it has no further question, the traditional library has not future but this doesn't mean that libraries as institutions are dead. Second, if viewed from the digital perspective, the digital library has replaced the traditional library through expanded vision, encompassing the traditional values and features and extending outward to vast and free but also licensed digital resources. Hence, the digital library could be a combination of the traditional and digital resources. Resources of e-library include e-journal, e-books, and other online databases.

Meanwhile, there is need to ensure sustainability of library operation in Nigeria. According to Omiunu (2012), sustainability implies stable, endurable, and consistent, and could also be connected to making something last and does not crumble in the face of formidable problems and challenges. Several factors have been investigated to ensure library sustainability which could include environmental factors, institutional factors, personal or staff factors, among others (Ucha, 2021). Oyewumi Oladapo and Adegun (2017) also noted that library aesthetic is a major factor that could influence its usage and sustainability. In the traditional library, different aesthetics is a type of design principle that stipulates the design's pleasing qualities and includes factors such as color, pattern, shape, visual weight, among others that are directed to complement designs' usability, and also enhance functionality with attractive layouts (Interaction Design Foundation, 2021). Hence, Oyewumi et al. (2017) noted that libraries in Nigeria generally must be functional in design, aesthetically pleasing and inviting in appearance which cuts across the thermal, visual and aural aspects. The thermal ensures that the environmental temperature and relative humidity are put into consideration else, air conditioning should be provided with comfortable cross ventilation in hot and humid environment such as Nigeria. Visual puts into consideration the level of illumination as very low or excessive illumination can cause discomfort in the use of library. For the aural, all unwanted sound that could cause distraction hence, the need to put this into consideration in the design and building of a library.

With regards to digital environment, webpage of digital libraries could provide a good visual aesthetics towards providing insight into the physical design features of the web pages. Lavie and Tractinsky (2004) noted that as aesthetics is a major factor that could influence library usage in the traditional environment, also, website aesthetics which in this study is referred to as e-aesthetic is an important factor that influences visitors' pleasure and satisfaction with the website especially in the use of digital library. Studies related to website aesthetics have focused on sensory information provided by the website environment couple with its influence on the web users such as users' attitudes, preferences, satisfaction, continual usage, among others (Deng and Poole, 2012). In the traditional environment, the sensory information from different senses could include vision, hearing and smell and could inform aesthetic experiences, while in the digital library experience, the visual aesthetics is the major focus because of the fundamental role that vision plays in the apprehension of website.

The long history of debate on aesthetic provided two school of thoughts which are the objective and subjective views of aesthetics (Deng and Poole, 2012). The objective perspective postulated that aesthetics as an objective property of things that focuses on the attributes of a thing that make it beautiful and appealing while the subjective view posits that it could be subjective, that is it resides in the user's experience and judgment. Drawing from the environmental aesthetics, human–computer interaction, among others, the webpage visual complexity and webpage visual order are two salient webpage aesthetic features in the digital environment (Deng & Poole, 2012; Tseng & Tseng, 2014).

Adapting the theory of Birkhoff (1933), aesthetic value is inversely proportional to its Complexity C and directly proportional to its Order. When approached from economic term, this implies that the value or utility obtained by users is an inverse function of the amount of information content of diversity or numerosity of information provided on the website, and directly a function of the degree of spatial arrangement, upon which resolution of the tension depends. This reveals that the more the contents that are placed on digital library, the less the value or utility that users would obtain and the more the spatial arrangement, the higher the value or utility that users would obtain from such webpage. Library web page includes a variety of visual elements hence, it is also essential to identify the general e-aesthetic design variables that could inform webpage aesthetics in the digital library system especially in developing countries.

Website aesthetic relevance in library studies which connotes the desire for certain types of aesthetic experiences was informed by the study of Green (1997) and focuses on whether it should be calm and soothing, or emotionally invigorating, or warmly sensitive, among others. Studies of web aesthetics have examined different aspects of web design. Aesthetic effects of individual webpage elements could include image colour, image size, font size, link style, text-background colour combination, column width, typography, pictures, video clips, flash animations, among others (Hall and Hanna, 2004; Thorlacius 2007; Schmidt, Liu & Sridharan. 2009).

Order refers to the degree of organization of the electronic environment such as the extent of coherence, fittingness, congruity, legibility and clarity while Complexity connotes that the multiplicity of the relationships among the parts of an entities in the electronic environment (Arnheim, 1966; Oostendorp and Berlyne, 1978; Nasar, 1984; Tseng & Tseng, 2014). According to Deng and Poole (2012), coherence, fittingness, and congruity relate to how the components of the website are united together to enhance harmony. The legibility of the electronic environment characterizes the ease with which the component parts could be recognized and further suggests the ease with which user could gain knowledge on the navigation around the environment couple with the deployment of such knowledge to search for and reach a destination. Clarity implies the ease to identify the different elements of the electronic environment.

In electronic practice and in the digital library, Order and Complexity are interrelated and antagonistic in the sense that Order in a digital library web design could reduce Complexity while Complexity could reduce Order (Arnheim, 1966; Tseng & Tseng, 2014). Hence, a certain level of Order could be needed to achieve accurate website Complexity as complexity without order could not be appealing to digital library users. However, some level of Complexity could be necessary to bring interest to high degrees of Order because, order without complexity could cause boredom (Arnheim, 1966; Tseng & Tseng, 2014). Hence, the design of digital library environmental Complexity and Order should be combined to ensure that Complexity provides visual richness, while Order structures diversity and helps to reduce uncertainty and provide understanding (Nasar, 2000; Deng and Poole, 2012)- this is what is referred to as e-aesthetic of digital library in this study. In Nigeria, studies have focused on the relevance of aesthetics in the traditional library (Usuka, 2017; Oyewumi et al., 2017; Usuka, Nwachukwu & Nwachukwu, 2019) but very little have focused on the relevance of e-aesthetic in the sustainability of Nigerian libraries in the digital era. Therefore this study focuses on examining the relevance of e-aesthetics in the sustainability of Nigerian Libraries in the digital era.

**Literature Review**

Several studies such as Oyedum (2011); Usuka (2017); Oyewumi et al. (2017); Usuka et al. (2019); among others have focused on the relevance of aesthetics in the use and sustainability of Nigerian Libraries. Library aesthetics facilities such as ventilation, lightning, temperature, signage, art drawing; interior and exterior decoration; furniture, among others influence use and purpose of library patronage. Usuka et al. (2019) noted that the users' perception is that library aesthetics make the library very conducive, comfortable and exciting for reading, learning and research purposes. Studies such as Oyewumi et al. (2014) and Ibrahim and Sakiyo (2015) revealed that library patronage can be enhanced through its aesthetics. But in recent times, with the advent of technology and digital development which has given rise to the digital library, the traditional library has been challenged and these aesthetics that accompany its functioning seem to also be subjected to challenge. Deng & Poole (2012) noted that the use of Internet and other related technologies have continued to grow, various organizations which include the library have also continued to increase their recognition towards possessing a competitive edge through web presence and engaging in e-commerce such as the digital library.

Digital libraries could refer to as set of electronic and or online resources that are associated with technical capabilities and are designed to serve specific users community in an online environment (Buckland's electronic library, 2012; Gani & Magoi, 2014). It could also be referred to as a typical library with collection resources stored in digital formats which is an opposite of the traditional or print, microform, or other media hence are accessible through computers and other technology aided methods such as the internet, among others (Trivedi, 2010). It include text, visual material, audio material, video material, stored as electronic media, along with means for organizing, storing, and retrieving the files and media contained in the library collection (Aman and Norliyanan, 2002). Also, information resources are made available through computer process and the acquisition, storage, preservation, retrieval and dissemination of resources are carried out using digital technologies such as the Internet, among others (Gani & Magoi, 2014). In the transformation of the traditional libraries, it was believed that the digital library operation has brought lasting solutions to the challenges faced by the previous. But it wasn't long before it was discovered that the new digital library also has with it several other challenges. Hence, several studies have also tend to investigate the various factors that could affect the sustainability and use of the digital libraries especially in the developing countries such as Nigeria.

According to Edem and Ani (2015) noted that frequent power outage, poor attitude of managements, among others are factors that could affect the use and sustainability of electronic libraries in Nigerian. Also, Lavie and Tractinsky (2004) and Oyewumi et al. (2017) stated that library aesthetic which could also include the e-aesthetic influence the usability and sustainability of library which also include digital libraries. Website aesthetics as referred in this study as e-aesthetic, is an important factor that influences visitors' pleasure and satisfaction with the website especially in the use of digital library (Lavie and Tractinsky, 2004). Website aesthetics or e-aesthetic include the different aspects of web design and include image colour, image size, font size, link style, text-background colour combination, column width, typography, pictures, video clips, flash animations, among others (Hall and Hanna, 2004; Thorlacius 2007; Schmidt et al. 2009). With the trend and development of the digital library, it should be important to understand the relevance of e-aesthetics in the sustainability of Nigerian Libraries in the digital era.

**Theoretical Underpinning**

The study adapts the theory of Birkhoff (1933). Birkhoff defines an aesthetic measure and applies it to several types of objects from different perceptions which include the visual such as 3D objects, and auditory such as in music, poetry, among others. it is defined in respect to the effort which the object requires of the perceiver (which is the complexity), and the pleasing or displeasing features which can be recognised in the object by the perceiver (which represents the order). Birkhoff (1933) provides a mathematical formula of aesthetic value as:

$M = O/C$,

This suggests that aesthetic value (M) of an image is inversely proportional to its Complexity C on which attention and tension depend, and directly proportional to its Order upon which resolution of the tension depends. The Complexity C refers to the amount of information content which include its diversity or numerosity on which attention and tension depend, and Order implies the degree of spatial arrangement which include in unity and symmetry upon which resolution of the tension depended.

According to Birkhoff, such aesthetic experience which could also be an e-aesthetic consists of three primary consecutive stages which are:

- The preliminary attempt of attention, which is for the act of perception, and increases in proportion to the complexity (C) of the object or website as used in this study to imply the digital library;
- The feeling of value or aesthetic measure (M) which rewards this attempt; and
- The realisation that the object which in this paper refers to as website for operation of digital

library is characterised by a certain harmony, symmetry, or unity called order (O).

In summary, the aesthetic quality or rather e-aesthetic quality as regards to this paper is in relation to the attention which is required to perceive the object or constituents of the digital library in its entirety, and is counterbalanced by their harmony or order. Therefore, the load of attention grows in proportion to the complexity of the objects or constituents of the digital library, and its counterbalancing quantity, often found in the forms of harmony or symmetry (Douchová, 2015).

**Methodology**

A systematic review strategy was adopted and information and materials used include journal articles, books, and other online materials that focused on addressing the relevance of e-aesthetics in the sustainability of Nigerian Libraries in the digital era which is a major aim of this study. Also, focus was on empirical studies which inform the information and materials deployed in this study. Also articles considered for this systematic review study include those between the year range of 2000 and 2021. The wide elasticity of the year range was attributed to the need to achieve a wide range of information and material resources that would account for the time span of the digital era in Libraries in Nigeria hence providing a better ground to affirm the relevance of e-aesthetics in the sustainability of Nigerian Libraries.

Also, several information and materials were searched for using the google scholar and through other search engines such as Google and yielded several results and outcomes but very few (only seven articles) were selected to fit in this study due to limited studies addressing the relevance of e-aesthetics in the sustainability of Nigerian Libraries. The articles selected includes the works of Unagha (2009); Ibrahim and Sakiyo (2015); Oyewumi et al. (2017); Usuka et al. (2019); Gbotosho (2019); Tella (2020); Okechukwu and Anunobi (2020). In addition, a content analysis is deployed and information resources obtained are grouped into the major themes of the research objectives to address the objective of the study.

**Results**

The study used seven studies from the total downloaded studies due to the limited studies that focused on this aspect at the local level. Unagha (2009) examined Nigerian university libraries and the challenges of users' service demands in the 21st Century and revealed that users complained about the non-application of technology to library service delivery among Nigeria libraries pose significant effect on the available limited resources, inefficient reference service, and less competition among the library service providers. This further revealed that with the low level of application of technology to library service delivery among Nigeria libraries, the aesthetic condition of digital library may pose significant challenge.

Adopting a descriptive survey design, and using questionnaires to collect data and information from students and lecturers, Ibrahim and Sakiyo (2015) investigated the aesthetics and utilization of University libraries in North East zone of Nigeria; and found that there was a significant relationship between library aesthetic facilities and the use of libraries in federal universities in North-East zone of Nigeria. This could also implies that library e-aesthetic could pose significant influence on the use and sustainability of Nigerian Libraries especially in the digital era. Understanding the fact that in the digital library era, most library operate the traditional and the digital library to augment each other hence, the library aesthetic which could mean both the traditional and the digital library forms posed significant effect on the use and sustainability of Nigerian Libraries

Also, Oyewumi et al. (2017) examined library aesthetic and environmental condition as motivating factors for reading in Olusegun Oke Library, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria using a survey design, questionnaire was also deployed to elicit information from the respondents of the study. Their findings revealed that revealed that the majority of the users were not satisfied with the aesthetic interior of the library with a vast majority indicating that library aesthetic motivates them to use the library hence, e-aesthetic holds elastic relevance in achieving Nigeria libraries sustainability in the digital era.

Usuka et al. (2019), examined the availability of library aesthetics for enhanced educational purpose of library patronage by users in federal university libraries in South east, Nigeria using a descriptive survey design and questionnaires to obtain information from the library users. The result revealed that available library aesthetics facilities considered include ventilation, signage, lightning, art drawing; interior and exterior decoration. It was also revealed that library aesthetics influence users' educational purpose of library patronage; and users' perceived library aesthetics make the library conducive, comfortable and exciting for reading, learning and research. This could further mean that with respect to e-aesthetic, library e-aesthetics could also influence online users' educational purpose of its patronage hence, posing great effect on its sustainability.

Gbotosho (2019) investigated the electronic library services and its patronage among undergraduates in the faculty of health sciences, Osun State University, Osogbo, Osun state, Nigeria. The study noted that there is a pace of change in library operations brought about by new technologies which has posed significant effect on the use of electronic library services in Osun State University. Also, the use of electronic library and Information Communication Technology tool is of necessity and very germane for in recent digital era. Hence, the relevance of e-aesthetic with regards to the use and sustainability of Nigerian libraries in the digital era.

Tella (2020), in a survey research, investigated the interactivity, usability and aesthetic as predictors of undergraduates' preference for university library websites in Kwara State, Nigeria. Issues considered in the study of Tella (2020) which were related to aesthetics in library websites designed were interface, interactivity, visual appeal, content quality, ease of use in terms of access and navigational links, and usability among others. He also noted that previous studies have treat aesthetic with respect to only library space, use, and preferences and that aesthetic with respect to library websites especially in the context of Africa, Nigeria inclusive are limited. The findings of the study revealed that aesthetics of library website is a major criterion that could pose significant impetus on preference for university library website however, users' perceptions and ratings with respect to aesthetics of library websites was very low. This implies that aesthetics of library website which in this study is referred to as e-aesthetics is very relevant in the use and sustainability of Nigerian Libraries especially in the digital era.

Okechukwu and Anunobi (2020) examined the availability and usability of academic library websites by undergraduates in federal universities in South east Nigeria. The study adopted a descriptive survey design and information were obtained through the structured questionnaire. The findings revealed that in the last six months, users have approximately visited the library website on a weekly basis for various needs such as e-text books, reference materials, searching for "what is new", library catalogues, databases, e-journals, e-newspapers, among others. This showed that the e-aesthetic becomes very germane in the Nigeria libraries system especially in the digital era of library development.

**Discussion**

Following the findings of this study, several empirical evidences have been provided to justify the relevance of e-aesthetics in the use and sustainability of Nigerian Libraries in the digital era. For example, the findings revealed there is a low level of application of technology to library service delivery among Nigeria libraries, hence, the aesthetic condition of digital library may pose significant challenge to the use of libraries in Nigeria. The findings of this study revealed that there was a significant relationship between library aesthetic facilities and the use of libraries in federal universities in North-East zone of Nigeria which could also implies that library e-aesthetic could pose significant influence on the use which include users' educational purpose and sustainability of Nigerian Libraries especially in the digital era. This is because according to Usuka et al. (2019), users' perceived library aesthetics as an important factor that make the library very conducive, comfortable and exciting for reading, learning and research purposes hence, the relevance of e-aesthetic. Also, the findings of this study showed that library aesthetic which could also include library e-aesthetics motivates the use of library hence, e-aesthetic holds elastic relevance in achieving Nigeria libraries sustainability in the digital era. This supports the findings of Ogunsola (2011) that in the operation of digital libraries, users may not have to visit a building to meet their information needs but they still need some assistance in locating some needed information.

The findings of this study revealed that e-aesthetics in library websites designed were interface, interactivity, visual appeal, content quality, ease of use in terms of access and navigational links, and usability among others. The findings of the study also further revealed that aesthetics of library website which in this study is referred to as e-aesthetics is very relevant in the use and sustainability of Nigerian Libraries especially in the digital era. Putting into consideration the assertion of Omiunu (2012) about sustainability, it implies that for Nigerian libraries to be stable, endurable, and consistent, and last longer not crumbling in the face of formidable problems and challenges, the e-aesthetic of library website or electronic page should put into considerations good interface design that is user friendly, interactivity, visual appealing, content quality, ease of use in terms of accessing and navigational links, and its usability, among others. This supports the findings of Oyewumi et al. (2017) that library aesthetic which in this study is referred to as e-aesthetic is a major factor that could influence its usage and sustainability in Nigeria. This also add up to the works of Hall and Hanna (2004); Thorlacius (2007); Schmidt et al. (2009); among others that aesthetic effects of individual webpage elements could include image colour, image size, font size, link style, text-background colour combination, column width, typography, pictures, video clips, flash animations, among others.

This could be used to further augment the theory of Birkhoff (1933) on aesthetic value which is inversely proportional to its Complexity C and directly proportional to its Order. With regards to e-aesthetic, the Order could refer to the degree of the organization of the electronic contents towards ensuring effective coherence, fittingness, congruity, legibility and clarity. On the other hand, the Complexity could connote the fact that it should be ensured that the website is created in a state that could accommodate several information that should meet users needs especially in this digital era of information explosion but ensuring an effective relationships among the parts of the entities in the electronic environment. This further explains the justification of the works of Birkhoff (1933); Arnheim (1966); Oostendorp and Berlyne (1978); Nasar (1984); Nasar (2000); Deng and Poole (2012); among others about the relevance of e-aesthetic in the sustainability of Nigerian libraries.

The findings revealed that many library users use library websites often to access various needs such as e-text books, reference materials, searching for "what is new", library catalogues, databases, e-journals, e-newspapers, among others hence for efficient and effective usage, the e-aesthetic website condition becomes very germane in the Nigeria libraries system especially in the digital era of library development. This findings could be used to in conjunctions with the previous works of Oyedum (2011); Usuka (2017); Oyewumi et al. (2017); Usuka et al. (2019); among others who focused on the relevance of aesthetics in the use and sustainability of Nigerian Libraries that e-aesthetic is also relevant in the use and sustainability of Nigerian libraries in the digital era since both are functioning hand-in-hand in the society.

**Conclusion and Recommendations**

In conclusion, as aesthetic condition and facilities were of high relevance and significance in the traditional library operation towards ensuring increase usage and sustainability, so the relevance of e-aesthetics in the sustainability of Nigerian Libraries in the digital era cannot be underestimated if Nigeria libraries must keep abreast to the global effect of digital transformational effect on the library and information system. Therefore, e-aesthetic issues which relate to the website design towards ensuring user-friendly environment and also ease of usage is of high premium in ensuring increase usage and sustainability of Nigerian library. To this end, it was recommended that:

i. The management of the Nigerian library system should ensure that the e-aesthetic of the library websites has improved interactivity features towards attracting higher usability and sustainability.

ii. Similarly, library website administrators and designers should put into considerations the aesthetic features that are acceptable to users and could ensure further usage by users,

iii. The university library websites should be designed in a more interactive, usable and aesthetic ways that should include several information which represent the complexity yet ensuring orderliness of the information contents placed for the users.

iv. Libraries should endeavour to ensure that their websites are easily accessible, appealing, and current, because any library that hopes to use the online medium to reach its users should ensure that there is ease of communication with users and navigation aids are fully implemented and functional in the website.

v. Essential websites links should be incorporate to ease easy navigation from one point to another.

vi. It should also be ensured that the physical and traditional libraries are also designed with focus and consideration on the physical aesthetics to ensure comfortability and usability towards ensuring its sustainability along side with the digital libraries in Nigeria.

vii. Also, it would be necessary to provide necessary up dates of information and materials placed online and continuous maintenance culture so that the complexity would not at one time work against its orderliness.

**References**

Ali A., Hussain A. and un-Nisa R. (2017). Chapter one: Access to Scholarly Literature in Jammu and Kashmir Higher Education Institutions under NLIST Programme, in Modern Technologies for Reshaping Libraries in the Digital Era, Anthology, 173 Pages, https://www.grin.com/document/367578

Aman, M. L and Norliyanan, B (2002). Excellent People-Oriented Stragies for Digital Libraries World Libraries. 12(2), http://www.worlib.,org/vol.12. no2/aman.vi2n2html

Arnheim, R. (1966). Order and complexity in landscape design. In R. Arnheim (ed.), Toward a Psychology of Art, University of California Press, Berkeley and Los Angeles, CA.

Birkhoff, G. D. (1933). Aesthetic Measure. Harvard University Press, Cambridge, MA

Buckland electronic library, (2012). Redesigning Library Services: A Manifesto. Chicago: American Library Association

Council on Library and Information Resources, (2021). Library Roles in a Digital Age, https://www.clir.org/pubs/reports/pub108/digital/

Deng L. and Poole M. S., (2012). Aesthetic design of e-commerce web pages – Webpage Complexity, Order and preference, Electronic Commerce Research and Applications, 11 (4), 420-440, https://doi.org/10.1016/j.elerap.2012.06.004.

Douchová V. (2015). Birkhoff's Aesthetic Measure, ACTA Universitatis Carolinae, Philosophica Et Historica 1 / Miscellanea Logica X, PAG. 39–53, https://karolinum.cz/data/clanek/5184/PheH_1_2015_03_Douchova.pdf

Edem N. and Ani O.E. (2015). Development of electronic libraries in Nigerian universities, Information Technologist (The) 12(2), https://www.ajol.info/index.php/ict/article/view/130102

Gani E. and Magoi J. S. (2014). The Emergence Of Digital Libraries Services In Northwest Nigerian Universities: Challenges And Prospects. Library Philosophy and Practice (e-journal). 1184. http://digitalcommons.unl.edu/libphilprac/1184

Gbotosho A.S. (2019). The Electronic Library Services And Its Patronage Among Undergraduates In The Faculty Of Health Sciences, Osun State University, Osogbo, Osun State, Nigeria, International Journal of Library and Information Science Studies 5(1), 41-54,

Green, R. (1997). The role of relational structures in indexing for the humanities. Knowledge Organization, 24(2), 72–83

Hall, R. H., and Hanna, P. (2004). The impact of web page text-background color combinations on readability, retention, aesthetics and behavioral intention. Behavior & Information Technology, 23, 3, 183–195

Ibrahim, F. L. & Sakiyo, J. (2015). Aesthetics and utilization of university libraries in North East Zone of Nigeria. Information Impact, 6(3),1-20.

Interaction Design Foundation (2021). Aesthetics, https://www.interaction-design.org/literature/topics/aesthetics

Lavie, T., and Tractinsky, N. (2004). Assessing dimensions of perceived visual aesthetics of web sites. International Journal of Human–Computer Studies, 60(3), 269– 298.

Leeder K. (2013). Adventures in rhetoric: the traditional library, https://www.inthelibrarywiththeleadpipe.org/2013/adventures-in-rhetoric/

Nasar, J. L. (1984). Visual preferences in urban street scenes: a cross-cultural comparison between japan and the United States. Journal of Cross-Cultural Psychology, 15, 79–93.

Nasar, J. L. (2000). The evaluative image of places. In W. B. Walsh, K. H. Craik, and R. H. Price (eds.), Person-Environment Psychology, Lawrence Erlbaum Associates, Mahwah, NJ

Ogunsola, L. A., (2011). The Next Step in Librarianship: Is The Traditional Library Dead? Library Philosophy and Practice (e-journal). 606. https://digitalcommons.unl.edu/libphilprac/606

Okechukwu N.N. and Anunobi C.V. (2020). Availability and Usability of Academic Library Websites by Undergraduates in Federal Universities in South East Nigeria, UNIZIK Journal Of Research In Library And Information Science (UJOLIS) 5 (1), 87-98

Omiunu O.G., (2012). Deploying Indigenous Knowledge for Sustainable Development, African Journal of Sustainable Development, 2(1), 149-170, Centre for Sustainable development (CESDEV), University of Ibadan.

Oostendorp, A., and Berlyne, D. E.(1978). Dimensions in the perception of architecture: identification and interpretation of dimensions of similarity. Scandinavian Journal of Psychology, 19, 73–82.

Oyedum, G. U. (2011). Physical facilities as determinants of undergraduate students' use of federal university libraries in Nigeria. Library Philosophy and Practice. http://unllib.unl.edu/LPP/on 17 Feb, 2017

Oyewumi, O. O., Oladapo, Y. O. & Adegun, A. I. (2014). Users perception and library patronage among postgraduate students: A case study of Ladoke Akintola University of Technology Ogbomosho, Oyo state. Information Impact, 2(10): 55-64.

Oyewumi O. O., Olatunji E. T. and Adegun A. I. (2017). Library Aesthetic and Environmental Condition as Motivating Factors for Reading in a State University in Nigeria, IOSR Journal of Research & Method in Education (IOSR-JRME) 7(4; II), 51-58

Schmidt, K. E., Liu, Y., and Sridharan, S. (2009), Webpage aesthetics, performance and usability: design variables and their effects. Ergonomics, 52(6), 631–643.

Tella A. (2020). Interactivity, usability and aesthetic as predictors of undergraduates' preference for university library websites, SA Jnl Libs & Info Sci., 86(2), 16-25

Thorlacius, L. (2007). The role of aesthetics in web design. Nordicom Review, 28(1), 63– 76

Trivedi, M. (2010). Digital Libraries: Functionality, Usability and Accessibilty. Library Philosophy and Practice, http://www.webpages.uidaho.edu/-mbolintrivedi-diglib.htm

Tseng, K.T., Tseng, Y.C. (2014). The Correlation between Visual Complexity and User Trust in On-line Shopping: Implications for Design. In: Kurosu, M. (eds) Human-Computer Interaction. Applications and Services. HCI 2014. Lecture Notes in Computer Science, vol 8512. Springer, Cham. https://doi.org/10.1007/978-3-319-07227-2_10

Ucha I. M. (2021). Impact of Personal Characteristics and Environmental Factors on Librarians in University Libraries in Nigeria, International Journal of Library and Information Science Studies, 7(3), 11-26

Unagha A.O. (2009). Nigerian university libraries and the challenges of users' service demands in the 21st Century: what university administrators should know, SA Jnl Libs & Info Sci., 75(2), 195-200

Usuka E.I. (2017). Influence Of Library Aesthetics On Users' Patronage Of Federal University Libraries In South-East, Nigeria, A Project Report Submitted To The Department Of Library And Information Science, University Of Nigeria, Nsukka In Partial Fulfillment Of The Requirements For The Award Of Masters In Library and Information Science (MLS) Degree, https://oer.unn.edu.ng/read/influence-of-library-aesthetics-on-users-patronage-of-federal-university-libraries-in-south-east-nigeria/file.docx

Usuka E. I., Nwachukwu V. N, and Nwachukwu P. (2019). Availability of Library Aesthetics for Enhanced Educational Purpose of Library Patronage by Users in Federal University Libraries in South East, Nigeria. Library Philosophy and Practice (e-journal). 3058. https://digitalcommons.unl.edu/libphilprac/3058

Journal of Social Sciences and Management Studies
https://doi.org/10.56556/jssms.v1i3.179
ISSN: 2957-8795

RESEARCH ARTICLE

# Inhibitors to E-governance Adoption and Implementation and the Impact on the Performance of University of Abuja, Nigeria: An Empirical Investigation

**Paul Chima[1*], Ali Ojochegbe Enoch[2]**

[1,2]University of Abuja Department of Public Administration University of Abuja, Fct-Nigeria

Corresponding author: Paul Chima, chimapaul2006@yahoo.com
Received: 21 June, 2022, Accepted: 18 July,2022, Published: 19 July, 2022

**Abstract**

The drive for this study stems from the growing concern for the inability of the University of Abuja to adopt and implement e-governance effectively. Consequently, the paper investigates the inhibitors to the adoption and effective implementation of e-governance in the University of Abuja and how to mitigate them. Primary and secondary data were collected for the study. The primary data were obtained from copies of the questionnaire distributed, while the secondary data constitute relevant literature which were extensively reviewed. Hypotheses were tested using Z-test and multiple regression. The findings reveal that poor funding, inadequate awareness of e-governance activities and its importance, resistance to change and lack of training and retraining of personnel are the factors affecting the effective implementation of e-governance in the University of Abuja. It was also discovered that these barriers have affected the performance of the university, with funding being the most significant barrier affecting performance followed by low awareness of e-governance activities. In view of the above findings, the study recommends that adequate attention should be given to the funding of ICT within the University, an awareness campaign on the importance of e-governance be carried out in the University, and only qualified ICT personnel be recruited into the ICT department and that the University should periodically audit how funds allocated for e-governance development are utilized.

**Keywords**: Inhibitors; E-governance; Adoption; Implementation; Performance; Nigeria

## Introduction

Traditional methods of gathering, storing, processing, and disseminating information were thought to be falling behind 21st-century demands (Marufu, 2016). Thus, the growing interest in using Information Communication Technology (ICT) to reform government by using it as a platform for communicating with citizens and businesses and providing services to them since the late 1990s (Bernhard,2014). Accordingly, it has been argued that the benefits of implementing a digital government/e-governance include increased accountability, transparency, inclusion, and democratic participation, among other things (Haldenwang, 2004). While the benefits and subsequent progression of e-Governance applications are limitless, there are a number of potential adoption and implementation barriers in a number of developing countries (Kazmi, 2010; Arif et al., 2010; Kayani et al., 2011). Due to these barriers, many e-governance projects implemented in both developed and developing countries have failed to result in significant improvements in citizens' services and welfare (Benjamin; Symonds; Gartner; UNDESA; Kanungo; Sify Business; Heeks; cited in (Madon, 2009).

Notwithstanding the barriers, developing countries are facing transitional challenges, and government systems must be reinvented to deliver public services to stakeholders via Information and Communication Technologies (ICT) (Chan et al., 2008). Committing itself to reinventing public service delivery, Professor James Sunday Adelabu (Former Vice-Chancellor, University of Abuja) launched an e-governance initiative in 2010, with the first phase focusing on online course registration, Joint Admission Matriculation Board (JAMB) regularization, and receipt processing following online school fee payment. Subsequent administrations improved on the e-governance facilities initiated by the former Vice-Chancellor by upgrading the online platforms and websites of the University of Abuja to make them more accessible and user-friendly. Despite the noble intentions and goals, e-governance adoption and implementation at the University of Abuja is yet to attain the desired height as obtainable in some climes across the globe. In this regard, this paper attempts to identify barriers affecting the adoption and effective implementation of e-governance at the University of Abuja and also the extent to which barriers affect the performance of the University. In line with foregoing objectives, the paper is guided by the following hypotheses:

(i) Barriers (inadequate personnel training, lack of ICT experience, inadequate awareness creation, resistance to change, lack of political will and corruption) to e-governance adoption and implementation have no significant impact on the university's performance.

(ii) The perceived barriers to the adoption and implementation of e-governance have a significant impact on the performance of the university.

## Literature Review

### E-governance

The terms digital governance, online governance, mobile governance, ubiquitous government, and smart government have all been used to describe the concept and practice of e-government and/or e-governance (Manoharan and Ingrams, 2018). Adding an "e" to the concepts of government and governance denotes the use of electronic tools in governance. E-governance is the application of technology to improve governance practices and relationships with the rest of society, which includes elected bodies, non-profit organizations (NGOs), the private sector, commercial entities, and international organizations (Heeks, 1999, Khan, 2002). Similarly, it can be seen as the use of information and communication technologies (ICTs) to support public services, government administration, democratic processes, and relationships between citizens, civil society, the private sector and the state (Dawes, 2008). Furthermore, it can be seen as the use of information and communication technologies (ICTs) in government to either: (i) change governance structures or processes in ways that would be impossible without ICT, (ii) create new governance structures or processes that would be impossible without ICT, and/or (iii) reify previously theoretical ideas in normative governance (Bannister & Connolly, 2012). Issues (i) and (ii) concern structural governance, whereas issue (iii) relates to normative governance. Essentially, therefore, effective communication between the governors and the governed and a harmonious society which are the litmus test for good governance are at the heart of e-governance (Vijayahanka, 2000).

The bottom line is that the use of information and communication technology (ICT) applications to deliver various government services is referred to as electronic governance (or e-governance). The concept and practice of e-governance are very important as it improves the quality, accountability, and efficiency of government service and information to stakeholders (Alshehri et al., 2012; Dawes,2009). This portrays the fact that, E-governance and good governance share the same goals (Basu,2004). In essence, e-governance just like good governance promotes information sharing throughout government, while also increasing transparency and accountability, reducing discrimination and promoting inclusion, improving accessibility and removing barriers to accessing public services. E-governance boosts economic growth by improving coordination between the public and private sectors. For the purpose of this paper, (Broome's 2015) definition of e-governance as the use of ICT infrastructure to manage relationships across the government has been adopted.

### Potential Inhibitors

Several factors have been considered as barriers to the adoption and implementation of e-governance across the globe. These include inter alia, the organizational governing cum political factors, dynamics of change, awareness and knowledge of e-governance, funding, training and ICT facilities. Vision, strategy, funding, top-level support, citizen-centric approach and leadership orientation are a few of the governing factors that have been investigated (Altameen et al; 2006). It has been discovered that the presence of a belief among leaders is a major influencing factor for successfully completing e-governance projects, particularly among the top leadership, and that when leadership is strong, the chances of success increase (Bakacsi 2010; Kim et al, 2009). Similarly, many studies, including Heeks (2003), the Europarat (2009), and Toots (2019), believe that political and top management support is critical in implementing e-government, particularly in e-democracy and e-participation. Corroborating the foregoing, Sang., Lee, and Lee (2009) identifies variations in leadership support and a lack of high priority for (or even need for) e-Government at the moment as critical challenges to implementing e-Government. Towards ameliorating political inhibitors, Guanghua (2009) suggested that top-level management must make a strong commitment to e-Government implementation.

Closely related to the governing cum political factors discussed above is resistance to change. Without mincing words, Al-Shboul et al. (2014) assert that resistance to change is a major impediment to e-government transformation in a political environment, particularly in the domain of e-democracy. In the same vein, Mahrer and Krimmer (2005), and Toots (2019) found that the majority of Austrian politicians are adamantly opposed to e-democracy because they fear losing control and status. In line with the foregoing, Local governments have claimed, according to Akbulut (2003), that their employees are under-trained in the use of information technologies, and that this lack of training is due to resistance to change, resistance to use, and inability to use information technologies. In order to reduce change resistance inhibitors, government must make e-governance more widely known. This can be accomplished by raising awareness among leaders, who can encourage people to use the internet, as well as informing the general public about the advantages of e-

governance over traditional governance (Sinha and Lal, 2017).
In addition to the political and resistance to change factors, Parent et al. (2005) identify a lack of knowledge or awareness of e-government services as a significant barrier to the adoption of e-governance. In specific terms, awareness of the ease of e-participation, as well as the relative advantage for the user, were identified as critical factors in the implementation of e-governance(Roblek 2020; Rokhman, 2011 and Voorberg et al. 2015). In the context of change resistance, Sang et al (2009) suggested increasing public awareness of the importance and utility of e-government as critical to its adoption and implementation. It could be seen from the foregoing that it is critical to emphasize the importance of raising citizen awareness through campaigns aimed at deploying e-government services that encourage citizen participation and, ultimately, successful implementation of these services. In addition to the other factors mentioned above, finance is a prime factor in the implementation of e-governance. Supporting this assertion, it was argued that significant capital and operational expenditures are required for the successful implementation of an e-Government project (Kamal., Hackney, & Sarwar, 2013). Unfortunately, Governments, in general, are hesitant to provide financial assistance to start e-Government projects in government organizations/agencies, which is one of the roadblocks to progress.

Another critical major inhibitor to e-governance implementation is the lack of training and ICT infrastructure. With regards to training and ICT experience, Kamal., Hackney, & Sarwar, (2013) identify citizens' lack of skill set to use available e-Government services and digital infrastructures, such as the Internet and laptop access as basic barriers to e-governance implementation. IT standard, IT infrastructure, national information infrastructure, collaboration and security are some of the most important ICT factors studied in the e-government literature affecting the implementation of e-governance (Altameen et al; 2006). Others include network infrastructure (LAN, server, Internet, internet, extranet), IT skills, and personnel (Ebrahim and Irani, 2005). The main challenge of e-government in the Nigerian public sector, according to Abdel-Fattah and Galal-Edeen (2008), is a lack of trained and qualified personnel to manage and operate the infrastructure. Ayo and Ekong (2008) corroborate the foregoing when they emphasized the lack of skilled workers to handle various ICT services and applications as hurdles to e-governance adoption and implementation. The foregoing shows that the adoption and implementation of e-governance is truncated by several factors. Thus, this study unravels empirically barriers to e-governance adoption and implementation in the university of Abuja.

**Research Design**

The study is an empirical investigation of inhibitors to the adoption and implementation of e-governance in the University of Abuja, Nigeria. The survey research design was used for the study. The survey research design was considered to be appropriate because it is capable of getting the direct views and opinions of individuals or representatives in the study. It also has the ability to reach a large number of populations within a short period.

**Population/Sample Size of the Study**

The population of the study is 2,372 comprising Academic Staff (631) and Non-Academic staff (1741) of the University. (University of Abuja Establishment Unit, 2018). A total of 342 respondents constitutes the sample size. Stratified and random sampling techniques were used to get the participant from the Academic and Non-Academic staff. To get the sample size for each stratum, the formula suggested by the University of California at Davis was utilized. The formula states that:

The sample size of the strata=size of entire sample /population size x layer size

Since the sample size = 342

Population = 2372

Layer size = number of people in strata. See the formula applied in the table below.

Table 1.1: Sample Size for each Stratum

| S/N | DEPARTMENTS (ACADEMIC & NON-ACADEMIC) | POPULATION | WORKING | SAMPLE SIZE |
|---|---|---|---|---|
| 1 | Academic Staff | 631 | 342/2372x631=90.9 | 91 |
| 2 | Non-Academic Staff | 1741 | 342/2372x1741=251.0 | 251 |
| 3 | Total | 2372 | | 342 |

**Source:** Researchers Computation, 2018

The choice of selecting the respondents using the simple random sampling technique is because it is a method of determining a sample from a population in which all population members have an equal chance of being chosen.

**Reliability of the Study**

The study adopted the Split-halves method of reliability test to assess the reliability of the survey instrument with aid of SPSSv24. A pilot study of 30 participants was used for the test. participants were divided into half, and copies of the questionnaire were administered to each half of the group. The result indicates that the instrument is reliable given that R-values are above .70 as suggested by (Creswell, 2003). The table below shows the work.

**Table 1.2: Reliability of the Instrument using Split Halves Method**

| | | | Grp1 | Grp2 |
|---|---|---|---|---|
| Spearman's rho | Grp1 | Correlation Coefficient | 1.000 | .768* |
| | | Sig. (2-tailed) | . | .037 |
| | | N | 30 | 30 |
| | Grp2 | Correlation Coefficient | .768* | 1.000 |
| | | Sig. (2-tailed) | .037 | . |
| | | N | 30 | 30 |

*. Correlation is significant at the 0.05 level (2-tailed).

**Methods of Data Analysis**

The study used both inferential and descriptive statistics for the study. Z-test and multiple regression were used for testing the hypotheses with the aid of the Statistical Package for Social Science (SPSSv25).

**Data Presentation**

The survey data for the study were collated and presented using simple percentages. Out of a total of three hundred and forty-two (342) questionnaires distributed, a total of two hundred and ninety (290) representing 85% were retrieved.

Table 1.3: Respondents' Opinions on Personnel Training & ICT Experience

| S/N | Personnel Training & Experience on ICT | SA (5) | A (4) | U (3) | D (2) | SD (1) | Mean |
|---|---|---|---|---|---|---|---|
| 1 | Inadequate trained and experienced ICT personnel | 86 (30%) | 158 (55%) | 29 (10%) | 10 (3%) | 7 (2%) | 4.06 |
| 2 | Poor ICT knowledge by staff | 92 (32%) | 145 (50%) | 32 (11%) | 10 (3%) | 11 (4%) | 4.02 |
| 3 | Inadequate training and retraining on ICT best practices. | 49 (17%) | 148 (51%) | 62 (21%) | 26 (9%) | 5 (2%) | 3.72 |
| 4 | Inadequate training on current ICT facilities | 111 (38%) | 139 (48%) | 30 (10%) | 8 (3%) | 2 (1%) | 4.20 |
| | Grand Mean | | | | | | 4.00 |

Source: Field survey 2020

The descriptive result in Table 1.3 shows that 86(30%) and 158(55%) participants strongly agreed and agreed respectively that the university experiences inadequate trained and ICT personnels, while 10(3%) disagreed and 7(2%) strongly disagreed respectively that the university does not experience inadequate trained and experienced ICT personnels. Respondents represented by 92(32%) and 145(50%) strongly agreed and agreed respectively that the university staff have poor ICT knowledge, while 10(3%) and 11(4%) disagreed and strongly disagreed respectively that staff have poor ICT knowledge. On training and retraining on ICT best practices, 49(17%) and 148(51%) respondents strongly agreed and agreed respectively to acknowledge the inadequacy of training and retraining on ICT best practice. Contrarily, 26(9%) and 5(2%) are of the opinion that there is adequate training and retraining of staff on ICT best practices. Similarly, 111(38%) and 139(48%) respondents strongly agreed and agreed that staff have been undergoing training on current ICT facilities, while 8(3%) and 2(1%) disagreed and strongly disagreed with their views. The grand mean value of 4.00> 2.50 likert benchmark shows that there is high rate of acceptance that personnel training & experience on ICT is inadequate.

Table 1.4: Respondents' Opinions on the Awareness on E-governance

| S/N | Questions Items | SA (5) | A (4) | U (3) | D (2) | SD (1) | Mean |
|---|---|---|---|---|---|---|---|
| 1 | Inadequate awareness of the existence of e-governance services | 74 (25%) | 164 (57%) | 40 (14%) | 9 (3%) | 3 (1%) | 4.02 |
| 2 | Poor awareness campaign on the existence of e-governance services | 70 (24%) | 148 (51%) | 51 (18%) | 17 (6%) | 4 (1%) | 3.91 |
| 3 | Low maintenance culture of University of Abuja ICT facilities | 98 (34%) | 149 (51%) | 30 (10%) | 8 (3%) | 5 (2%) | 4.13 |
| 4 | There is sufficient knowledge on the relevance of e-governance. | 84 (29%) | 156 (54%) | 32 (11%) | 14 (5%) | 4 (1%) | 4.04 |
| 5 | Our institution encourages e-governance platforms usage in all functional and operational activities. | 71 (24%) | 140 (48%) | 54 (19%) | 20 (7%) | 5 (2%) | 3.87 |
| | Grand Mean | | | | | | 3.994 |

Source: Field Survey 2020

The descriptive result in Table 1.4 shows that 74(25%) and 164(57%) respondents strongly agreed and agreed respectively that there is inadequate awareness of the existence of e-governance services, while 9(3%) and 3(1%) were of the contrary opinion that there is adequate awareness of the existence of e-governance services. Regarding poor awareness campaign on the existence of e-governance services, 70(24%) and 148(51%) respondents strongly agreed and agreed respectively that awareness creation on the existence of e-governance is poor, while 17(6%) and 4(1%) were of the disagreeing opinion. In the same vein, 98(34%) and 149(51%) respondents were of the agreeing opinion that that University of Abuja has low maintenance culture of its ICT facilities, while 8(3%) and 5(2%) disagreed and strongly disagreed respectively. However, overwhelming majority of the staff agreed that they have sufficient knowledge on the relevance of e-governance as depicted by 84(29%) and 156(54%) respondents who are on the agreeing sides respectively. Insignificant number of the staff represented by 4(5%) and 4(1%) respectively affirmed that there is insufficient knowledge of the relevance of e-governance by the staff. On whether the institution encourages e-governance platforms usage in all functional and operational activities, majority of the respondents represented by 71(24%) and 140(48%) affirmed that e-governance platform usage is encouraged by the institution, while 20(7%) and 5(2%) disagreed and strongly disagreed with their opinions. The grand mean value of 3.994> 2.50 likert benchmark however, shows that staff awareness of e-governance is still shallow in the University of Abuja.

Table 1.5: Respondents' Opinions on Resistance to Change

| S/N | Questions Items | SA (5) | A (4) | U (3) | D (2) | SD (1) | Mean |
|---|---|---|---|---|---|---|---|
| 1 | Unwillingness to change from manual method to digital method of administration | 68 (23%) | 136 (47%) | 54 (19%) | 28 (10%) | 4 (1%) | 3.81 |
| 2 | Existence of digital divide on the use of ICT by staff | 59 (20%) | 157 (54%) | 51 (18%) | 19 (7%) | 4 (1%) | 3.86 |
| 3 | Inadequate enforcement from manual to digital use of ICT | 80 (27%) | 165 (57%) | 26 (9%) | 14 (5%) | 5 (2%) | 4.04 |
| 4 | Resistance to implementation of regulations and framework of ICT | 65 (22%) | 149 (51%) | 49 (17%) | 20 (7%) | 7 (3%) | 3.84 |
| | Grand Mean | | | | | | 3.888 |

Source: Field Survey 2020

The descriptive result in Table 1.5 shows that 68(23%) and 136(47%) of the respondents attested to the unwillingness of the staff to change from manual method to digital method of administration, whereas, 28(10%) and 4(1%) disagreed and strongly disagreed with regards to their views. In the opinion of the respondents regarding the existence of digital divide among staff, 59(20%) and 157(54%) respectively affirmed the existence of digital. Whereas, 19(7%) and 4(1%) contrastingly agreed that digital divide on the use of ICT does not exist among the university staff. 80(27%) participants strongly agreed and 165(57%) agreed while 14(5%) disagreed and 5(2%) strongly disagreed that there is inadequate enforcement from manual to digital use of ICT. 65(22%) participants strongly agreed, 149(51%) agreed, while 20(7%) disagreed and 7(3%) strongly disagreed that there is resistance to implementation of regulations and framework of ICT. The grand mean value of 4.156 > 2.50 likert benchmark strongly shows that the university staff are resistant to e-governance change.

Table 1.6: Respondents' Opinions on Political Will and Corruption

| S/N | Questions Items | SA (5) | A (4) | U (3) | D (2) | SD (1) | Mean |
|---|---|---|---|---|---|---|---|
| 1 | Misappropriation of funds allocated for ICT development | 175 (60%) | 111 (39%) | 1 (0%) | 0 (0%) | 3 (1%) | 4.57 |
| 2 | Lack of trust on security of personal information whenever e-governance services is engaged | 99 (34%) | 183 (63%) | 1 (0%) | 7 (3%) | 0 (0%) | 4.29 |
| 3 | Lack of political will and commitment | 89 (31%) | 147 (51%) | 39 (13%) | 11 (4%) | 4 (1%) | 4.06 |
| 4 | Divergent views by individuals, pressure groups on the efficacy of the implementation of e-governance | 91 (31%) | 138 (48%) | 35 (12%) | 19 (7%) | 7 (2%) | 3.99 |
| 5 | Lack of transparency and accountability on the use of funds allocated for e-governance | 56 (19%) | 164 (57%) | 50 (17%) | 12 (4%) | 8 (3%) | 3.86 |
| | Grand Mean | | | | | | 4.154 |

Source: Field Survey 2020

According to Table 1.6, 175 (60%) and 111 (39%) respondents strongly agreed and agreed, respectively, that funds allocated to ICT are misappropriated, while 3 (1%) strongly disagreed. When asked if they had confidence in the security of personal information when using e-government services, 99 per cent (34%) and 183 per cent (63%) agreed, while 7% disagreed. Lack of political will and commitment were cited as impediments by 89 (31%) and 147 (51%) respondents who strongly agreed and agreed, respectively, whereas 11 (4%) and 4 (1%) disagreed and strongly disagreed with the majority's views, respectively. Concerning divergent views on the efficacy of e-governance implementation held by individuals and pressure groups, 91(31%) and 138(48%), respectively, strongly agreed and agreed that views on the efficacy of e-governance implementation vary among individuals, while 19(7%) and 7(2%) disagreed and strongly disagreed with the majority's views. In terms of e-governance fund towards 56(19%) of respondents strongly agreed that e-governance funds lack transparency and accountability, while 8 (3%) strongly disagreed that transparency and accountability are observed during and after funds are allocated for e-governance projects. Similarly, 164 (57%) agreed that allocating funds to e-government projects lacks accountability and transparency, while 12 (4%) disagreed. The grand mean value of 4.154> 2.50 likert benchmark indicates that a lack of political will and the presence of corruption in the university were widely accepted.

Table 1.7: Respondents' Opinions on Extent of Funding in the University

| S/N | Questions Items | SA (5) | A (4) | U (3) | D (2) | SD (1) | Mean |
|---|---|---|---|---|---|---|---|
| 1 | Inadequate budgetary allocation to ICT development | 138 (47%) | 80 (28%) | 38 (13%) | 26 (9%) | 8 (3%) | 4.08 |
| 2 | Old and outdated ICT infrastructures available | 139 (48%) | 96 (33%) | 40 (14%) | 13 (4%) | 2 (1%) | 4.23 |
| 3 | Irregular financial audit of funds allocated for e-governance services | 86 (30%) | 109 (38%) | 53 (18%) | 27 (9%) | 15 (5%) | 3.77 |
| | Grand Mean | | | | | | 4.027 |

Source: Field Survey 2020

From the descriptive findings in Table 1.7, 138 (47%) participants strongly agreed, 80 (28%) agreed, 26 (9%) disagreed, and 8 (3%) strongly disagreed that there is the insufficient budgetary allocation for ICT development. It was found that available ICT infrastructures are old and outdated as depicted by 139 (48%) and 96 (33%) participants that strongly agreed and agreed respectively, while 13 (4%), and 2 (1%) refuted their opinion. There is a lack of regular financial audit of funds allocated for e-governance services as shown by 86(30%) participants strongly agreeing and 109(38%) agreeing, whereas, 27(9%) disagreed and 15(5%) strongly disagreed with their views. The grand mean value of 4.027> 2.50 Likert benchmark indicates that most people agree that university funding is insufficient.

**Hypothesis one: Adoption and Implementation of E-governance are Significantly Influenced by Some Barriers.**

Table 1.8. Normality Statistics Result on whether adoption and Implementation of E-governance are Significantly Influence by Some Barriers

| | | Implementation of e-governance | Barriers of e-governance |
|---|---|---|---|
| N | Valid | 290 | 290 |
| | Missing | 0 | 0 |
| Skewness | | .947 | .554 |
| Std. Error of Skewness | | .229 | .129 |
| Kurtosis | | 2.667 | 2.196 |
| Std. Error of Kurtosis | | .142 | .256 |

Source: Field Survey 2020 Level of significance (α) = 0.05

The data were tested for normality using the skewness and kurtosis test. All responses used for this analysis met the required and normal skewness value of being less than 1. The result for the variables indicates that they are normal given the kurtosis values at the range of ± 2 as suggested by Creswell (2003). The skewness and kurtosis values for the variables are within the ranges. As such parametric analysis of Z-test was carried out to testhypothesis one.

Table 1.9: Z-Test Statistics Showing Results on whether Effective Implementation of E-governance in the University of Abuja is Significantly Affected by some Barriers.

| Variable | Test ofµ = 2.50 vs µ ≠ 2.50; assumed sigma = 1.29 | | | | | |
|---|---|---|---|---|---|---|
| | N | Mean | Std. | SE Mean | Z-stat. | Sig.(2-tailed) |
| Mean Response | 5 | 1.982 | 0.242 | 0.577 | 0.90 | 0.040 |

Source: Field Survey 2020

**Decision Rule**: Reject $H_o$ if p-value < 0.05 otherwise do not accept.

Table 1.9 above is a Z-test that was used to ascertain whether effective implementation of e-governance in the University of Abuja is not significantly affected by some barriers. The Z-test result shows a statistic value of 0.90 and associated probability value of 0.040 < 0.05 indicating that effective implementation of e-governance in the University of Abuja is significantly affected by some barriers. The researcher therefore upholds the alternate hypothesis that effective implementation of e-governance in the University of Abuja is significantly affected by some barriers and rejects the null. This result is in consonance with the factor analysis result that identified some factors relative within the scope of the study.

**Hypothesis Two**

The perceived barriers to e-governance adoption and implementation have no significant impact on the university's performance.

Table 1.10 Model Summary on Perceived Barriers to adoption and Implementation of E-governance Effect on Performance of the University

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .817[a] | .667 | .661 | .49672 | 1.060 |

a. **Predictor: (Constant), Funding, Personnel Training & Experience on ICT, Political will, Corruption**, Awareness on E-governance and Resistance to Change
b. Dependent Variable: University Performance

Source: Field Survey 2020

The results of a multiple regression analysis of perceived barriers to e-governance adoption and implementation and their impact on university performance are presented in Tables 1.8, 1.9, and 1.10. All the assumptions for multiple regression were met. The dependent variable (university performance) and the independent variables (personnel training and experience, awareness of e-governance, resistance to change, political will, corruption, and funding) have a correlation of .817, according to table 1.9. Given the correlation value of 81.7, it can be concluded that perceived barriers to e-governance adoption and implementation and their impact on university performance have a positive and strong relationship. The coefficient of determination between the independent variables (e-government awareness, resistance to change, political will, corruption, and funding) and the dependent variable (university performance) is 0.667. This means that changes in the independent variable (personnel training and experience, awareness of e-governance, resistance to change) account for 66.7 per cent of the variations or changes in the dependent variable (university performance).

Table 1.11: ANOVA on Barriers to adoption and Implementation of E-governance and the impact on the Performance of the University

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 140.469 | 5 | 28.094 | 113.866 | .000b |
| | Residual | 70.070 | 284 | .247 | | |
| | Total | 210.539 | 289 | | | |

a. Dependent Variable: University Performance
b. Predictors: (Constant), Funding, Personnel Training & Experience on ICT, Political Will and Corruption, Awareness on E-governance, Resistance to Change

Source: Field Survey 2020

The model fit assessment result is shown in Table 1.9, indicating that the model is fit and statistically significant. The alternative hypothesis is accepted based on the F-value (113.866) and P-value of 0.05, implying that perceived barriers to e-governance adoption and implementation have a significant impact on the university's performance.

Table 1.12: Coefficients of Barriers to adoption and Implementation of E-governance and their impact on the Performance of the University

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.229 | .125 | | 9.832 | .000 | | |
| | Personnel Training & Experience on ICT | 1.030 | .292 | .024 | 3.527 | .002 | .485 | 2.060 |
| | Awareness on E-governance | 1.142 | .183 | .105 | 6.240 | .000 | .311 | 3.219 |
| | Resistance to Change | 2.106 | .154 | .088 | 13.675 | .000 | .310 | 3.230 |
| | Political Will and Corruption | .025 | .131 | .015 | 1.908 | .058 | .520 | 1.924 |
| | Funding | 1.688 | .141 | .706 | 16.623 | .000 | .649 | 1.540 |

a. Dependent Variable: University Performance

Source: Field Survey, 2020

The coefficients of the variables are shown in Table 1.9, with the variable having the greatest effect on the dependent variable highlighted. Other variables, with the exception of political will and corruption, were found to be significant. The most significant barrier to e-governance adoption and implementation that affects the University of Abuja's performance was found to be funding (=.706, t = 16.623, p<0.05), followed by e-governance awareness (=.105, t = 6.240, p<0.05).

**Discussion on Findings**

The following sub-themes, which correspond to the research problem statement and hypotheses developed, guide the discussion.

**Barriers to adoption and Implementation of E-governance in the University of Abuja**

The hypothesis investigated whether there are any barriers to adoption and implementation of e-governance at the University of Abuja. In this regard, the Z-test revealed a statistic value of 0.90 and a probability value of 0.040 < 0.05, indicating that some barriers ranked according to their significance, which is funding, awareness of e-governance activities, resistance to change, personnel training and experience with ICT, political will, and corruption, have a significant impact on effective e-governance implementation at the University of Abuja. As a result, the study lends support to the alternative hypothesis that the University of Abuja is struggling to implement effective e-governance due to a number of challenges such as lack of staff training and experience, awareness of e-governance, resistance to change to e-governance, political will, corruption, and insufficient e-governance funding. This is consistent with the findings of Torgby and Asabere (2014), who discovered that e-governance implementation is hampered by a lack of staff training and experience, awareness of e-governance, resistance to change to e-governance, political will, corruption, and insufficient e-governance funding. In this regard, Chima (2022) suggested training and retraining for effective implementation of e-governanc.

**Implementation of E-governance and Performance of University of Abuja**

The second hypothesis was on how the perceived barriers to effective implementation of e-governance affect the performance of the university. The result provided further insight, as the barriers showed a positive and strong relationship (81.7%) with the performance of the university. The model on e-governance implementation was fit and statistically significant. This indicates that the perceived barriers to effective implementation of e-governance have a significant impact on the performance of the university. It follows that the performance of the University will partly improve when adequate funding is given to e-governance activity, awareness campaigns are carried out on the importance of e-governance as well as the training and retraining of staff on current e-governance practices. Finally, the result shows that all the individual variables indicated were significant, except for political will and corruption which were not significant. Funding is the most significant of the barriers to e-governance adoption and implementation in the University of Abuja that affects the performance of the institution. This is followed by an awareness of e-governance. The study of Nkwe (2012) further supports that funding is a major tool in achieving effective e-governance implementation as it also confirmed that awareness, resistance to change and the human resources perspective such as training and employee experiences are critical to e-governance implementation.

## Conclusion and Recommendations

### Conclusion

The purpose of the study was to investigate respondents' perception of the factors that influence e-governance adoption and implementation, as well as how those factors influenced the University of Abuja's performance. Emerging findings show that a number of obstacles hamper the University of Abuja's adoption and implementation of e-governance. Inadequate funding for e-governance activities, a lack of awareness of e-governance activities among staff, and resistance to change are all factors that stymie e-governance adoption and implementation, as well as the University's performance, resulting in a jumbled administrative system. Other factors, but not too critical as compared to factors listed above that influence the adoption and implementation and by extension performance of the university include personnel training and experience, political will, and corruption. As a result, the paper concludes that funding, raising awareness, and overcoming resistance to change are critical success factors for the adoption and implementation of e-governance in the university. Drawing from the foregoing, the paper recommends the following to improve e-governance adoption and implementation, and by extension the university's performance.

**A. Funding**

i. Adequate attention should be paid to the funding of ICT within the University, with significant funds designated in the budget for the University's ICT facilities. This will make it easier to provide the necessary ICT infrastructure and other resources to the University of Abuja to support e-governance. This can be accomplished using the methods listed below:

ii. Inviting Nigerian stakeholders, banks, non-governmental organizations, and multinational corporations to form partnerships in order to secure adequate funding for the acquisition of ICT facilities at the University of Abuja for effective e-governance adoption and implementation.

iii. Effective consultation and encouragement of the University of Abuja Alumni and other associations within the University to see the need in contributing to the funding of e-governance activity of the University.

iv. Scholars and students in the Departments of Engineering, ICT, and Computer Science should be encouraged to create software applications and ideas that will help the University adopt and implement e-governance effectively.

**B. Awareness Creation**

i. There should be an awareness campaign carried out by the University where staff and students will be enlightened on the importance of e-governance. This will create more awareness of e-governance activities, end the resistance to change by those who do not wish to use e-governance as a means of administration and improve staff performance in the university. Below are the processes through which this can be achieved;
ii. Regular seminars and workshops on the importance of e-governance should be encouraged in the University of Abuja's faculties, departments, and units to raise awareness about e-governance.
iii. Posters and billboards emphasizing the importance of e-governance in the university should be displayed on school premises and on the university's website.
iv.

**C. Personnel**

Only qualified and professional ICT staff should be hired and trained on a regular basis for the University's ICT unit. This will keep them current on ICT best practices. The procedure is outlined in the section below.

i. On a regular basis, students and staff should be given the opportunity to rate the University's e-governance implementation and performance in order to get feedback on what is and is not working.
ii. The University of Abuja should make good ICT knowledge a hiring criterion for non-academic and academic staff. This will enhance effective adoption and implementation of e-governance.
iii. To drive e-governance policy and implementation, a strong and committed ICT leadership team should be put in place to work in collaboration with university management that is also committed to effective e-governance implementation.
iv. The university should put strategies in place to enforce adoption and implementation of e-governance. To achieve this, it should be made mandatory for all staff to be tested on basic e-governance skill sets before they are promoted or get some important entitlements from the university.

**D.** On a regular basis, the University should audit the ICT department and those responsible for ensuring effective e-governance. This will help people understand how e-governance funds are spent, the obstacles encountered, and how they can be surmounted. The following are some strategies for achieving the aforementioned objectives:

i. The administration of the university should form an e-governance monitoring team to collect data on e-governance practices and track how funds set aside for e-governance activities are spent.
ii. External auditors should be hired by the university to assist in auditing the funds allocated for e-governance activities.
iii. Technical and financial bids for ICT infrastructure and e-government equipment should be conducted with the best and most reasonably priced contractor being awarded the contract.

## References


Abdel-Fattah, M & Galal, Edeen (2008).Toward Flexible Evaluation for E-Government Websites Equality: A Multi-Perspective Evaluation Framework. Proceedings of the 8th European Conference on e-government, July 10-11, 2017.

Akbulut, A. Y. (2003). An investigation of the factors that influence electronic information sharing between state and local agencies. . LSU Doctoral Dissertations. 877. https://digitalcommons.lsu.edu/gradschool_dissertations/877

Al-Shboul, M., Rababah, O., Al-Shboul, M., Ghnemat, R., & Al-Saqqa, S. (2014). Challenges and Factors Affecting the Implementation of E-Government in Jordan. Journal of Software Engineering and Applications, 07(13), 1111–1127. https://doi.org/10.4236/jsea.2014.713098.

Alshehri, M., Drew, S., Alhussain, T. & Alghamdi, R. (2012). The effects of website quality on adoption of e-government service: an empirical study applying UTAUT model using SEM. arXiv preprint arXiv:1211.2410.

Altameem, T., Zairi, M., & Alshawi, S. (2006). Critical Success Factors of E-Government: A Proposed Model for E-Government Implementation. 2006 Innovations in Information Technology, 1–5. https://doi.org/10.1109/INNOVATIONS.2006.301974.

Arif, S., Cartier, W., Golda, A., & Nayyar-Stone, R. (2010). The local government system in Pakistan: Citizens perceptions and preferences. IDG Working Paper No. 2010-02. Available@ https://www.urban.org/sites/default/files/publication/29166/412216-

Ayo, C. K. & Ekong, U. (2008). E-voting implementation in Nigeria: Prospects and challenges. Proceedings of the 8th European Conference on e-government, July 10-11.

Bakacsi, Gy. (2010): Managing Crisis: Single-Loop or Double Loop Learning. Strategic Management, 15 (3), pp. 303-309. Available@

https://scindeks.ceon.rs/article.aspx?artid=1821-34481003003B.

Bannister & Connolly. (2012). Defining e-Governance. E-Service Journal, 8(2), 3. https://doi.org/10.2979/eservicej.8.2.3.

Basu, S. (2004). E-government and developing countries: An overview. International Review of Law, Computers & Technology, 18(1), 109–132. https://doi.org/10.1080/13600860410001674779.

Bernhard, I. (2014). E-government and e-governance: Local implementation of e-government policies in Sweden. Architecture and the Built Environment, KTH Royal Institute of Technology.

Broome, P. A. (2015). Before e-Governance and e-Government, Back to Basics! The Case of the Caribbean. SAGE Open, 5(3), 215824401560310. https://doi.org/10.1177/2158244015603106.

Chima P. (2022). Transiting from Manual Voting to Electronic Voting System for Enduring Democratic Governance in Nigeria: The Imperative for Digital Remedy. https://doi.org/10.5281/ZENODO.6509924

Creswell, (2003). Office of Qualitative and Mixed Research. University of Nebraska, Lincoln, USA.

Dawes, S. S. (2008). The Evolution and Continuing Challenges of E-Governance. Public Administration Review, 68, S86–S102. https://doi.org/10.1111/j.1540-6210.2008.00981.x.

Dawes, S. S. (2009). Governance in the digital age: A research and action framework for an uncertain future. Government Information Quarterly, 26(2), 257–264. https://doi.org/10.1016/j.giq.2008.12.003

Ebrahim, Z., & Irani, Z. (2005). E-government adoption: Architecture and barriers. Business Process Management Journal, 11(5), 589–611. https://doi.org/10.1108/14637150510619902

Europarat (Ed.). (2009). Electronic democracy (‘e-democracy’): Recommendation CM/Rec(2009)1 adopted by the Committee of Ministers of the Council of Europe on 18 February 2009 and explanatory memorandum. Council of Europe Publ.

Guanghua, L. (2009). E-government, People and Social Change: A Case Study in China. The Electronic Journal of Information Systems in Developing Countries, 38(1), 1–23. https://doi.org/10.1002/j.1681-4835.2009.tb00266.x.

Heeks, R. (2000). Government Data: Understanding the Barriers to Citizen Access and Use. https://doi.org/10.13140/RG.2.2.28137.24162.

Heeks, R. (2003). Success and Failure Rates of e-Government in developing/Transitional Countries: Overview. Institute for Development Policy and Management University of Manchester, Manchester, UK.

Heeks, R. (Ed.). (1999). Reinventing government in the information age: International practice in IT-enabled public sector reform. Routledge.

Heeks, R. (Ed.). (2002). Reinventing government in the information age: International practice in IT-enabled public sector reform (Reprinted). Routledge.

Kamal, M. M., Hackney, R., & Sarwar, K. (2013). Investigating Factors Inhibiting e-Government Adoption in Developing Countries: The Context of Pakistan. Journal of Global Information Management, 21(4), 77–102. https://doi.org/10.4018/jgim.2013100105.

Kayani, M. B., ul Haq, M. E., Perwez, M. R., & Humayun, H. (2011). Analyzing Barriers in e-Government Implementation in Pakistan. International Journal for Infonomics, 4(3/4), 494–500. https://doi.org/10.20533/iji.1742.4712.2011.0055.

Kazmi, S. N. A. (2010). Factors influencing e-Governance implementation: Issues and challenges in Pakistan. 2010 Fifth International Conference on Digital Information Management (ICDIM), 326–331. https://doi.org/10.1109/ICDIM.2010.5664643.

Khan, F. (2002). Information society in global age. A.P.H. Pub.

Kim, S., Kim, H. J., & Lee, H. (2009). An institutional analysis of an e-government system for anti-corruption: The case of OPEN. Government Information Quarterly, 26(1), 42–50. https://doi.org/10.1016/j.giq.2008.09.002

Madon, S. (2009). E-Governance for Development. In S. Madon, E-Governance for Development (pp. 53–70). Palgrave Macmillan UK. https://doi.org/10.1057/9780230250499_4.

Mahrer, H., & Krimmer, R. (2005). Towards the enhancement of e-democracy: Identifying the notion of the ‘middleman paradox’. Information Systems Journal, 15(1), 27–42. https://doi.org/10.1111/j.1365-2575.2005.00184.x

Manenji, T., & Marufu, B. (2016). The impact of adopting e-government as a mechanism to enhance accountability as well as transparent conduct within public institutions. Scholedge International Journal of Business Policy & Governance ISSN 2394-3351, 3(7), 84. https://doi.org/10.19085/journal.sijbpg030701.

Manoharan, A. P., & Ingrams, A. (2018). Conceptualizing E-Government from Local Government Perspectives. State and Local Government Review, 50(1), 56–66. https://doi.org/10.1177/0160323X18763964.

Mutula, S. M., & Mostert, J. (2010). Challenges and opportunities of e-government in South Africa. The Electronic Library, 28(1), 38–53. https://doi.org/10.1108/02640471011023360.

Nkwe, N. (2012). E-Government: Challenges and Opportunities in Botswana. International Journal of Humanities and Social Science. Vol. 2 No. 17: PP 39 – 48.

Parent, M., Vandebeek, C. A., & Gemino, A. C. (2005). Building Citizen Trust Through E-government. Government Information Quarterly, 22(4), 720–736. https://doi.org/10.1016/j.giq.2005.10.001.

Roblek, V., Bach, M.P., Meško, M. & Bertoncel, T., (2020). Best Practices of the Social Innovations in the Framework of the E-Government Evolution. Amfiteatru Economic, 22 (53), 275-302.

Rokhman, A. (2011). Potential Users and Critical Success Factors of E-Government Services: The Case of Indonesia. Proceedings of the International Conference on Public Organization: ICONPO 2011, Yogyakarta: University of Muhammadyah yogyakarta, pp. 231-244.

Sang, S., Lee, J.-D., & Lee, J. (2009). A Study on the Contribution Factors and Challenges to the Implementation of E-Government in Cambodia. Journal of Software, 4(6), 529–535. https://doi.org/10.4304/jsw.4.6.529-535

Sinha, N and Lal, M, R (2017). Strategies for effective implementation of e-governance in india. International Journal Technology and Management. 6(2), 627-634. Available@ http://www.ijstm.com/images/short_pdf/1487863897_P627-634.pdf.

Spencer-Henry, N. (2021). COVID-19 Pandemic – Momentum for E-Government and E-Governance. https://www.caricad.net/covid-19-pandemic-momentum-for-e-government-and-e-governance.

Toots, M. (2019). Why E-participation systems fail: The case of Estonia's Osale.ee. Government Information Quarterly, 36(3), 546–559. https://doi.org/10.1016/j.giq.2019.02.002.

Toots, M. (2019). Why E-participation systems fail: The case of Estonia's Osale.ee. Government Information Quarterly, 36(3), 546–559. https://doi.org/10.1016/j.giq.2019.02.002.

Torgby, W. K. and Asabere, N. K. (2014). Challenges of Implementing and Developing E-Government: A Case Study of the Local Government System in Ghana. International Journal of Computer Science and Telecommunications, 5(8), 40-41.

Vijayahankar N. (2000).The role of Cyber Laws in E-Governance, Paper presented at the Seminar in Chennai on September 16, 2000.

Von Haldenwang, C. (2004). Electronic Government (E-Government) and Development. The European Journal of Development Research, 16(2), 417–432. https://doi.org/10.1080/0957881042000220886.

Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2015). A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey. Public Management Review, 17(9), 1333–1357. https://doi.org/10.1080/14719037.2014.930505.

RESEARCH ARTICLE

# Analysis on policy implementation and institutional integration of RA 9003 SWM indicators in educational institutions

**Alvin Q. Romualdo[1*], Jinnifer D. Arroyo[1], Cheryl Marie M. Cristobal-Cipriano[2]**

[1] DILG-Philippine Public Safety College - National Police College Davao, Philippines
[2]Department of Trade and Industry XII - Sultan Kudarat Provincial Office, Philippines

Corresponding Author: Alvin Q. Romualdo, alvin.romualdo@ppsc.gov.ph
Received: 22 July, 2022, Accepted: 16 August, 2022, Published: 19 August, 2022

**Abstract**
This study attempts to assess the extent of implementation and integration of solid waste management practices in public and private schools in General Santos City in terms of waste reuse, waste reduction, waste collection, waste recycling, waste treatment, final waste disposal, and IEC advocacy/campaign indicators. A modified questionnaire was given to the respondents which were composed of Senior High School students, Science teachers, and school administrators of one (1) private and public educational institution. The comparative result of implementation and integration between the public and private schools revealed that both schools implement and integrate the policy on solid waste management to a great extent with a composite mean of 3.55 and 3.42 respectively. *T-test* result on the extent of the implementation and integration of RA 9003 solid waste management between the two selected big schools in General Santos City showed no significant difference with a *t*-value of 1.03941and the *p*-value of 0.319106 which is less than 0.05 ($p<.05$). This justifies that the two public and private schools in General Santos City implement and integrate solid waste management to a great extent. It is imperative, therefore, for the educational institutions to continue prioritizing the programs and advocacies on solid waste management. The school administrators must also maintain high standards of integrating SWM in the learning process through campaigns, incentives, partnerships, organizational resources, and equity.

**Keywords:** solid waste management; reuse; reduction; collection; recycling; treatment, disposal; advocacy; budget

## Introduction

In recent decades, climate change, poverty, non-renewable resource depletion, and species extinction are just a few of the environmental threats that the globe has faced. With the accelerated pace of urbanization and industrialization, pollution has become one of the environmental threats to sustainability. Despite the given that a majority of regulations and initiatives are being implemented throughout the world to mitigate risk, the area of environmental sustainability is being confronted by global environmental concerns (Patwary, 2016).
The challenges related with municipal solid waste (MSW) management have grown alarmingly in developing nations in the past few decades. Population explosion and rise in economic activity in developing nations' metropolitan regions, along with a lack of training and expertise in current solid waste management methodologies and procedures, hamper efforts to enhance solid waste management services (Khan et al., 2021).

In the case of developing countries, though waste generation per capita is lesser than the developed nations, the capacity of the former is exponentially limited especially in terms of collection, processing, disposal, and recovery, which can be attributed to the geographic, sociocultural, industrial, and environmental factors of a certain country (Bundhoo, 2018; Mmereki et al., 2016). For instance, in Bangladesh, solid waste management has been one of the least investigated environmental challenges though recently, the government and other non-government private institutions have come in to pursue efforts to address the concern, it has been reported that solid waste has not been managed properly and it remained to be a daunting task for the said sectors due to the socioeconomic and technological setup of the country (Ahsan et al., 2014).
In the study conducted (Mmereki et al., 2016), despite the changing lifestyles, increasing manufacturing processes, and fast urbanization of the developing nations, they still fall short in adequate waste policy implementation. According to the conclusions of the comparative research, SW management in less developed countries is poorly established and inefficient.

This issue is exacerbated by lack of coordination among government and non-government stakeholders, institutional structural and mechanism concerns, and other uncoordinated initiatives. There are also reported increase in solid waste generation during pandemic, while, poor strategies in solid waste management in developing countries is also believed to aggravate CoViD-19 cases (Nzediegwu & Chang, 2020; Zand & Heir, 2020).

The Philippines, like other developing countries in Asia and the Pacific, is being confronted by more severe waste management constraints. It was reported that the country's solid waste management system is regarded as one of the most pressing environmental issues threatening the country's entire environmental justice (Atienza, 2011). Solid wastes, which include all superfluous waste generated by various institutions, households, and large industries, have been identified as a dilemma in fast-growing urban communities as a result of poor solid waste management (Ogbonna et al., 2007). In the case of municipal solid waste (MSW), moreover, the ASEAN Report in 2015 recorded that MSW has become a severe concern in recent years due to increased urbanization and industry, population growth, and improved lifestyles (ASEAN, 2015). In developing nations, the growing accumulation of solid wastes has amplified the effects of typhoons resulting in flash floods and blocking water flows (Al-Khatib et al., 2010). Indeed, waste pollution remains a pressing environmental challenge of this contemporary time that needs to be robustly dealt with.

In response to this growing environmental concern, the Philippine government decreed the Republic Act 9003 or the Ecological Solid Waste Management Act of 2000, which sets out programs and initiatives apropos solid waste management from segregation to disposal and treatment. To achieve the best possible execution of the Act, several stakeholders in the educational institutions have been obliged to accept accountability and obligation for solid waste management. The Act also requires educational institutions to incorporate ecologically-sound solid waste management in educational systems articulated across all levels. In the case of state universities and colleges (SUCs), the Act obligated the higher institutions to aid local government units (LGUs) in the extended system by enhancing their effectiveness through competence development and complementing extension initiatives (Baula, 2010; Gequinto, 2017).

Furthermore, the Act states that the national government, in collaboration with all government educational institutions, should undertake continuing information, education, and communication campaigns on solid waste management, as well as intensify the incorporation of environmental issues in the school curricula across all levels. To encourage environmental awareness and action among citizens, the education workforce must place a special focus on waste management concepts such as segregation at source, reduction, recycling, re-use, and composting. (Bautista, 2019). There must be a concerted effort and collective participation among the school administrators, teachers, staff, and students from the school and surrounding community to make the concept of waste management even more pronounced and establish their own solid waste management program.

Indisputably, schools play a crucial function in raising the level of awareness among actors and key players. As cited by Punongbayan et al., (2014), awareness, together with participation and involvement, is fundamental for all students to be active in the school's waste management program, resulting in successful and sustainable promotion of appropriate waste management practices. According to the study conducted by Matunog and Awa (2013), schools and universities placed second in the generation of biodegradable garbage and are the major manufacturer of recyclable materials, with the majority of wastes being connected to the instructional process.

This study attempts to assess the extent of implementation and integration of solid waste management indicators of a public and a private school in General Santos City especially in terms of waste reuse, reduction, collection, recycling, treatment, and disposal considering the components of engineering support; education and advocacy; enforcement and policy support; institutional mechanism; equity; and incentives. There are several studies conducted vis-à-vis the level of implementation among LGU's Solid Waste Management Plan, but only a few have dug into school-based SWM, particularly in the context of General Santos City.

In the light of the unveiled realities, this study would be integral in establishing baseline data that will be useful for policymakers and school administrators to look deeper into the problem and take necessary steps and actions to be reflected in their school innovation programs. General Santos City, a rapidly urbanized city in the southernmost region of the Philippines, is a hub for the generation of waste of growing amount and complexity. Considering that municipalities are struggling to keep up with the accelerated level of waste generation, it is imperative to delineate the role of schools and their extent of implementation and integration in solid waste management, hence this study is carried out.

## Literature Review

### *National Policies*

The legal landmark of waste management was established with the passage of RA 9003 to comprehensively provide management mechanisms for all sectors and institutions. Notably, the policies that defined the country's SWM system were dispersed among components. For instance, Presidential Decree No. 825 (PD No. 825), the country's first basic policy which focus is geared towards penalizing littering, requires all inhabitants and residents of the Philippines, educational institutions, and commercial and industrial entities to clean their immediate surroundings, including canals, highways, and streets. The Department of Environment and Natural Resources (DENR) Administrative Order No. 1998- 49 and the Memorandum Circular (MC) No. 1988-39A creating the Presidential Task

Force on Waste Management then followed to support waste management measures (Domingo & Manejar, 2021). At the onset of the 21st century, the adoption of a comprehensive and systematic strategy for waste management with a significant emphasis on the ecological side was made possible. By the time, there is a strong push for common-but-differentiated responsibility (CBDR), hence, some initiatives were potentially aided by international commitments to climate change mitigation (Vanderheiden, 2020). The cascading of initiatives as part of the implementation efforts on waste management plus being supported by the Local Government Code, mandated the devolution of domestic solid waste segregation and collection to the barangay level, while special and hazardous wastes were delegated to municipal or city local government units (LGUs) (Domingo & Manejar, 2021).

Today, RA 9003 remains to be the most valid legislation that governs the solid waste management covering waste re-use, reduction, collection, recycling, treatment, and disposal.

*Waste Generation Status*

According to the ASEAN Report in 2015, municipal solid waste (MSW) has become a severe concern in recent years due to increased urbanization and industry, population growth, and improved lifestyles. According to the report, the majority of MSW is created by homes, but it also includes garbage from hotels, retail complexes/shops, schools, and institutions, as well as municipal services like street cleaning and recreational area upkeep. Indonesia generates the most municipal waste per year, followed by Thailand with 26,770,000 tons, Vietnam with 22,020,000 tons, the Philippines (14,660,000 tons), Malaysia (12,840,000 tons), and Myanmar (841,508 tons), while Lao PDR produces the least (77,380 tons) (UNEP, 2017).

Thailand is the largest generator of hazardous or industrial waste among the four ASEAN nations, with roughly 3,500,000 tons of hazardous waste inventory each year, followed by the Philippines (2,000,000 tons/year), Malaysia (1,500,000 tons/year), and Singapore (500,000 tons/year). According to the UNU's Global E-waste Monitor 2014, Indonesia creates the most (745 metric kilotons per year), followed by Thailand (419 metric kilotons), Malaysia (232 metric kilotons), and the Philippines (127 metric kilotons), while Brunei Darussalem generates the least (Baldé et al., 2015).

In terms of Municipal Solid Waste (MSW), ASEAN produces 1.14 kg of Municipal Solid Garbage (MSW) per citizen every day, with Indonesia generating the most waste with 64 million tons/year. Thailand comes in second with 26.77 million tons/year, followed by Vietnam with 22 million tons/year, the Philippines with 14.66 million tons/year, Malaysia with 12.84 million tons/year, Singapore with 7.5 million tons/year, Myanmar with 0.84 million tons/year, and Lao PDR with 0.07 million tons/year. Organic waste accounts for the bulk of MSW (around or more than 50%) in all ASEAN countries except Singapore, where organic waste accounts for just 10.5 percent of total MSW reported. The additional categories of rubbish (for example, plastic, paper, and metals) are also common in MSW landfills. Aside from MSW, rising waste sources in ASEAN countries include healthcare waste, e-waste, industrial waste, and building and demolition trash (UNEP, 2017).

*School-Based Solid Waste Management Program*

As the RA 9003 mandates the Department of Education (DepEd), the Technical Education and Skills Development Authority (TESDA), the Commission on Higher Education (CHED), and other concerned agencies to “incorporate ecological solid waste management in the school system at all levels”, these educational institutions have taken initiatives towards the implementation of school-based waste management. The said mandate for the educational institutions prompted the private organizations to take part in the solid waste management campaign bolstered by the National Solid Waste Management Commission (NSWMC) that put in place a holistic approach through the project called "Mainstreaming Ecological Solid Waste Management in the Philippine Educational." The project endeavored to enhance students' waste management capacity through an Ecological Solid Waste Management Training Program, which was implemented by the DENR as the lead agency. The Trainers' Training Program was developed for the students, staff, teachers, and the school management to develop their own solid waste management program, thus promote green practices (DENR, 2018).

For example, as part of their commitment to support the reduction of plastic waste, Procter & Gamble Philippines, in collaboration with World Vision Development Foundation Inc., has successfully implemented the school-based Pag-asa sa Basura initiative. Aside from promoting the necessity of efficient solid waste management, the initiative seeks to enable plastic recovery and recycling. Rehabilitation of the schools' materials recovery facilities (MRF) was done and training the teachers and students on waste segregation, upcycling, and the circular economy was conducted (Manila Lifestyle Standard, 2020).

**Research Methods**

This study employed a quantitative research design through a survey method to attain the objectives of the study. An availability or convenience sampling technique –a type of nonprobability or non-random sampling in which the target population fits the particular practical requirements or criteria, was used to easily and conveniently conduct the survey (Etikan et al., 2016). The respondents of the study were purposely selected based on the following criteria: a.) practicing solid waste management; b.) big school with one thousand population or more; c.) located in the city, and d.) willing to take part in the study. A modified questionnaire from (Gequinto, 2017) was given to SHS students, Science teachers, and administrators of each school yielding a total of 150 respondents per school. The survey questionnaire was divided into seven (7) sections namely: waste reuse, waste reduction, waste collection, waste recycling, waste treatment, waste disposal, and SWM advocacy. It utilized a five-point Likert scale interpreted as:

| Description | Weighted Range |
|---|---|
| Implemented and integrated to a very great extent (VGE) | 4.20-5.00 |
| Implemented and integrated to a great extent (GE) | 3.40-4.19 |
| Implemented and integrated to a moderate extent (ME) | 2.60-3.39 |
| Implemented and integrated to a small extent (SE) | 1.80-2.59 |
| Not implemented and integrated at all (N) | 1.00-1.79 |

Data were tallied and statistically analyzed using a weighted mean. A dependent-means *t*-test or paired *t*-test was used to determine the significant difference in the extent of solid waste management implementation and integration between the two selected big schools in General Santos City. It determines if the mean difference between paired/matched observations differs from zero or the dependent samples *t*-test process determines if there is a statistically significant difference between the means of the two variables (Gerald, 2018). The formula of the dependent-means t-test is given by:

$$t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2)-(\sum d)^2}{n-1}}}$$

Where Σd is the sum of the differences.

**Results and Discussion**

The solid waste management practices in public and private schools were assessed to observe the implementation and integration of RA 9003 as schools are contributory to a lamp collection of solid waste materials in city areas (Gequinto, 2017).
Based on the result, the public school community has high regard for waste disposal management as the school community obtained a *composite mean* of **3.55** described as **implemented to a great extent (GE)**. Specifically, results showed that the school community puts much emphasis on IEC Campaign/Advocacy **($\bar{x}$= 3.99)**, waste collection **($\bar{x}$= 3.98)**, waste disposal **($\bar{x}$= 3.45)**, waste treatment **($\bar{x}$= 3.43)**, and waste recycling **($\bar{x}$= 3.41)** which are all described as **implemented and integrated to a great extent (GE)**. However, the school needs to put extra effort into waste reduction and re-use activities which both garnered the lowest mean of **$\bar{x}$= 3.39** and **$\bar{x}$= 3.20** respectively and were described as **implemented and integrated to a moderate extent (ME)** as shown in Table 1.

**Table 1**. Mean on the extent of the implementation and integration of solid waste management in a public school

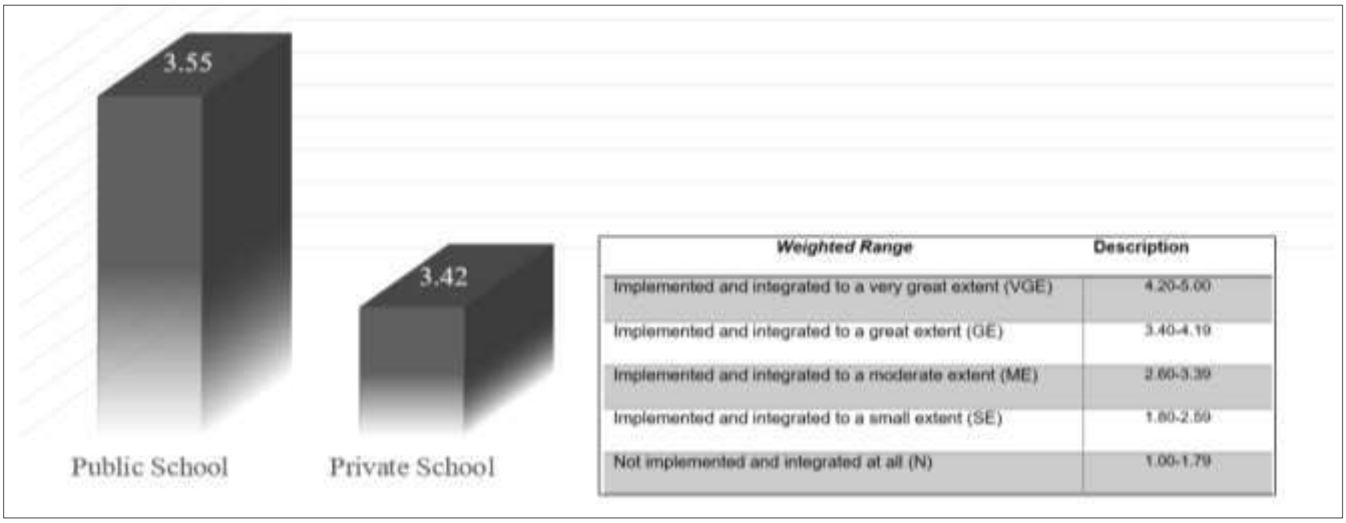
| Indicators | $\bar{x}$ | Description |
|---|---|---|
| A. Re-use | 3.20 | Implemented and integrated to a moderate extent |
| B. Waste reduction | 3.39 | Implemented and integrated to a moderate extent |
| C. Waste collection | 3.98 | Implemented and integrated to a great extent |
| D. Waste recycling | 3.41 | Implemented and integrated to a great extent |
| E. Waste treatment | 3.43 | Implemented and integrated to a great extent |
| F. Waste disposal | 3.45 | Implemented and integrated to a great extent |
| G. IEC Campaign/Advocacy | 3.99 | Implemented and integrated to a great extent |
| **Composite Mean** | **3.55** | **Implemented and integrated to a great extent** |

Results on the implementation and integration of solid waste management in a private school showed that the school community has **implemented and integrated the policy to a great extent** (**$\bar{x}$=** ***3.42***). Explicitly, the school has put much effort into implementing the policy through the IEC Campaign/Advocacy and waste collection with a mean of **3.58**, and waste treatment (**$\bar{x}$= 3.43**), described as **implemented to a great extent.** Conversely, results also revealed that the school community has **implemented to a moderate extent** its wastes disposal **($\bar{x}$= 3.37)**, reduction **($\bar{x}$= 3.31)**, re-use **($\bar{x}$= 3.28),** and waste recycling **($\bar{x}$= 3.39).**

**Table 2.** Mean on the extent of the implementation and integration of solid waste management in private school

| Indicators | $\bar{x}$ | Description |
|---|---|---|
| A. Re-use | 3.28 | Implemented and integrated to a moderate extent |
| B. Waste reduction | 3.31 | Implemented and integrated to a moderate extent |
| C. Waste collection | 3.58 | Implemented and integrated to a great extent |
| D. Waste recycling | 3.39 | Implemented and integrated to a moderate extent |
| E. Waste treatment | 3.43 | Implemented and integrated to a great extent |
| F. Waste disposal | 3.37 | Implemented and integrated to a moderate extent |
| G. IEC Campaign/Advocacy | 3.58 | Implemented and integrated to a great extent |
| **Composite Mean** | **3.42** | **Implemented and integrated to a great extent** |

**Figure 1.** Comparative result of the composite mean of public and private school




According to Baula (2010), by virtue of RA 9003, all educational institutions in the public and private and other concerned government educational agencies are vigorously integrating ecological solid waste management in school systems at all levels. This means that the school administrations continue to update and strengthen their waste management curricula. There is also active participation and collaboration among the school workforce including the administrators, teaching and non-teaching staff, and students to consider in their planning and implementation of the nearby community waste management actions.

Data obtained from the survey were then subjected to statistical analysis using a paired t-test to determine whether the responses showed significant differences from each other. Table 3 shows the t-test result of the extent of implementation and integration of Solid Waste Management between two (2) selected big schools in General Santos City.

**Table 3**. *t* Test on the extent of the implementation and integration of Solid Waste Management between the two selected big schools in General Santos City

| source | df | SS | MS | *T*-Value | *P*-Value |
|---|---|---|---|---|---|
| **treatment** | 6 | 0.57 | 0.1166 | 1.03941 | 0.319106 |
| **error** | 6 | 0.09 | 0.0454 | | |
| **total** | 12 | 0.66 | | | |

With a *t*-value of 1.03941, the *t*-test result on the extent of the implementation and integration of Solid Waste Management between the two selected big schools in General Santos City showed no significant difference as the p-value of 0.319106 is less than 0.05 at 0.05% level of significance ($p<.05$). This further testifies that the two (2) big public and private schools in General Santos City implements and integrates Solid Waste Management to a great extent.

The results supported the findings of the study conducted by Lalamonan & Comighud (2020) that the solid waste management practices of students and school administration especially in terms of segregation, reduction, reuse, recycling, collection, treatment, disposal, and advocacy were excellent. It signifies that both instructors and students displayed a high level of understanding of Solid Waste Management (SWM) ideas and methods, as educational practitioners continue to raise public awareness. It was also reported that both instructors and students had a high level of SWM implementation due to effective instruction and increased community engagement (Molina & Catan, 2021).

**Conclusion**

The result of the study reveals that schools (both public and private) implement the provision set forth in RA 9003 for educational institution and integrate the concept of solid waste management in their curricula. The role of schools in the implementation and integration of Solid Waste Management is evidently stated in RA 9003, thus, educational institutions must put much effort into educating the learners on proper Solid Waste Management Advocacy.

Sustainable waste management practices should be given much priority by creating a platform on which everyone can share knowledge and learn together vis-à-vis proper waste management.

Undoubtedly, an effective SWM is most likely to prosper if facilities are at the forefront of an institution. In this sense, the government should consider private sector participation as a means of enhancing efficiency and mobilizing private investment and thus expanding the resources available for urban infrastructure and equipment. Partnership with the LGU should always be considered to maintain and leverage SWM activities. Also, the administrators must always engage students with SWM advocacies/campaigns to strengthen the level of awareness of the school community.

**Acknowledgement.** The authors of this research work would like to extend their heartfelt gratitude to their respective agencies – the Philippine Public Safety College-National Police College Davao and the Department of Trade and Industry XII-Sultan Kudarat Provincial Office; families and friends; and above all to the Almighty God for the gift of life and the ability to hope and have dreams and wisdom, and the strength to realize them.

**Declaration of Conflicting Interest.** The authors declare no conflicts of interest in the development of this research work.

**Funding.** This research receives no grant from any funding agency in the public, private, or not-for-profit sectors.

**References**

Ahsan, A., Alamgir, M., El-Sergany, M. M., Shams, S., Rowshon, M. K., & Daud, N. N. N. (2014). Assessment of municipal solid waste management system in a developing country. *Chinese Journal of Engineering, 2014*(1–11), 561935.

Al-Khatib, I. A., Monou, M., Zahra, A. S. F. A., Shaheen, H. Q., & Kassinos, D. (2010). Solid waste characterization, quantification and management practices in developing countries. A case study: Nablus district–Palestine. *Journal of Environmental Management*, *91*(5), 1131–1138.

ASEAN. (2015). *Report of the ASEAN regional assessment of MDG achievement and post-2015 development priorities*. ASEAN Secretariat Jakarta.

Atienza, V. (2011). Review of the waste management system in the Philippines: initiatives to promote waste segregation and recycling through good governance. *Chiba, Japan, Institute of Developing Economies, Japan External Trade Organization.*

Baldé, C. P., Wang, F., & Huisman, J. (2015). *The global e-waste monitor – 2014*. , United Nations University, IAS – SCYCLE, Bonn, Germany. https://i.unu.edu/media/ias.unu.edu-en/news/7916/Global-E-waste-Monitor-2014-small.pdf

Baula, E. U. (2010). School-based solid waste management initiative in the Philippines: Lessons and experiences of the Toyota auto parts and Sta. Rosa city partnership. *4th Asian Rural Sociology Association (ARSA) International Conference, September*, 205–214.

Bautista, P. R. (2019). Level of awareness and practices on solid waste management (SWM) among college students. *Journal of Biodiversity and Environmental Sciences*, *14*(1), 131–138.

Bundhoo, Z. (2018). Solid waste management in least developed countries: current status and challenges faced. *Journal of Material Cycles and Waste Management*, *20*(3), 1867–1877.

DENR. (2018). *National solid waste management report 2018*. https://emb.gov.ph/wp-content/uploads/2019/08/National-Solid-Waste-Management-Status-Report-2008-2018.

Domingo, S. N., & Manejar, A. J. A. (2021). *An analysis of regulatory policies on solid waste management in the Philippines: Ways forward*. PIDS Discussion Paper Series.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1–4.

Gequinto, A. C. (2017). Solid waste management practices of select state universities in CALABARZON, Philippines. *Asia Pacific Journal of Multidisciplinary Research*, *5*(1), 1–8.

Gerald, B. (2018). A brief review of independent, dependent and one sample t-test. *International Journal of Applied Mathematics and Theoretical Physics*, *4*(2), 50–54.

Khan, A. H., López-Maldonado, E. A., Khan, N. A., Villarreal-Gómez, L. J., Munshi, F. M., Alsabhan, A. H., & Perveen, K. (2021). Current solid waste management strategies and energy recovery in developing countries-State of art review. *Chemosphere*, 133088.

Lalamonan, E. N., & Comighud, S. M. T. (2020). *Awareness and implementation of solid waste management (SWM) practices.*

Manila Lifestyle Standard (2020). *School-based program promotes proper solid waste management.* https://www.manilastandard.net/lifestyle/home-living/315342/school-based-program-promotes-proper-solid-waste-management.html

Matunog, V. E., & Awa, A. L. (2013). Solid waste generation rate in Ozamiz City, Philippines. *Journal of Multidisciplinary Studies*, *1*(1).

Mmereki, D., Baldwin, A., & Li, B. (2016). A comparative analysis of solid waste management in developed, developing and lesser developed countries. *Environmental Technology Reviews, 5*(1), 120–141.

Molina, R. A., & Catan, I. (2021). Solid waste management awareness and practices among senior high school students in a state college in Zamboanga City, Philippines. *Aquademia, 5*(1), ep21001.

Nzediegwu, C., & Chang, S. X. (2020). Improper solid waste management increases potential for COVID-19 spread in developing countries. *Resources, Conservation, and Recycling, 161*, 104947.

Ogbonna, D. N., Amangabara, G. T., & Ekere, T. O. (2007). Urban solid waste generation in Port Harcourt metropolis and its implications for waste management. Management of Environmental Quality: *An International Journal, 18*(1), 71–88.

Patwary, S. (2016). *Environmental sustainability and current threats*. LinkedIn.

Punongbayan, C. M., Abu, S. P., Arago, M. P., Caponpon, M. G., Marie, A., Geron, C., & Manzano, A. (2014). Waste management practices of an educational institution. *Asia Pacific Journal of Education, Arts and Sciences, 1*(4), 15–20.

UNEP. (2017). *Summary Report: Waste management in ASEAN countries.* https://www.unep.org/ietc/resources/publication/waste-management-asean-countries-summary-report

Vanderheiden, S. (2020). Common but differentiated responsibilities. In *Essential Concepts of Global Environmental Governance* (pp. 41–43). Routledge.

Zand, A. D., & Heir, A. V. (2020). Emerging challenges in urban waste management in Tehran, Iran during the COVID-19 pandemic. *Resources, Conservation, and Recycling, 162*, 105051.

RESEARCH ARTICLE

# Encouraging financial literacy for Youngers: Self-confidence effects from Pakistan

**Shahid Hussain**[1*]

[1]AKhwaja Fareed University of Engineering and Information Technology, Rahim Yar khan, Pakistan

Corresponding Author: Shahid Hussain, shahid.randhawa@live.com
Received: 30 July, 2022, Accepted: 18 August,2022, Published: 19 August, 2022

**Abstract**
Financial literacy is important to control non-public wealth and precise financial health. Consequently, it is crucial to evaluate the impact of intercession to boom monetary focus and confidence in the maximum vulnerable corporations in society based in Pakistan under 30 years of Male and Female participants. We carried out an effective evaluation of an hour speech addressed to adults. This study used a questionnaire to collect data from respondents. The questionnaire comprises seven more than one-preference questions on topics protected inside the hour non-public finance study. We discover that intercession does now not drastically impact understanding but extensively and (in component) Overconfidence. Our critical finding is that intercession will increase human being's without extensively impacting expertise. We also discovered the result of the intercession to be overconfident. However, the best questions were asked equally both before and after the intercession. We also locate evidence of elevated Overconfidence whilst questions are asked further before and after the examination. This shows that the mere truth that he remembers a query may additionally provide an upward thrust to misconceptions approximately what the subject remembers. We also examine three different tactics for future research. The first is to discover what period and type of intercession can affect both expertise and self-belief. Any other exciting question is whether one-of-a-kind teaching equipment and strategies can produce lasting results in grownup financial training. Finally, it might be good to remember the effects of creating actual financial decisions.
**Keywords**: Financial literacy; Good Knowledge; self-confidence; Over-confidence

## Introduction

Over time, financial markets have been manageable; at the same time, the problem of financial merchandise has amplified dramatically. Consequently, financial literacy is one of the most crucial skills needed to manage private wealth in the twenty-first century (Sohn et al., 2012). According to (Abduh et al., 2011), financial literacy is related to knowledge and confidence in economic participation.

As a result, governments and other communal and private sectors have been making giant efforts to implement audit applications and likely boom financial literacy (Aeknarajindawat, 2021; Ahmad & Shah, 2021). Understanding the usefulness of those packages is essential to figuring out techniques for improving the financial well-being and investment (Akims & Jagongo, 2017; Ameliawati & Setiyani, 2018), in meticulous among the most susceptible groups (Aren & Zengin, 2016).

In this research article, we document the consequences of an assessment of the financial schooling schedule's impact on people under the age of 30 in Punjab, Pakistan. Even though many applications are geared toward younger humans (Arianti, 2018; Awais et al., 2016; Azouzi & Anis, 2012; Bakker et al., 2010) and more newly also at females (Bayar et al., 2021), diminutive has been completed to the elderly. But, figuring out this institution is vital for numerous motives. Initially, younger persons can also find it extraordinarily hard to maintain familiarity with the advancing high-tech advances in the economic markets. Secondly, via being a part of a generation of foster youngsters, they may be much more likely to save a lot of wealth in the course of their lives and need information and capabilities to participate in economic markets without setting themselves at tremendous danger (Camara, 2017; Charles Schwab, 2009; Chavali & Mohanraj, 2016; D.A.T, 2021; Dickason & Ferreira, 2018a, 2018b).

Our intercession consists of a -hour non-public finance path provided with the aid of university professors on several troubles, such as asset management, funding and hazard diversification. By coping with the questionnaire within the layout of pre-and put up-research studies, we determine the effect of intercession on three outcomes: financial knowledge, self-assurance (whole) and Overconfidence.

Despite the fact that the effect of the intercession on monetary facts is an awesome hobby, thispaper aims to analyze, which is crucial for funding, and Overconfidence (Dynamic & Allocation, 2013). Alternatively, the indication displays that low investment is linked with a minor level of financial literacy (Fachrudin & Fachrudin, 2016). Therefore, evaluating whether programs aimed at financial information affect confidence is important. On the other hand, Overconfidence can be detrimental if it ends in risks without suitable facts (Anshika et al., 2021; Cossa et al., 2022). In fact, previous publications suggest that one of the  Intercession may be to increase self-esteem without the need for successful financial literacy (Arrondel et al., 2015; Balasubramnian & Sargent, 2020)

Previous publications have compared self-confidence and self-confidence with a straightforward, nonprofit query that inquires respondents to evaluate their level of financial literacy on the Likert scale (Barthel & Lei, 2021; Bottazzi & Lusardi, 2021). Our novelty (Arrondel et al., 2015; Balasubramnian & Sargent, 2020) compared to this dual approach: (i) weed out the confidence in each question separately, we can link the confidence with the answer given to each question, and (ii) provide financial benefits to the quest for confidence that may provide a higher level of assessment. Control, minimize potential bias, and increase accuracy (Bucciol et al., 2021; Corsini & Giannelli, 2021; Cossa et al., 2022; Gallego-Losada et al., 2022; García-Pérez-de-Lema et al., 2021)

We find that intercession substantially will increase humans, even now, not compromising their monetary knowledge. This shows that longer and greater powerful methods in comparison to a two-hour talk can be had to grow the information of much less than 30 people but those short courses, however, may also have the capability to increase self-confidence. We also locate evidence of elevated Overconfidence whilst questions are asked further before and after the examination. This shows that the mere truth that he remembers a query may additionally provide an upward thrust to misconceptions approximately the subject remembers.

The rest of the article is arranged in this way. Unit-2 expresses the suspension of intercession and effect assessment procedures, Unit-3 précises key findings, and Unit-4 consists on conclusion.

**The intercession**

Our impact assessment happened inside the framework of an application known as "II future matters backed by using the university of Engineering and statistics & era, Rahim Yar Khan Khwaja Fareed University of Engineering and Information Technology (KFUEIT), Pakistan. The intercession became organized by the University of Engineering and facts and generation, Rahim Yar Khan, Pakistan. We randomly selected considered one of their places, Rahim Yar Khan and Sadiqabad (about 9000 population). Intercession covered a two-hour non-public finance examination with university professionals for students attending Khwaja Fareed University of Engineering and Information Technology (KFUEIT) meetings. Earlier than attending the direction, the scholars were informed only approximately its topic. It should additionally be noted that, although attending isn't obligatory, Khwaja Fareed University of Engineering and Information Technology (KFUEIT) university students need to participate as a minimum -of thirds of the path to obtaining an official certificate by using the conclusion of the academic year. On Feb 10, 2021, university students participated in the first fashionable communication on environmental sustainability. At the end of this introductory consultation, we used a chain of nameless primary questions to decide the preliminary ranges of financial facts and self-assurance.

One calendar week later, on Feb 17, we provided a two-hour observation on essential monetary subjects (the topic, "Your funding hazard Profiles"). Individuals have been exposed to everyday frontal communique employing animated slides and movies to make the problem greater attractive. They were allowed to invite questions throughout and after the speech, but they did now not have time to work out and practice the thoughts that the pastor defined. Hereafter 2d conference, we used comply with-up survey to evaluate the effect of the observation.

**Methodology**

The questionnaire comprises seven more than one-preference questions on topics protected inside the hour non-public finance study, together with the "massive 3" questions by Lusardi and Mitchell (2011); see the Appendix online for an entire listing of questions. Every question is supplied in 3 feasible ways; the simplest one is accurate. We provided the basis and a list of observe-up questions. Four questions (inclusive of the three significant Questions) had been identical for all query papers, whilst 3 were one-of-a-kind.

Every query turned into accompanied by a desk over which we elicited no doubt (Bottazzi & Lusardi, 2021). The table consisted of ten traces, each requesting a choice among alternatives: an assured quantity of "A" and a "B" lot that returns $ five if the player provided the precise answer to the query and zero, respectively. The rows are separated through a guaranteed length decrease of $ 0.5 according to the line, from $ five down to a minimum of $ zero.5. Members have been anticipated to choose alternative A from the initial row and change from choice 'A' to alternative 'B' occasionally. We interpret their converting environment as a measure of entire self-assurance. Beneath rational hypothesis in the app function, moving from option B to option A is unreasonable.

Selections were advocated at the top of another assembly; we casually decided on one of the meetings to artwork for pay a number of the options made at that meeting; we randomly selected one question and one line of the corresponding table that would accompany the fee. If individuals have chosen choice 'A' in that line, they'll obtain a receipt conforming to the precise, assured price. If they had selected option 'B', they could have obtained a $ five voucher if the conforming response turned right and there was no alternative receipt. This procedure changed previous to managing the first survey and all randomness become carried out publicly on the give up of the second assembly.

## Data

Eventually, 68.31% of Khwaja Fareed University of Engineering and Information Technology (KFUEIT) university students determined to participate in this have a look at. We agree with that this very high pupil fee has three meanings: (i) the university has a coverage in which final certificate are issued handiest to folks who attend regularly (see the beginning of segment 2); (ii) university students are of the technology of toddler boomers and are within the section in their life-cycle with a wealth of accrued assets, which makes them much more likely to be interested by associated economic issues; (iii) the province has currently been hit by way of the disintegrate of two resident banking institutions (Rink et al., 2021), which may have improved considerably to the financial division.

Table-1 Descriptive Stats

| Variable | Obs. | Mean | Std. Dev. |
|---|---|---|---|
| Right | 543 | 0.813 | 0.344 |
| Self-confidence | 432 | 3.564 | 3.001 |
| Over-confidence | 432 | 0.612 | 2.222 |
| Treatment | 432 | 0.503 | 0.451 |
| Knowledge | 432 | 0.142 | 0.596 |

Our standard examination focused just on IV similar queries before and after the intercession that provided the highest comparison. In the Appendix Online, we also analyze different questions before and after treatment.

We consciousness on 3 dependent elements: a dummy equal if the suggested solution is accurate (variable accurate), self-assurance level (variable agree with) and over-self-belief stage (variable over-confidence). Self-belief is measured because the remaining assured cost of belief is earlier than switching to anything inside the restoration table. It could be interpreted as a lottery equal. If a file is wrong, over-confidence is measured as a product between and a fable.

Table 1 summarizes the variables in our database. Participants answered 72% positive and reported a lottery based on 2,354. In addition to the three different types of dummy and dummy treatments, we report self-diagnostic financial information that is included in the post-test questionnaire (a popular type of good information, which if one reports good financial information) Is equal to). In our sample, 27.1% of respondents think they know financial matters well.

## Hypotheses Development

Proof of the usefulness of financial schooling structures is jumbled together in previous literature because of the treatment's exclusive robustness. Despite the most potent treatments, it seems necessary for the best positive outcomes (Noviarini et al., 2021), there is evidence of positive results and short Intercession (Barthel & Lei, 2021). This results in our first hypotheses:

**H# 1.** The intercession enhances financial knowledge.

Our 2nd and 3rd hypotheses are extracted from findings in Brüggen et al. (2017), who reported a reported rise in self-confidence after a brief study. Our overall self-confidence function permits us to evaluate the effect of intercession on self-esteem and Over-confidence:

**H# 2.** The intercession enhances self-confidence.

**H# 3.** The intercession enhances over-confidence.

## Results and Discussion

As a primary stage, table-2 reports the standard variety of our 3 structured variables earlier than and after the remedy. The last column suggests the t take a look at output within the widespread contrast after and earlier than remedy. We no longer see the statistical distinction in the part of the right solutions, whilst we discover a giant boom in and Over-confidence.

Table-3 indicates the productivity from our standard retrospective analysis while thinking about panel line models with steady or random outcomes.

In columns 1 and 2, we define Dummy accurate as our clinical diversity and desirable know-how feature. Both fixed- and random-effect fashions do now not display proof of a significant impact of our remedy at the chances of an excellent response.

Next, we turn to the outcomes of self-confidence Intercession. Columns 3 and 4 display that remedy has an extraordinary and crucial impact. The Hausman checks reported at the lowest of the desk suggest that a random-effect version ought to be decided on. Column (4) also shows that remedy will increase the equal lottery guarantee by way of $ 0.605. This boom is negligible because the median fee of the equal fee inside the pattern is $ 3,567.

Table-2 Response variables Average

| Variables | Pre treatment | Post treatment | T test |
|---|---|---|---|
| Correct confidence | 0.871 | 0.743 | 0.120 |
| | -0.367 | | |
| Overconfidence | 3.201 | 3.111 | 3.819** |
| | -3.001 | | |
| | 0.291 | 0.783 | 3.220* |

| | | | |
|---|---|---|---|
| | -2.219 | | |

**Notes:** The table reports a mean of three structured variables before and after the intercession. The last column reports the value of the t test in the comparison after and before the intercession. ***p= < 0.001, **p= < 0.01, *p= < 0.05.

Table-3 Regression Results

| **Variables** | **Right** | **Right** | **Self-Confidence** | **Self-Confidence** | **Over-confidence** | **Over-confidence** |
|---|---|---|---|---|---|---|
| Model Employed | Random Effect | Fixed Effect | Random Effect | Fixed Effect | Random Effect | Random Effect |
| Treatment | −0.041 | −0.013 | 0.331* | 0.404* | 0.337* | 0.216* |
| Good knowledge | −0.207 | −0.113 | 0.285 | 0.220 | 0.619* | 0.217 |
| | -0.023 | -0.037 | -0.215 | -0.299 | -0.247 | -0.203 |
| Constant | 0.662*** | 0.574*** | 3.120*** | 3.222*** | 0.126 | 0.418* |
| | -0.035 | -0.02 | -0.128 | -0.17 | -0.209 | -0.216 |
| Test FE | 2.11 | | 7.71*** | | 2.66* | |
| Test RE | | 0.2 | | 278.21*** | | 0.54 |
| Test RE vs. FE | 3.87 | 4.65 | 8.77** | | | |
| Individuals | 71 | 71 | 61 | 61 | 61 | 61 |
| Observations | 543 | 543 | 432 | 432 | 432 | 432 |

Notes: ***p= < 0.001, **p= < 0.01, *p= < 0.05.

It is interesting to observe that a rise leads to Over-confidence. Columns 5 and 6 show that the coefficient within the remedy dummy is massive, suggesting that the threat of developing without growing financial consciousness is a risk to our treatment. In this situation, looking at the table's stop invitations you to choose a set-effect model. Column (5) indicates that remedy will increase with the aid of $ 0.337. It has to also be cited that the coefficient of incredible facts is perfect in the Column model (5). The result is accurate: he tells you that the extra I know, the more assured I'm.

Our consequences may be motivated via participants answering the similar questions before and after the intercession. In fact, there can be two effects. We do not consider the impact of mastering, as we no longer discover a large increase in the accuracy of the responses after the intercession. Conversely, familiarity may also impact whilst participants who understand the similar questions and are supplied inside the take a look at my additionally have greater self-belief of their solutions to the questions asked two times.

To investigate this issue, in online Appendix table A1, we report the effects of a rigorous check that provides extraordinary inquiries to a list of questions. The consequences are typically steady with those of the location pronounced in Table3. The primary difference is the shortage of the importance of remedy variability in models that describe Overconfidence. Comparisons among online Appendix desk A1 and desk 3 propose that the impact of dependency might also contribute to Overconfidence. Indeed, the presentation may also deliver contributors false expectations about a way to enhance the questions they have got identified inside the initial questionnaire. That is no longer real when individuals see exceptional questions after the intercession.

Ordinary, we find robust evidence to support hypothesis 2 (confidence), incomplete assist for hypothesis 3 (Overconfidence) and no evidence to assist hypothesis 1 (understanding).

## Conclusion

This paper tested the effect of a quick-hour personal finance study on economic literacy, self-self-assurance, and Overconfidence using motivating guidelines.

Our critical finding is that intercession will increase human being's without extensively impacting expertise. We also discovered the result of the intercession to be overconfident, however, best within the questions asked equally both before and after the intercession. This suggests that recalling the question requested and exposing the lesson may also cause misconceptions about the information. Therefore, short-term financial literacy packages might also have the capability to increase average self-belief, an essential issue of investing, but without the increase of associated talents. Self-self-belief without capability may be risky. Destiny plans need to recollect this issue.

We understand a minimum of three boundaries of research. First, our intercession (-hour talk) may be too brief to fail in the expertise. 2nd, effects are measured immediately after intercession. Although this prevents external events from interfering with the evaluation, we agree that the consequences must be higher evaluated over a more extended period. Third, our provision is lacking in simple treatment with the commonplace time period "placebo". Even though our evaluation suggests that consequences aren't the result of studying consequences, we cannot rule out the opportunity for other drivers to make contributions.

**Future Recommendations**

We also examine three different tactics for future research. The first is to discover what period and type of intercession can affect both expertise and self-belief. Any other exciting question is whether one-of-a-kind teaching equipment and strategies can produce lasting results in grownup financial training. Finally, it might be good to remember the effects of creating actual financial decisions.

**References:**


Abduh, M., Omar, M. A., & Duasa, J. (2011). The impact of crisis and macroeconomic variables towards Islamic banking deposits. American Journal of Applied Sciences, 8(12), 1413–1418. Https://doi.org/10.3844/ajassp.2011.1413.1418

Aeknarajindawat, N. (2020). The combined effect of risk perception and risk tolerance on the investment decision making. Journal of Security and Sustainability Issues, 9(3), 807–818. Https://doi.org/10.9770/JSSI.2020.9.3(7)

Ahmad, M., & Shah, S. Z. A. (2020). Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. Journal of Economic and Administrative Sciences, ahead-of-p(ahead-of-print). Https://doi.org/10.1108/jeas-07-2020-0116

Akims, A., & Jagongo, A. (2017). Financial Literacy and Its Impact on Investment Decisions in Nigeria: a Theoretical Perspective 1. International Journal of Scientific Research and Innovative Technology, 4(11), 2313–3759.

Ameliawati, M., & Setiyani, R. (2018). The Influence of Financial Attitude, Financial Socialization, and Financial Experience to Financial Management Behavior with Financial Literacy as the Mediation Variable. Kne Social Sciences, 3(10), 811. Https://doi.org/10.18502/kss.v3i10.3174

Anshika, Singla, A., & Mallik, G. (2021). Determinants of financial literacy: Empirical evidence from micro and small enterprises in India. Asia Pacific Management Review, 26(4), 248–255. Https://doi.org/10.1016/j.apmrv.2021.03.001

Aren, S., & Zengin, A. N. (2016). Influence of Financial Literacy and Risk Perception on Choice of Investment. Procedia - Social and Behavioral Sciences, 235(October), 656–663. Https://doi.org/10.1016/j.sbspro.2016.11.047

Arianti, B. F. (2018). THE INFLUENCE OF FINANCIAL LITERACY , FINANCIAL BEHAVIOR AND INCOME ON INVESTMENT DECISION. Economics and Accounting Journal, 1(1), 1–10.

Arrondel, L., Debbich, M., & Savignac, F. (2015). Stockholding in France: the role of financial literacy and information. Applied Economics Letters, 22(16), 1315–1319. Https://doi.org/10.1080/13504851.2015.1026578

Awais, M., Fahad Laber, M., Rasheed, N., & Khursheed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from pakistan. International Journal of Economics and Financial Issues, 6(1), 73–79.

Azouzi, M. A., & Anis, J. (2012). CEO emotional bias and investment decision, Bayesian network method. Management Science Letters, 2(4), 1259–1278. Https://doi.org/10.5267/j.msl.2012.02.012

Bakker, L., Hare, W., Khosravi, H., & Ramadanovic, B. (2010). A social network model of investment behaviour in the stock market. Physica A: Statistical Mechanics and Its Applications, 389(6), 1223–1229. Https://doi.org/10.1016/j.physa.2009.11.013

Balasubramnian, B., & Sargent, C. S. (2020). Impact of inflated perceptions of financial literacy on financial decision making. Journal of Economic Psychology, 80(January), 102306. Https://doi.org/10.1016/j.joep.2020.102306

Barthel, A. C., & Lei, S. (2021). Investment in financial literacy and financial advice-seeking: Substitutes or complements? Quarterly Review of Economics and Finance, 81, 385–396. Https://doi.org/10.1016/j.qref.2021.06.020

Bayar, Y., Sezgin, H. F., Öztürk, Ö. F., & Şaşmaz, M. Ü. (2020). Financial Literacy and Financial Risk Tolerance of Individual Investors: Multinomial Logistic Regression Approach. SAGE Open, 10(3). Https://doi.org/10.1177/2158244020945717

Bottazzi, L., & Lusardi, A. (2021). Stereotypes in financial literacy: Evidence from PISA. Journal of Corporate Finance, 71(xxxx), 101831. Https://doi.org/10.1016/j.jcorpfin.2020.101831

Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. Journal of Business Research, 79, 228–237. Https://doi.org/10.1016/j.jbusres.2017.03.013

Bucciol, A., Quercia, S., & Sconti, A. (2021). Promoting financial literacy among the elderly: Consequences on confidence. Journal of Economic Psychology, 87(July), 102428. Https://doi.org/10.1016/j.joep.2021.102428

Camara, O. (2017). Industry herd behaviour in financing decision making. Journal of Economics and Business, 94, 32–42. Https://doi.org/10.1016/j.jeconbus.2017.08.001

Charles Schwab. (2009). Investor Profile Questionnaire. 1–5.

Chavali, K., & Mohanraj, M. P. (2016). Impact of demographic variables and risk tolerance on investment decisions: An empirical analysis. International Journal of Economics and Financial Issues, 6(1), 169–175.

Corsini, L., & Giannelli, G. C. (2021). Economics education and financial literacy acquisition: Evidence from a field experiment. Journal of Behavioral and Experimental Finance, 32, 100556.

Https://doi.org/10.1016/j.jbef.2021.100556

Cossa, A., Madaleno, M., & Mota, J. (2022). Financial literacy environment scan in Mozambique. Asia Pacific Management Review, xxxx. Https://doi.org/10.1016/j.apmrv.2021.09.004

D.A.T, K. (2020). The Impact of Financial Literacy on Investment Decisions: With Special Reference to Undergraduates in Western Province, Sri Lanka. Asian Journal of Contemporary Education, 4(2), 110–126. Https://doi.org/10.18488/journal.137.2020.42.110.126

Dickason, Z., & Ferreira, S. (2018a). Establishing a link between risk tolerance, investor personality and behavioural finance in South Africa. Cogent Economics and Finance, 6(1), 1–13. Https://doi.org/10.1080/23322039.2018.1519898

Dickason, Z., & Ferreira, S. J. (2018b). The effect of age and gender on financial risk tolerance of south african investors. Investment Management and Financial Innovations, 15(2), 96–103. Https://doi.org/10.21511/imfi.15(2).2018.09

Dynamic, F., & Allocation, A. (2013). I nvestment C onsulting. 14(1), 1–8.

Fachrudin, K. R., & Fachrudin, K. A. (2016). Wpływ wykształcenia i doświadczenia na decyzję inwestycyjną określaną przez wiedzę finansową. Polish Journal of Management Studies, 14(2), 51–60. Https://doi.org/10.17512/pjms.2016.14.2.05

Gallego-Losada, R., Montero-Navarro, A., Rodríguez-Sánchez, J. L., & González-Torres, T. (2022). Retirement planning and financial literacy, at the crossroads. A bibliometric analysis. Finance Research Letters, 44(November 2020). Https://doi.org/10.1016/j.frl.2021.102109

García-Pérez-de-Lema, D., Ruiz-Palomo, D., & Diéguez-Soto, J. (2021). Analyzing the roles of CEO's financial literacy and financial constraints on Spanish smes technological innovation. Technology in Society, 64(January). Https://doi.org/10.1016/j.techsoc.2020.101519

Noviarini, J., Coleman, A., Roberts, H., & Whiting, R. H. (2021). Financial literacy, debt, risk tolerance and retirement preparedness: Evidence from New Zealand. Pacific Basin Finance Journal, 68(August 2020), 101598. Https://doi.org/10.1016/j.pacfin.2021.101598

Rink, U., Walle, Y. M., & Klasen, S. (2021). The financial literacy gender gap and the role of culture. Quarterly Review of Economics and Finance, 80, 117–134. Https://doi.org/10.1016/j.qref.2021.02.006

Sohn, S. H., Joo, S. H., Grable, J. E., Lee, S., & Kim, M. (2012). Adolescents' financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. Journal of Adolescence, 35(4), 969–980. Https://doi.org/10.1016/j.adolescence.2012.02.002

Journal of Social Sciences and Management Studies
https://doi.org/10.56556/jssms.v1i3.234
ISSN: 2957-8795

RESEARCH ARTICLE

# Applied Six Sigma theory to reduce the drop-out rate among the students: systematic review

**Monojit Pal[1*], Suparna Ghosh[1]**

[1]Department of Education, Jadavpur University, Kolkata-700032, India

Corresponding Author: Monojit Pal, monojit111k@gmail.com
Received: 13 August, 2022, Accepted: 16 September,2022, Published: 18 September, 2022

**Abstract**
Quality education is a prerequisite and essence of human development. At present, India has improved a lot, but, in some cases, it still needs some improvement like retention and enrollment of students in education. The drop-out problem is a major in India. During this pandemic situation, drop-out problems become a significant issue. Researchers introduced a theory called the six sigma theory to reduce the rate of drop-out students. The goal of the six sigma theory is zero defects (zero drop-out), which means every student can learn or benefit from education and get motivated until the fulfilment of their needs. DMAIC is one of the pedagogical and instructional processes that helps reduce time and cost and retain students at school. The main aim of this framework developed by the researcher is. The researcher reviewed many research studies, and based on knowledge and critical Analysis, researcher developed this framework to satisfy students' needs and retain them in school to achieve their goals. Therefore, the researcher has applied this methodological approach to reduce the drop-out rate in India.

**Keywords:** Six Sigma Theory; Drop-out students; Quality improvement; Zero defects; DMIAC; Student satisfaction

## Introduction

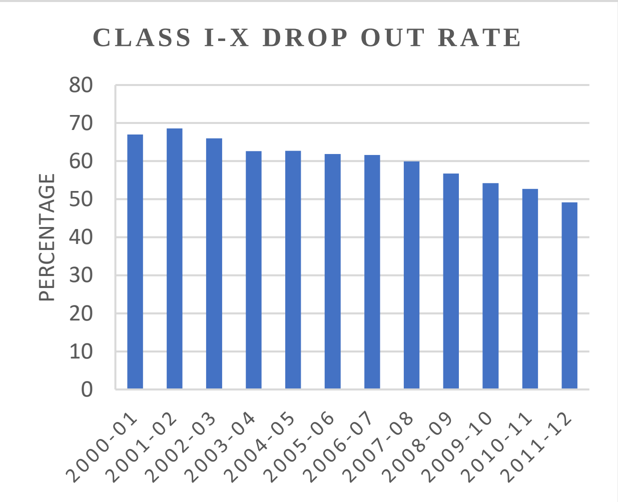
At present, quality education is needed for the development of any country. Consequently, several nations, including India, are taking different measures to enhance quality. Multiple policies and programs have been changed and modified, and new policies and programs are being introduced in India. Recently, the six-sigma theory has been developed as a practical approach to improving the quality of education in the world and India. But dropping out is a significant barrier to quality improvement in India. Drop-out means a student leaves the school after studying few days at school. In recent times, the number of drop-out students in India has increased. In 2017-18, the National Sample Survey Organization's household survey reported 3.22 crore out-of-school children (6-17 years) in India. The drop-out rate in India was much lower than earlier (near less than 3%) in the first half of the 2020 year. But after the COVID-19 pandemic, this drop-out rate may increase due to the loss of jobs and economic crisis. According to government data, the drop-out rate increases after class viii. Also, data showed that in 2016, the drop-out rate was the highest, at about 18%. In India, only 70% of students finish school education.(M. & Sekher, 2014)
The Government of India has taken many steps to reduce the number of schools drop-outs. In conjunction with State Governments, the Central Government is conducting several education-development programmes. The GOI (Government of India) introduced various strategies and planned to reduce them like Sarva Shiksha Abhiyan, Right to Education act 2009, the Kasturba Gandhi Balika Vidyalaya schemes, Mid-Day-Meal schemes and so on (Singh, 2018). Various states are taking into consideration this matter. Different national policies developed after independence to improve the quality of education in India, like-1968 policy, the 1986 policy, 2020 new education policy, also emerged to solve this type of problem (Aithal & Aithal, 2020). The six-sigma theory can be helpful for the policymaker, and contributors, to improve the overall quality of education and reduce the problems. Therefore, the researcher defines the six sigma theory and reviews various articles, literature, journals, and documents related to this issue (Tjahjono et al., 2010).

**Concept of Six Sigma:** The Motorola company introduced the idea of six sigma in the 1980s. Six Sigma is a data-driven approach, a set of techniques to remove defects from processes and products in the organization. Six sigma is also a philosophical idea applied to management and organization setup. The main aim of the six sigma theory is to limit the defects. The main principle of this theory is customer focus. This theory focuses on customer satisfaction and reducing cost. The other functions of this theory are eliminating waste, reducing process variability, increasing customer satisfaction, reducing cost, increase good quality output. The researcher did various reviews and made a statement ((PDF) Understanding Basics of Six Sigma, n.d.).

**Literature Review**

Q. H. Mazumdar (2014) conducted research entitled as "applying six sigma in higher education quality improvement." In this study, the researcher wants to determine how six sigma can be used at higher education levels to improve quality. Here researcher considers some principles of six sigma like-process improvement, reducing waste, continuous improvements etc. Researcher used statistical process control and developed some models for the teachers and administrators to improve the education system. (Mazumdar, 2014)

Paul G. LeMahieu, Lee E. Nordstrom, Elizabeth A. Cudney (2017) conducted research entitled "Six Sigma in education." In this study, the researcher wants to find out different approaches to quality improvement in education. Here researcher gave some theoretical outputs to progress in education. This study's primary purpose was to reduce variability, reduce cost, and eliminate activity that does not add value to desired outcomes. The result of this study revealed that it provides students' satisfaction levels and six sigma used as methodological purpose to improve quality in the organization and educational institution (Sunder M & Mahalingam, 2018).




The drop-out rate in India (primary-secondary level):
Source: Government of India (data.gov.in)

S.L. Ho, M. Xie, T.N. Goh (2006) conducted research entitled "Adopting Six Sigma in higher education: some issues and challenges." This study aims to apply the six sigma framework in a higher education institution and to find out some challenges and issues to implementing this framework for the workers, staff, etc. In this study, an operational amplifier circuit analysis from an electrical engineering course was utilised to demonstrate that the Six Sigma framework provides an ideal foundation for incorporating statistical teaching into engineering curricula. (Ho et al., 2006).

S.K. Gupta, J. Antony, F. Lacher and J. Douglas (2020) conducted research on "Lean Six Sigma for reducing student drop-outs in higher education – an exploratory study." This study examined the probable reasons of student dropouts in higher education institutions (HEIs) and discovered the effectiveness of Lean Six Sigma (LSS) technologies in lowering dropout rates. The researcher gathered 12 samples and performed semi-structured interviews with university personnel (n = 9) and LSS specialists (n = 3) to understand the complexity of the student drop-out phenomena and the function of various LSS instruments in lowering dropout rates. Utilizing theme analysis, researchers conduct research. This study showed that LSS is an influential framework for reducing the drop-out rate among students (Gupta et al., 2017).

**Statement of the problem**

The above studies revealed a wide knowledge gap in this area. Research showed that the Six sigma theory highly impacts the education sector. But researcher wanted to apply the various methods and principles of the six sigma theory to reduce drop-out rates among school-going children in India. The researcher developed a theoretical framework to identify and reduce this problem through developing this framework.

**Objectives of the study**

The purpose of the study is to apply the framework of the six sigma theory developed by the researcher based on the methodological approach of six sigma (DMAIC). Research also provides a theoretical concept to the education field that increases education quality.

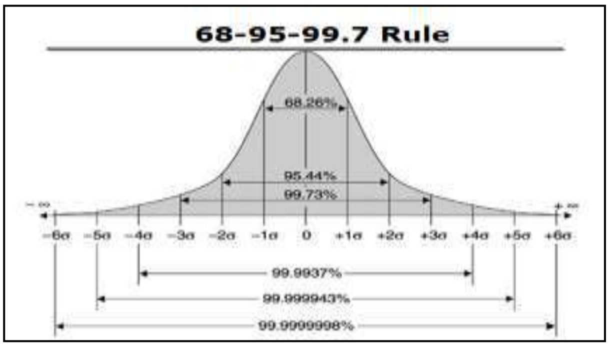
**Drop-Out Students**

In India, Education for all schemes started in 2000, and the main aim is 100% literacy. Other objectives of SSA are Universal Enrollment, Universal Retention and so on. So, therefore we see that there are so many plans, programs, schemes, and steps taken by the Government, but lack of proper implantation, drop-out at the school cannot be controlled. There are so many states in India where the drop-out rate is much higher.

In 2016, the drop-out rate in India at the secondary level was the highest than at the primary level (17.06%). Recently United Nations announced that almost 24 million children might drop out of school due to COVID-19. Statistics showed that less than 60% of students could complete school education. Therefore, the researcher decided to use the six sigma theory considering this issue (Coronavirus Disease (COVID-19): Schools, n.d.).

**The framework of six sigma**

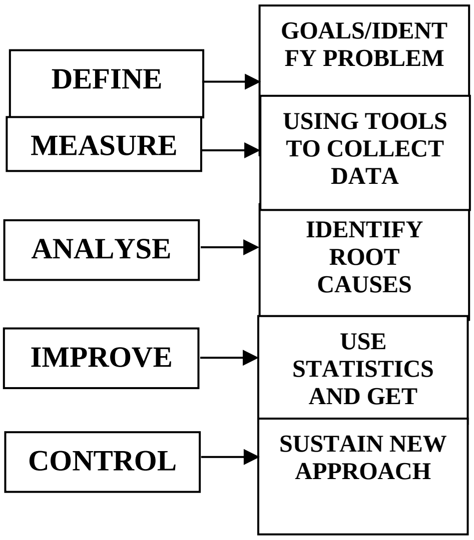
Literally, there is no possibility of achieving 100% efficiency. Six sigma means zero defects. Here researcher introduced six sigma to achieve high efficiency. Statistically, six sigma (6σ) equals 99.99966%, representing 3.4 defects per million. Six Sigma refers to the six standard deviations from a normal distribution or bell-shaped curve's mean. Utilizing the measurement of elements in a process, it strives to improve output by continually enhancing the system and its operations. Total area to the right and left of +6 and -6, respectively, represents the flaws in a Six Sigma process. (Navas et al., 2016).




Source: article of Ramana PV

Six sigma is a methodological and statistical approach to producing good quality output and reducing defects in the system. One of the methodologies of the six sigma theory is DMAIC. It is an abbreviation for Define, Measure, Analyse, Improve, Control (de Mast & Lokkerbol, 2012).

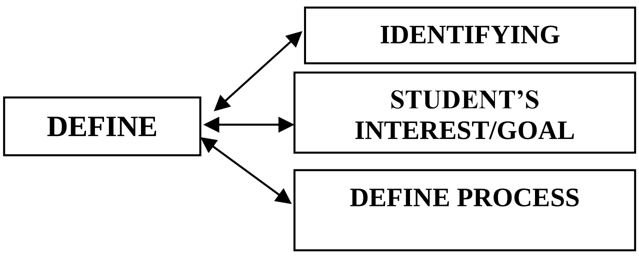
The researcher developed a framework for the students to satisfy their needs and achieve desired outcomes.



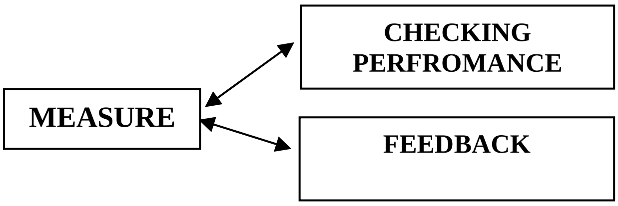

Applying DMAIC to reduce the drop-out rate: A classic problem-solving approach is DMAIC. It helps to solve existing problems and helps to reduce cost or time. It also resolves defected issues or derivation from the target/goal.

DMAIC was designed to identify a problem, improve the situation and regain control of any system.

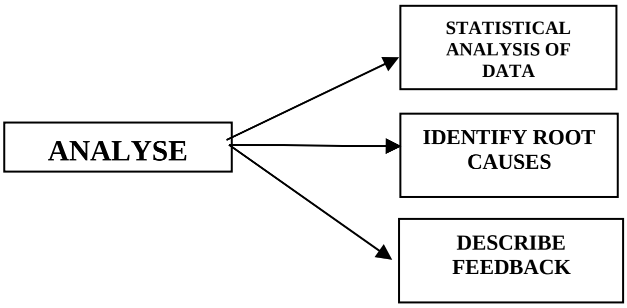
The first stage of this process is defining or setting a goal/educational objective and defining the student's needs and interests.



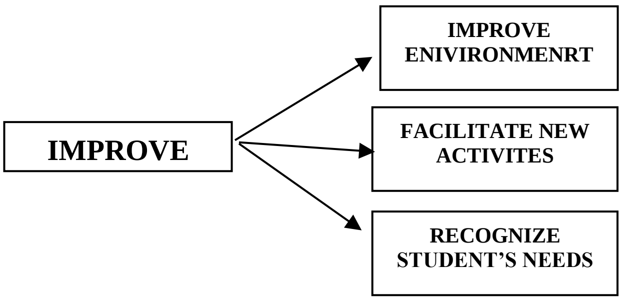

The second stage of this process is measurement. Here teacher collects the data from the student. Apply the concept of VOC (voice of customer) in education to take feedback from the students about the current procedure through various tools and techniques.



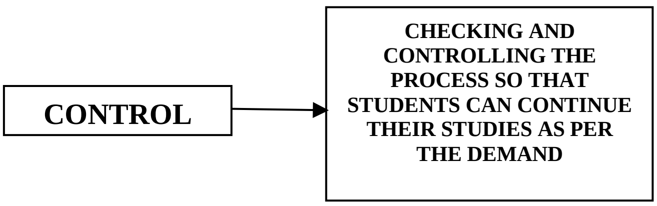

The third stage of this process is Analysis. After getting feedback from students, we need to Analysis what factors have emerged as the primary cause. Analysis reveals that problems are being created to achieve the desired goals in education. Identify some of the factors that hinder students from achieving goals.



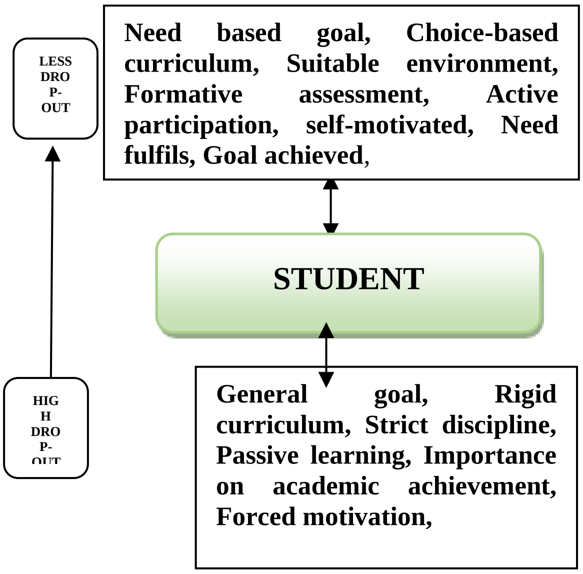

The fourth stage of this process is Improve. After analyzing the data, the next step is to solve the problems. Improvements have been made based on the previously identified root causes (through Analysis).




The last stage of this process is control. Control is nothing but sustaining the systems and stable the process. Student's gradually fulfil their needs and get interested in studying at a higher level.



This framework considers a need-based and student-based education system. Every learner can learn according to their needs and knowledge. They must actively participate in the learning process, which should be the motto of any education system. Students learn constructively and retain in the system.




**Conclusion**

Here researcher provides a general framework for the teachers, administrators, education providers, and trainers to deliver effective education to the learner so that the drop-out rate can be less. An uninteresting curriculum, one-way communication, passive learning, and rigid system can demotivate the student. Learning is always purposeful and acquired. Based on this principle, education should be interesting and learner-centered. Six sigma theory determine educational and learner's goal (LeMahieu et al., 2017). It measures the learner's performance and identifies the problems to attain this goal (Weber, 2013). This framework analyses the problems statistically and helps to improve or change the instruction and process. Lastly, it controls the situation. Therefore, the researcher wanted to express that six sigma can effectively reduce the drop-out rate in the education system. Six sigma is a systematic process and focuses on that every learner can continue education until the fulfilment of their goals. It basically increases efficiency. Earlier studies showed that DMAIC is used as a methodology in education. Research revealed this approach improved learning efficacy and academic performance. (Kaja Bantha Navas, 2016), (Hargrove & Burge, 2002)
In the present study, researchers conclude that this framework may help provide good quality education to the students. Therefore, they can stay motivated in the process of long term learning, "and the drop-out rate will be reduced.

**Acknowledgment**

The researcher wishes to convey profound appreciation to the Department of Education, Jadavpur University for providing the guidance required to conduct the research study. Researcher also would like to give thanks to the publisher.

**References**

Q. H. Mazumdar, 360 degrees of engineering education. University of Michigan, 2014.

Aithal, S., & Aithal, S. (2020). Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives. 5, 19–41. https://doi.org/10.5281/zenodo.3988767

Coronavirus disease (COVID-19): Schools. (n.d.). Retrieved May 24, 2022, from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-schools

de Mast, J., & Lokkerbol, J. (2012). An analysis of the Six Sigma DMAIC method from the perspective of problem solving. International Journal of Production Economics, 139(2), 604–614. https://doi.org/10.1016/j.ijpe.2012.05.035

Gupta, S., Antony, J., Lacher, F., & Douglas, J. (2017). Lean Six Sigma for reducing student drop-outs in Higher Education – an exploratory study. Total Quality Management and Business Excellence, 31. https://doi.org/10.1080/14783363.2017.1422710

Hargrove, S. K., & Burge, L. (2002). Developing a six sigma methodology for improving retention in engineering education. 32nd Annual Frontiers in Education, 3, S3C-S3C. https://doi.org/10.1109/FIE.2002.1158694

Ho, S. L., Xie, M., & Goh, T. (2006). Adopting Six Sigma in higher education: Some issues and challenges. International Journal of Six Sigma and Competitive Advantage, 2. https://doi.org/10.1504/IJSSCA.2006.011564

LeMahieu, P. G., Nordstrum, L. E., & Cudney, E. A. (2017). Six Sigma in education. Quality Assurance in Education, 25(1), 91–108. https://doi.org/10.1108/QAE-12-2016-0082

M., S., & Sekher, T. V. (2014). Factors Leading to School Drop-outs in India: An Analysis of National Family Health Survey-3 Data. International Journal of Research & Method in Education, 4, 75–83. https://doi.org/10.9790/7388-04637583

Navas, R., Akash, R., Sathish, G., & Azharudeen, J. M. (2016). Six Sigma in Education: Examination Result Analysis Using Six Sigma - A Case Study. 2016 IEEE 4th International Conference on MOOCs, Innovation and Technology in Education (MITE). https://doi.org/10.1109/MITE.2016.056

(PDF) Understanding basics of Six Sigma. (n.d.). Retrieved May 24, 2022, from https://www.researchgate.net/publication/341880676_Understanding_basics_of_Six_Sigma

Singh, B. (2018). Different Schemes Launched by the Government for Achieving the Aims of Universalization of Elementary Education. Journal of Advances and Scholarly Researches in Allied Education, 15(3), 228–233. https://doi.org/10.29070/15/57499

Sunder M, V., & Mahalingam, S. (2018). An empirical investigation of implementing Lean Six Sigma in Higher Education Institutions. International Journal of Quality & Reliability Management, 35, 2157–2180. https://doi.org/10.1108/IJQRM-05-2017-0098

Tjahjono, B., Ball, P., Vitanov, V. I., Scorzafave, C., Nogueira, J., Calleja, J., Minguet, M., Narasimha, L., Rivas, A., Srivastava, A., Srivastava, S., & Yadav, A. (2010). Six Sigma: A literature review. International Journal of Lean Six Sigma, 1, 216–233. https://doi.org/10.1108/20401461011075017

Weber, M. N. (n.d.). Lean-Six-Sigma methods for applied technical college courses [Ed.D., Edgewood College]. Retrieved May 24, 2022, from https://www.proquest.com/docview/1759043792/abstract/72684C372FB14D13PQ/1

RESEARCH ARTICLE

# Communication and Crisis Information Campaigns: Perspectives of Constructivism, Conspiracy and Misinformation of Coivid-19 messages in West Africa

**Akpan, Udo Usiere**[1*]

[1]Department of Mass Communication, WellSpring University, Benin City, Nigeria

Corresponding author: Akpan, Udo Usiere, usiereusen@gmail.com, ORCID 0000-0003-1723-1422
Received: 24 August, 2022, Accepted: 17 September,2022, Published: 20 September, 2022

**Abstract**
The research centers on crisis communication campaigns against audience constructivism, conspiracy and misinformation in two West African countries in the coronavirus pandemic era. The setting is Nigeria and Camerouns to find out the main media of information from the government, the major theme of coronavirus messages and the perception about coronavirus messages by Africans. The study adopted ex post facto quantitative survey method with questionnaire administered on a population of 6,269,945 sampled at 600 persons. It applied the media constructivism and information manipulation theories. Findings revealed that 84% of the respondents got coronavirus messages from traditional media of group meetings, radio and television rather than from social media interface with government agencies. Data further revealed that 96 % of the residents accepted the message of coronavirus control of hand washing more than on social distancing and face-masking. Responses indicated that 81 % of the residents regarded coronavirus messages as mere romours, fake media propaganda and anti – religious campaign from the government. Recommendations are: government should adopt regular group discussions and social media to conveying vital messages rather than reliance on transient old information sources. Additionally, messages must be motivating, convincing and persuasive to influence positive attitude.

**Keywords:** Crisis; Communication; Management; Misinformation

## Introduction

In crisis situations, the nature and styles of obtaining, processing and delivering of information can determine the success or failure of projects and programmes. This is irrespective of finest ways in the packaging of proposals. It can be reasoned that the technological concept of garbage in and garbage out makes meaning considering that the knowledge which a source of information learns from field investigations, teachings, indoctrinations and experiences influences the output of the information to listeners, readers, viewers. It goes to indicate that the management of information or campaigns about any crisis defectively gathered also end up being poorly delivered. The style of sending information during non-crisis period cannot be same with crisis periods. Any institution, community or government that rely in one form of communicating goals to citizens at all moments may face resistance and end up with failed programmes.

Thus, the processes of using appropriate communication steps to handle crisis moments can be described as crisis communication management and campaigns. Without being immodest, during crisis, information delivery faces distortions and falsifications from the original source through the channels to the receivers. The crux of the matter is that information ought to be redefined and edited adequately from the raw form to reach the intended receivers. The releasing of information without going through the professional process can be counterproductive and may cause stagnation in development of countries. In all senses, countries particularly in the African continent face crisis of poverty, healthcare and are desirous to come out of acute underdevelopment. The countries like Nigeria yearn to come out of the grips of health pandemics particularly the novel corona virus. The onus of bailing out countries from health crisis and to stand squarely on the platforms of development requires effective communication techniques of combating crisis through media channels. This is contrary to the position of Saleh and David (2022) that more attention should be given to hospital workers in terms of policy formulation being that they are at the forefront in the fight against corona virus.

It is assumed that life, businesses and governance may be much easier if emergencies or crisis arrive with fair warning. Unfortunately, that is not the case. Such existence and operations of organizations and governments would require no need to prepare for disasters in advance. Crisis is inevitable. It is everywhere, any moment and affects every person and government. Crisis is associated with perplexity, uncertainty, emotional reaction and fear. As far as there is existence, crisis has turned out to be part and parcel of all individuals, groups, institutions and governments. Olukunle (2018) states that crisis refers to an unexpected, unplanned circumstances or rather a risk that suddenly dawns upon a business, institution or government from nowhere. It means an occasion that threatens the steadiness of any society ororganization. A crisis is any happening that prompts a dangerous state of affairs among human beings, groups, communities, or the entire country or nation. Crises are deemed to be unhelpful events in the security, economic, political, societal, or ecological relationships. Crisis gives little or no notice. More liberally, it is aconnotation of an emergency.

Bernstein (2015) states that crisis is any condition that could threaten, harm people, property and seriously interrupts economic and social businesses. It can involve a nation, its territories, citizens, or vital interests to create a condition of national emergency. A crisis can be critical and may even completely knock down a government and inject pain, distress, or disordered functions.

Mikusova and Horvathova (2019) say that three elements that must be present when deeming a crisis situation are that the situation appears very stressful; there is very short time for interventions while individuals have uncertainties about the situation. Since crises comes when least expected, organizations and governments are not expected to wait until it hits. There has to be plans to control and manage crisis. A planned campaign of mitigating any form of crisis has to be initiated to enlighten the internal and external public about threats. Fragouli and Ibidapo (2015) indicate that crises require leaders who do not follow the norms and are able to take advantage of the negative situation to bring about change and growth of the society. This is why crisis communication is a necessity for all organizations and governments. Crisis of whatever nature can be properly managed or handled with effective communication applied or directed to the causes of the problems.

Crisis communication is an initiative which aims at protecting the reputations of organizations and the government by maintaining positive public image. Various factors such as crime, fraud and false media reports can tarnish the image of governments and countries. So, crisis communication specialists are usually set aside to fight against challenges which tend to harm the reputation and image of governments. Crocetit (2008) says that crisis communication is a strategic approach that draws people closer to the governments or organizations during a disruptive event. When a crisis occurs, practical, swift and detailed communication is vital. Crisis communication refers to the

dissemination of information to address factors or causes of negative impacts on the society (Amaresan, 2021).

It is worth saying that information diffusion by people are subject to the mind construction of beliefs, and can be affected by the conspiracies of many factors ranging from the level of literacy, poverty, peer groups, culture, interest of the media channels including and biases of media institutions proprietors. These elements propel the level of accurate or inaccurate information towards acceptance or rejection by the society. In the case of the corona virus pandemic, it was not different that the level of literacy, ignorance, scarcity of needs and even the rules of media institutions and proprietors acted to affect the extent of public acceptance and rejection of messages. Social belief and mind constructions formed conspiracy platforms of taking the messages accurately or inaccurately. Udende, Akpade, Omoloso and Abubakar (2022) remarked that even as sustained advocacy was made, recorded cases of infections and deaths were on the rise, since many persons refused to comply with stipulated rules and directives. In addition, the authors mentioned that due to the enforced lockdown, the outbreak of corona virus pandemic made it easy for people to freely and quickly access messages, create contents and disseminate misleading information particularly from the social media platforms. Consequently, the mind construction of the people was largely manipulated through false messages and conspiracies in the public sphere making it to adequately take right decisions of control or manage the proper information from the distorted versions.

With right information management, governments can improve decision-making and demonstrate accountability and openness. The public sector gains insights from information for better decisions for citizens' economic and health care. Properly managing public sector information can ensure reliable, trustworthy and dependable use and reuse of data by both public sector institutions in the general public interest (Liew, 2021).

To say the least means that without information from a specific or known channels of the mass media, a specific theme there can be poor perception and unsuccessful implementation of objectives and intentions of the government no matter the strength of personnel and equipment. Consequently, in it is a truism that the primary objective of media institutions lie in providing information, enlightenment, education and entertainment. This shows that media activities are primarily social services before thoughts of profit. In essence, the method and form of taking information from governmental and non-governmental institutions to communities deserve a strong cord of media campaigns. This is against reliance on faith and beliefs to solve fundamental social problems of health care particularly such as the processing of information about the coronavirus outbreak.

## Statement of the Problem

On December 31, 2019, the first case of coronavirus was reported and the source of the outbreak was linked to a wet market in Wuhan (Hubei province, China). Human-to-human transmission of the virus was confirmed in countries and territories worldwide. The pneumonia symptoms included dry cough, chest pain, fever, and trouble breathing (Wu, Chen and Chan, 2020).

In the campaign by governments and organizations to reduce the risk of transmission, individuals were advised to abide by frequent cleaning of hands, applying an alcohol-based hand rub or washing with soap and water; covering mouth and nose with a flexed elbow or tissue when coughing or sneezing; throwing tissue away immediately; if experiencing fever, cough, difficulty breathing, or any other symptoms suggestive of respiratory illness, including pneumonia, emergency call services were expected before going to the doctor or hospital.

Consequently, on March 11, 2020, the World Health Organization, WHO declared the corona virus outbreak other-wised called the Covid 19 a global pandemic. On the heels of this, many nations including Nigeria announced a lockdown with information on all individuals to stay at home as much as possible for two weeks and only be permitted to leave homes for essential items such as food, medicine, water, banks and public toilets. Additionally, inter-city travel for private and commercial purposes, except for essential goods and services, were suspended. All intra-city travel vehicles were equally ordered to reduce number of passengers to observe social distancing.

Similarly, on April 23, state governments announced subsequent ban on large gatherings, intra and interstate movements and set up task force Committees and sub committees to reach out to communities through organized groups and associations. In most African states, especially in the Western regions of Nigeria and Camerouns, one of the existing many groups for social mobilization is the Christian and Moslem communities. Consequently, the Nigerian government and other African countries targeting of the Christian and Moslem institutions for the dissemination of the coronavirus messages became appropriate group channels of communication to reach a greater percentage of the entire population.

However, in the monitoring of compliance, about 45 proprietors and Heads of faith based institutions in Nigeria and seven in Cameroons were arrested for gathering members on religious activities against directives. In addition, some of the African state governments went as far as enforcing the demolition of religious buildings which resisted compliance to messages of the pandemic control protocols. The variance between the government and the people brought moments of crisis. While government were struggling to send the information through organized media channels, the community opinion leaders were also busy distorting and misinforming the people.

By towing different paths from the government, it tended to reflect that the cord of collective social contracts of responsibilities through the media to build partnership for sensitization, enlightenment and socialization was either weak or sabotaged. Perhaps, the reluctance of most social groups to convey messages to a large population of persons was due to misinformation, the construct of minds of residents or due to outright conspiracy. The statement of the problem therefore is that either there was misinformation from the side of the government through the media or that the non compliance was the product of conspiracy or mind perception construction of residents of Africancountries about coronavirus.

## Objectives of the study

This work explores crisis communication campaigns management on Covid 19 particularly on issues of constructivism, conspiracy and misinformation among residents of select African countries. The specific objectives are:

1. To find out the main media which information about coronavirus reached most residents of African countries;

2. To find out the major theme of coronavirus messages received by residents of African countries;

3. To find out the perception of information about coronavirus outbreak among residents of select Africa countries

## Literature Review

### Communicating Coronavirus: The African Countries Perspectives.

The communication of matters about coronavirus pandemic happened during a crisis moment and the pre-requisite for the achievement of results in managing it needed effective strategic communication plans. The conservative systems and models dominant in the Western World were not necessarily suited for the sub-Saharan Africa reality. This is because many sub Saharan countries are with communities that lack adequate financial resources to develop and implement immediate and effective strategic communication plans. Bruijn and Brinkman (2011) states that the most important of the methods of staying in - touch with communities revolve the use of oral messages. It has to be pointed out that in the dissemination of oral messages, group communication is central in reaching people in a - two step flow process. In this perspective, there are usually leaders expected to receive information from the sources of either the government or non - governmental institutions before taking it to others. It is one form of communication that resources can be reduced. It is also a form of communication whereby interpretations of issues can be applied for clarity to illiterate groups of persons. But apart from the advantages, group oral communication can be frustrating in the sense that distortion of facts and figures cannot be ruled out. Another, disadvantage of group communication is that of falsehood and the spreading of incomplete information. Generally, group communication is oral information that moves from mouth to mouth or from person to person in communities. The scope of this research selects Camerouns and Nigeria with a large part of the two countries having elements noticeable in rural communities. For instance, Camerouns has about 560 village communities (Amungwa and Nji, 2015) and Covid 19 messages were taken from government agencies through group discussions from government opinion leaders and media institutions to communities. There is no gain saying that in the process, community leaders and media institutions did not undertake these responsibilities without resistance from communities.

Consequently, Kindzeka (2020) says that in Yaounde, Cameroon, a group of seven members of the Tabernacles of Freedoms Ministries took a house to house and street to street evangelism by telling people that God revealed to them that nations were wasting the time and resources in fighting coronavirus pandemic. This simply means that faith was the amour of most African countries rather than adherence to simple protocols of taking the vaccines. These were threats to government directives and the subsequent channeling of more resources to counter disobedience instead of fighting the pandemic. Notwithstanding, the action of the faith based institutions may have been a product of ignorance which the government had not tackled from the roots.

Kindzeka analyses that the evangelists before they were arrested campaigned to individuals to go on their knees and pray with claims that there was nothing as corona virus but God's punishment for wrongdoings during previous World wars. By the preaching of the Tabernacles of Freedoms Ministries that corona virus pandemic was a hoax, about 300 new converts refused to wear the nose masks and went about social activities against government directives. This anti government campaigns and messages was replicated in almost all the communities and was seen in the refusal of several persons to adopt measures against corona virus pandemic Even with the closure of churches, members continued organizing daily prayers and meetings in front of sealed buildings while preaching the erroneous messages about corona virus pandemic.

Similarly, the case was not different in Nigeria, Ghana, Kenya, Zimbabwe, Lesotho and South Africa where about 84% of population are socially tied to apron strings of Christian religious beliefs and prophecies. In fact Shaban and Mumbere (2020) write that 36 African countries had rolled out strict robust measures to halt the spread and contain the pandemic by closing schools, markets, mosques churches and public gatherings.

**Functions of Mass Media In Crisis**

Mass media are apparatus for the conveying of information, thoughts and ideas to the public. They are essential tools to improve public health goals. Saraf and Balamurugan (2018) states that the role of mass media in the health development field is of high value and that the strength of mass media can cause a major impact on a large population. In a World facing a lot of health issues, if the issues are not presented appropriately it can cause adverse effects to mankind. It is the mass media that play the vital role to present these issues to the masses. Communicating about health through mass media is complex. This is because a greater number of mass media communicators are not well vested in health care campaign strategies. From simple ailments to endemic health matters, most journalists and communicators to tend avoid taking up professionalism. Thus, at the outbreak of the pandemic, the case of sending out the right message brought difficulties.

The media play fundamental tasks of informing the people about happenings globally. People rely on media such as television, the radio and social media to get news and updates (Falcone, 2018). Mass media performs three key functions of educating, shaping public relations and advocating for a particular policy or point of view. As education tools, media not only pass on knowledge but also take part in the larger efforts of social engineering. As public education tools, media organizations provide credibility to information through public health opinion leaders, stakeholders and other gatekeepers. As advocacy tools, mass media assist in setting policy agenda, organizing debates about controversial issues, and gaining support for viewpoints. Generally, the mass media reach people regardless of age, gender, earnings or educational level. Sushi; Sharma;. Kumar and Kumar (2017) believe that media functions extend to dissemination of health news (or other matters) by adding value to what gets out and how it gets reported.

The mass media are capable of facilitating short term, intermediate term and long term health concepts, awareness and knowledge by altering out dated or incorrect knowledge and enhancing audience recall of advertisements or Public Service Announcements (PSAs). The objectives of mass media can change attitude, behaviours and perceptions about negative social norms and ideas. Evidence of these objectives is useful in evaluating the effectiveness of mass media.

Principally, mass media have been major sources of information in developed and developing nations like Nigeria about HIV/AIDS and other disease outbreaks like Bird flu, Swine Flu, Ebola and Monkey pox. In a 2017 study in Nigeria, 96% of 1290 men aged 22 to 26 reported hearing about these outbreaks through television advertisements, radio or magazines. For instance, a study by Ghosh (2006) shows a significant relationship between maternal health awareness and mass media exposure by women. Mass media exposure, as Ghosh opines makes women aware of the need for basic maternal and child healthcare and enables them to receive information regarding essential healthcare and recent developments in health issues. No doubt that the news media are important sources of information about health and medical therapies, but there is a level of quality of reporting the media are expected to offer the public about health care.

**Essence of Media Campaign**

Ordinarily, every government strives to increase legitimacy in the eyes of the people by identifying itself with institutions and communities by raising hope above fear of health hazards. Additionally, all governments recognize the principle that the public must be protected and served, since the citizens have surrendered sovereignty to the government. With the growth of technology and know-how, many governments have provided social security and health insurance making the scope of government activities people centric (Slaughter, 2017).

In the pre independence era of most African countries, the colonial British and French governments were entirely concerned with the application of arms and might in the implementation of policies. There were conscriptions, arrests, detentions and imprisonments. Little effort and resources were channeled towards application of communication by persuasion to achieve results. The miniature persuasion through ethos, logos, pathos and kairo were applied on audiences by face to face communication without involvement of mass media technology (Barton and Tucker, 2021).

Jamar (2008) indicates that Aristotle introduced the modes of persuasion in his book *Rhetoric which emphasized* effective identification of ethos, pathos, *and* logos as personal character of the speaker; putting the audience into a certain frame of mind and the apparent proof from the words of the speech itself. This type of persuasions appear obsolete hence, the yearning of people oriented governance by the integration of mass media of communication in campaigns. Bianchi (2020) professes the use of qualitative time or the right time' to convey a particular message. The World Health Organization, WHO, (2017) recognizes that effective, integrated and coordinated communication is integral to carrying out goals of better, healthier future for people. This has no other principle than through media management campaigns and strategic communication of information, advice and guidance across a broad range of health issues. This covers chronic health issues to emerging and novel risks of corona virus through mass media campaigns. It is a connected series of operations designed to bring about a particular result. Hence, media campaigns can further be seen within the context of social projects management cycle from a specific start and end for adaptation to changes in behaviour, attitudes and perceptions of people. It calls for a new system or organisational arrangements and remodeling of objectives with a specific budget.

**Types of media campaigns**

Government agencies and institutions, advocacy groups, use various techniques to communicate with target audiences. Media campaign techniques fall into the broad areas of communication and focus in interpretable, persuasive, and actionable approaches. The interpretable approach is all about the use of appropriate channels of sending out the messages. Thibault(2016) says that communication between government officials and residents is vital for any democratic state, or nation to function successfully, and that there are a number of channels available for governments to use. While more traditional methods include face-to-face interactions, telephone calls, ordistributing informational flyers, the modern methods range from television sets, radio sets and the print media.

In the persuasive approaches, it is the tailoring of the message in a communication design for individuals based on information from the public demographic and psychological factors. The targeting of the message to the audience segments is important. Communication has to be designed for subgroups based on group membership or characteristics of age, gender, race, cultural, language, and psychographic characteristics or attitudes.

In the actionable approach, it carries the use of narratives of communication in the form of a story, testimonial, or entertainment and education. The framing of the message can convey the same messages in alternate ways of what is gained or lost by taking an action or making a choice.

Elena, Nicusor and Roxana (2013) posits the use of two vital methods of creating an information center and creating strategic partnerships. The thinking is that by creating and organizing an information centre, institutions can keep communication professionals to manage the flow of information to the citizens. Most European states maintain such offices for emergency information. It usually acts as the first point of information services for all-purpose information needs. Here, citizens can consult, access the official publications daily or weekly with a calendar of upcoming meetings and events. Also, the citizens can access new policy initiatives and legislative actions or receive answers to questions. Saleh, etal (2022) confirmed that there is need for setting up of psychological service centers across hospitals in Nigeria which would go a long way in not just evaluating the mental health status of hospital workers in relation to corona virus pandemic but it will be beneficial to the general public in assessing psychology services easily. The advantage is that presentations are relatively reliable. The method of creating strategic partnerships and visibility starts with the intent to meet the challenges of rapid evolution of communication techniques and technologies for public interests. This is about the importance of working in groups. It is an essential modality to promote activities; find new ways to be recognized by the citizens; and to have fulfill visibility and communication objectives using complimentary skills, capacities and experiences of partners from universities, local stakeholders; research institutions or NGO's.

Brownson, Ross; Eyler, ; Harris, Moore, and Tabak (2018) supported the strategies of One-on- one meetings, workshops and seminars. One-on-one meetings may be an effective means to communicate ideas on a particular issue. Often individual meetings consider the input made during interactions. However, time constraints may render this option impractical or infeasible while workshops and seminars on multiple formats can be short webinars to week-long in-person trainings. The objectives of carrying out a media campaign also range from public awareness, public information, public education and seeking to reinforce, change or modify the behaviour and attitude of the targeted public. The steps of mass media campaigns call for formal recognition of groups, a feasibility study and research defining the problem, broad description of the campaign, the objectives, tasks to be executed, output, deadlines, target delivery date, the budget, risks and constraints, start and completion date ( McLachlan, 2022). After the campaign is completed, it has to be evaluated. Evaluation focuses on performance of the campaign and the extent to which the campaign has met its objectives. The team needs to ask itself difficult questions about delivery, constraints, experiences, lessons and future goals. It is important that all of the above answers are captured in an exit report. The real measure of a campaign's success should be its impact on lives,

not just how well the individuals or teams performed tasks or how much media coverage the campaign received.

**Media campaigns Management and Corona virus Pandemic**

During the corona virus pandemic across most African counties, government communication health care campaigns practitioners were confronted with changing attitudes and behaviours of diverse audiences. It was not just a daunting task to interrogate into the psychographic, demographic and geographic profiles of targeted audiences but also the behavioural profiles. The government-media communication practitioners were saddled with responsibilities of ensuring that the campaign brand was distinctive, acceptable and visible at the various contact points and in line with the audience values.

Additionally, the various government agencies of information and opinion leaders were expected to take into consideration the socio - cultural fundamentals, the identification of the preferred communication vehicles, and the audience immediate priorities and needs. This is because the outbreak of corona virus pandemic was a social problem moment. Hence, Romualdo, Arroyo, and Cristobal-Cipriano, (2022) emphasized on institutions to continue prioritizing the programmess and advocacies, and management of social problems by maintaining high standards of integration in the learning process through campaigns, incentives, partnerships, organizational resources, and equity. The reality is that almost none of these expectations are usually seen done in crisis periods even when there are ample times to conduct media campaign strategies. This has major impacts on the messages that can be developed.Theoretical Framework

Constructivism Theory

Constructivism is focused on the identification of individual differences among people's ability to communicate effectively in social situations (Griffin, 2012). Jesse Delia, a researcher in communication is credited for the development of constructivism theory in 1970. The theory implies that there is a difference between people who are interpersonally successful as opposed to those who are not interpersonally successful. Delia's theory of constructivism is to better understand the differences among individuals who communicate more effectively in social situations.

It states that through interpersonal contact, each person has a unique perception of the world through encounters. People construct knowledge from interactions with the physical world. Through the development of interpersonal constructs, individuals establish impressions of other people in social situations.

**Information Manipulation Theory (IMT)**

This is a theory that argues that when deceiving others, citizens play with and stage-manage pertinent information in many ways out of the background (McCornack 2009). In IMT, the particular ways in which people manipulate information suggest influential impact. McCornack presented an elaboration of IMT, as a propositional theory of deceptive discourse production rooted in artificial intelligence in speech production. Jung (2009) says that Information Manipulation Theory suggests that deceptive messages covertly violate the principles that govern conversational exchanges in the quantity, quality, manner, and relevance of information presented. He agrees that media information manipulation occur when a sender or senders stage-manage information through the media to influence receivers. This means that a sender has a conditional preference of overlooking credibility in reporting accurate information and the receivers face the dilemma to make decisions according to the sender's primary preference. This extends to cases in which the sender has imperfect information without credibility, inadequate facts but embarks on reporting to favour cloudy interests.

**Methodology**

The research employed the ex post facto study or after-the-fact research, a category of research design in which the investigation starts after the fact has occurred without interference from the researcher. Silva (2010) states that the ex post facto research designs is often applied as a substitute for true experimental research to test hypotheses about cause-and-effect relationships in situations. Despite studying facts that have already occurred, ex post facto research shares with the research design of surveys. Survey method using questionnaire is one of the popular research methods that Barran (2004) notes that allow mass communication researchers to measure characteristics, opinion or behaviour of a population by studying a small sample from that group.

In order to be thorough, the research took the World Population Review (2020) population size of Port Harcourt in Nigeria and Duala in Camerouns which stood at 2,343,300 and 3,926,645 respectively. The combination of the two cities in both countries population which represented the entire West African countries was 6,269,945 persons

Taherdoost (2017) states that In order to generalize from a random sample and avoid sampling errors or biases, a random sample size need to be of adequate size. Consequently, the research adopted 600 persons as the sample size and proportionately spread at 224 and 376 in the two countries respectively.

In order to test for reliability of the instrument, this research adopted Akpan (2020) position of $10^{th}$ percent as basis of social and economic transactions. Thus, 60 copies of the 600 questionnaire was pretested on the members of the Power City International, Nwaniba road, a leading Pentecostal church having uniqueness to the population of the study. This gave room for modification of the research instrument.

The research instrument was a self-administered questionnaire. The study mainly used primary data whereby both qualitative and quantitative data were collected. Quantitative data was collected using a structured questionnaire consisting of closed-ended questions in which respondents were encouraged to provide accurate information on 10 different. A total of 600 questionnaires was distributed proportionately to residents of Port Harcourt at 224 and 376 to residents of Duala. In Port Hatcourt, three major roads of Old Refinery, the Aba road and the Ikwerre roads were picked. Each road was assigned 75 copies of the questionnaire for distribution to one resident per an odd number house only. In Duala, through an assistant researcher, Nguema Bala, 376 questionnaire was distributed in three streets of Besseke, Nkomba and Mambanda using odd number houses.

**Findings and Discussions**

The data collected from the questionnaire per each of the questions was computed in terms of the higher and lower numbers to ascertain the totals. The totals computed in simple percentages. It was also computed based on each of the objectives earlier selected for the study by the use of separate tables. The objectives are subsequently converted into questions to reflect the different answers.

**Table 1:** What was the main media which information about covid 19 reached most residents of African countries?

| Media | Nigeria | Cameroun | Total | Percentage |
|---|---|---|---|---|
| Television | 5 | 176 | 181 | 30 |
| Meetings | 62 | 73 | 135 | 23 |
| Radio | 101 | 85 | 186 | 31 |
| Sub Total | 168 | 334 | 502 | 84 |
| New media | 56 | 42 | 98 | 16 |
| Total | 224 | 376 | 600 | 100 |

Field Survey 2022

In the above Table 1, the data shows that the combination of television, group discussions, radio attracted 502 responses against New media responses at 98 or 16%. The implication is that African countries prefer listening to radio and television against New media. In the case of no response for newspapers, it can be reasoned that in the lockdown, vendors were restricted while residents were not allowed to go out.

**Table 2: What was the most acceptable theme of covid 19 messages received by residents of African countries;**

| Theme | Nigeria | Camerouns | Total | % |
|---|---|---|---|---|
| Social Distance | 15 | 3 | 18 | 3 |
| Masking | --- | --- | ---- | ---- |
| Vaccination | --- | 7 | 7 | 1 |
| Sub total | 15 | 10 | 25 | 4 |
| Hand washing | 209 | 366 | 575 | 96 |
| Total | 224 | 376 | 600 | 100 |

Field Survey 2022

Table 2 has it to show that in the list of themes of messages about the control of Covid 19, African residents accepted Hand washing at 575 or 96% above social distancing and masking at 25 or 4 %, vaccination was out-rightly rejected. The reason is that drugs for medical cure were not discovered.

**Table 3** : What was the perception of information about Covid 19 outbreak among residents of selectAfrica countries

| Perception | Nigeria | Cameroun | Total | % |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Propaganda | 62 | 107 | 169 | 28 |
| Rumour | 10 | 114 | 124 | 20 |
| Anti-Christ | 94 | 101 | 195 | 33 |
| Sub Total | 166 | 322 | 488 | 81 |
| Reality | 58 | 54 | 112 | 19 |
| Total | 224 | 376 | 600 | 100 |

Field Survey: 2022

Table 3 shows that the perception of residents of African countries about Covid 19 was far from seeing the outbreak as a reality. The perception was that of propaganda, rumour and anti religious at 488 or 81% respondents against reality at 112 or 19 %. The responsible factor cannot be far- fetched from illiteracy and lack of confidence in the pattern of government message delivery particularly in crisis moments.

**The Main Media Channels**

From the focus of establishing the main media channels of information about the corona virus from the government in African countries, typically, Nigeria recoded 168 and Duala 334 responses to be 502 persons or 84% to show that the traditional media of radio and television was the major platform of information dissemination during the crisis. This was against 98 or 16% of the respondents on social media platforms. This is a reflection that the government of African countries still rely on means of communication that have challenges of real time reach - out to citizens even at moments of crisis as the corona virus pandemic outbreak. This agrees with the position of Fukui, Arderne and Kelly(2019) that despite some progress in the international connectivity of latest communication broad bandwidths, much of Africa is still unconnected and large populations cannot fully realize the benefits of connectivity. The absence of timely information from foundational information sources and even telephoning caused a lot of people to resort to using the social media of information with attendant negatives of fake, false, distorted and anonymous releases to cause fear among citizens.

**Outstanding Theme of Coronavirus Messages**

On the themes of messages to the citizens on the corona virus outbreak, 575 or 96 % of respondents which came from 209 in Port Harcourt (Nigeria) and 366 in Duala (Camerouns) answered that hand washing was communicated and largely accepted among residents of African countries above social distancing, face masking and vaccination. The remaining 25 or 4 % took to other themes. The reason is not far from the fact that African beliefs cherish cleanliness and reject uncommonness, public masking, balms and medications. This tallies with Robinson (2020) position that expressions of faith in some (African) religious services emphasize close contact, such as hand-holding and sharing communion by touching or kissing at gatherings. The themes of messages were equally confrontational rather than persuasive as the African governments took much interest in the enforcement of lockdowns rather than in creating messages of campaigns for awareness and acceptance of coronavirus pandemic compliance protocols. Consequently, Dong, Zhou, Che and Bodomo (2020) state that the themes that emerged during the Covid-19 pandemic was a subject of nation-wide public debate over the language and styles used to urge people to stayindoors. The manner goes beyond a unidirectional path of on-site instant communication. This process is facilitated by mass media, created de-contextualization of messages and triggered need for an adaptive adjustment of the language and styles.

**Perception About Coronavirus Pandemic**

Considering the perception of African, it came out with data that 488 or 81% respondents which came from 166 in Port-Harcourt (Nigeria) and 322 in Duala (Camerouns) had the view that the messages from the African government healthcare outfits about the corona virus outbreak were merely taken as usual propaganda to scuttle the rise of religious institutions and particularly faith in Christianity. They felt that it was necessary to show resistance and to accept imprisonment, humiliation and harassment as did by the early Apostles. Consequently, it too African countries hard time combating some of the corona virus myths taking hold in countries as some believe coronavirus pandemic to be a divine punishment imposed on China and spreading to Africa. Barua; Barua; Aktar, Kabir, and Li, (2020) find out that in all-inclusive, the propagation of misinformation on (social) media undermines the coronavirus pandemic individual responses as credibility or misinformation can strongly predict the individual responses towards positive reaction in as much as religious beliefs as well as conspiracy general come next to influence negatively.

**Recommendations**

There has to be a broad based way of taking messages to Third World countries by the wide acceptance of social media rather than the existing archaic short range radio and television station service to misinform and confuse citizens.

This calls for effective regulation of social media services to reduce conspiracy against government social intentions borne out of ignorance, past frames and mind constructions.

The messages of social services in crisis moments have to be delivered with clarity, conciseness and correctness, courtesy in tones, themes, contents and contexts.

Messages of social wellbeing of the people have to be crafted by the integration of relevant segments of communities to enhance re-orientation of mind - sets from misconstruction and age- long perceptions. The limitations of this research was the restriction to West African countries, hence the suggestion to replicate it in the other regions of the African continent for generalization.

**Conclusions**

The study analyzed crisis communication campaigns about corona virus pandemic messages, the constructivism and misinformation among residents of West African states. With three objectives of finding out the main channels, the specific theme of the messages and the perception of the residents were explored. The methodology covered the use of survey methods through self- administered questionnaire on 600 residents. From findings, it was holistically, ascertained that corona virus happened suddenly and brought crisis which demanded for appropriate dissemination of messages to residents of states by health and government agencies. From quantitative data compilation, finding had it that multiple channels of information were applied ranging from radio, newspapers, magazines and the social media platforms. Incidentally, information to the people from the agencies were subjected to receivers' mind constructivism and there was misinformation.

In this circumstance and in the future, there is the need to ensure that the barriers for effective information delivery are overcome. Certainly, in the corona virus outbreak or similar moments of crisis deserved a refined approach of managing communication between the governments and the citizens. Crisis are periods that called for strong media campaigns management using appropriate channels, styles, steps and strategies. The citizens have to be considered as relevant stakeholders in the functioning of social services rather than the application of militarized styles of driving people into homes. Compliance to corona virus pandemic can be persuasive and result oriented. Since the global community has come to exist, it is likely that similar global pandemics may not be evitable. It is timely that the governments consider some recommendations of communication experts in taking information across to the citizens using familiar, credible media channels, precise themes to control poor perceptions of messages during crisis.

**References**


Akpan, U. U. (2020) Sampling statistical analysis in research. Opobo: Udis PublishersAmaresan, S. (2021). *Crisis communication examples*. Retrieved from
https://blog.hubspot.com/service/crisis-communication-plan

Amungwa, F. A. and Nji, A. (2015). Appraisal of the participatory and decentralized approach torural community development in Cameroon. Journal of the Cameroon Academy of Sciences 12(2) 131 – 143

Barua, Z Barua, S. Aktar, S. Kabir, N. and Li, M.(2020). *Effects of misinformation on COVID- 19 individual responses and recommendations for resilience of disastrous consequences of misinformation* https://www.sciencedirect.com/science/article/pii/S2590061720300569

Bernstein, J. (2015). *The 10 Steps of Crisis Communications.* Retrieved from https://www.bernsteincrisismanagement.com/the-10-steps-of-crisis-communications/

Bianchi, N. (2020). *How to use the four modes of persuasion to make your writing irresistible.*
Retrieved from https://nicolebianchi.com/modes-of-persuasion/

Barton, K. and Tucker, B. G. (2021). *Traditional views of persuasion.* Retrieved fromhttps://socialsci.libretexts.org/Bookshelves/Communication/Book%3A_Exploring_Public_Speaking_(Barton_and_Tucker)/13%3A_Persuasive_Speaking/13.04%3A_Traditional_Views_of_Persuasion

Brownson, R. C. Eyler,A. A,. Harris, J. K. Moore, J. B. and Tabak, R. G. (2018). *Getting theword out: New approaches for disseminating public health science. Journal of PublicHealth Management and Practice: 24(2) 102 – 111 doi: 10.1097/PHH.0000000000000673*

Bruijn, M. D. and Brinkman, I. (2011). *Communicating Africa: Researching mobile kin communities, communication technologies, and social transformation in Angola andCameroon.* https://www.cairn.info/revue-autrepart-2011-1-page-41.htm

Crocetit, P. (2008). *What is crisis communication.* Retrieved from https://searchdisasterrecovery.techtarget.com/definition/crisis-communication

Dong, H., Zhou, M. , Che, D. and Bodomo, A. (2020). If the coronavirus doesn't scare you, the banners will—A case study of early cOvid-19 banners *International Journal of Environmental Research and Public Health, 17(1) pp 1 - 19*

Elena J. Nicusor, C. and Roxana, C. (2013). Techniques and methods to improve the communication channels in modern public administration. Procedia - *Social and Behavioral Sciences (92 ) 174 – 179*

Falcone, Z. (2018). The role of media in shaping public opinion. https://wcuquad.com/6010053/op-ed/the-role-of-media-in-shaping-public-opinion/

Fragouli, E.and Ibidapo, B. (2015). Leading in crisis: Leading organizational change and business development. *International Journal of Information, Business, and Management*, *7*(3), 71–90.

Fukui, R. Arderne, C. J. and Kelly, T. (2019). Africa's connectivity gap: Can a map tell the story? Retrieved from https://blogs.worldbank.org/digital-development/africas-connectivity-gap-can-map-tell-story

Ghosh, D. (2006). Effect of mothers' exposure to electronic mass media on knowledge and use of prenatal care services: A comparative analysis of Indian States. *The Professional Geographer*, 58(3), 278–293. https://doi.org/10.1111/j.1467-

Griffin, W. R.( 2012). Management. https://www.amazon.com/Management-11th-Griffin-Ricky-Hardcover/dp/B010CKHC3U

Jamar, S. D. (2008). *Aristotle teaches persuasion: The psychic connection*. https://www.researchgate.net/publication/228297913_Aristotle_Teaches_Persuasion_The_Psychic_Connection

Kindzeka, M. E. (2020). *Cameroon seals church that claims COVID-19 does not exist*. Retrievedfrom https://www.voanews.com/covid-19-pandemic/cameroon-seals-church-claims- covid-19-does-not-exist

Liew, M. (2021). *The power of information management for the public sector.* https://opengovasia.com/exclusive-the-power-of-information-management-for-the- public-sector/

MvLachlan, S. (2022). *7 inspirational social media campaigns.* https://blog.hootsuite.com/social-media-campaign-strategy/

McCormack, S. A. (2009). Information manipulation theory. Communication monograph 59(1) 1-16

Mikusova, M. & Horvathova, P. (2019). *Prepared for a crisis? Basic elements of crisismanagement in an organization.* https://www.tandfonline.com/doi/full/10.1080/1331677X.2019.1640625

Olukunle, A. D. (2018). Evaluation of causes and solution to ethnic conflicts in North-central, Nigeria. *International Journal of Social Sciences, 18(2) 207-215*

Romualdo, A., Arroyo, J., and Cristobal-Cipriano, C. M. (2022). Analysis on policy implementation and institutional integration of RA 9003 SWM indicators in educationalinstitutions. *Journal of Social Sciences and Management Studies, 1(3), 91–97. https://doi.org/10.56556/jssms.v1i3.210*

Robinson, K. (2020). *How are major religions responding to the coronavirus?* https://www.cfr.org/in-brief/how-are-major-religions-responding-coronavirus

Saleh, D. and David, S. (2022). Assessment of Covid-19 obsession among hospital workers inJos-South LGA Plateau state, Nigeria. *Journal of Social Sciences and Management Studies, 1(1), 75–80. https://doi.org/10.56556/jssms.v1i1.102*

Sushi, M. Sharma, S. K. Kumar, Y. and Kumar, G. (2017). *Mass media for health education (A study in the State of Rajasthan).* https://www.researchgate.net/publication/324910020_Mass_Media_for_Health_Education_A_Study_in_the_State_of_Rajasthan

Shaban, A. R. A. and Mumbere, D. (2020). *Coronavirus: Zimbabwe beer ban u-turn, AU leadersmeet, Cameroon tally booms*. www.africanews.com/2020/04/04/coronavirus-hub-impact-of-outbreak-across-africa

Saraf, R. A and Balamurugan, J. (2018). The role of mass media in health care development: A review article. *Journal of Advanced Research in Journalism & Mass Communication 5(1&2) 39 -43*

Silva, C. (2010). *Ex post facto study. In N. J. Salkind (Ed.),* Encyclopedia of research design (pp. 466-466). SAGE Publications, Inc., https://dx.doi.org/10.4135/9781412961288.n145

Slaugther, A. (2017). *3 responsibilities every government has towards its citizens* https://www.weforum.org/agenda/2017/02/government-responsibility-to-citizens-anne- marie-slaughter/

Taherdoost, H. (2017). *Determining sample size; How to calculate survey sample size. determiningsample size; idea*s.repec.org/p/hal/journl/hal-02557333.html

Thibault, J. (2016). *Analyzing government-resident communication methods in the city of Bangor.* https://digitalcommons.library.umaine.edu/cgi/viewcontent.cgi?article=1257&context=honors

Udende, P, Akpede, K. S. Omoloso, A. I. and Abubakar, I. Y. (2022). *Social media and Covid 19conspiracy theories' amplification of misleading information*. In: Ogwezzy-Ndisika, A, Oyeleye, So. A. Osuagwu, T. and Abubakar, A (ed). Communication identities: Media and inclusive democracies, Ibadan: Evans Brother( Nigeria Publishers) Limited

World Health Organization (2017) *Strategic communication framework for effective communication. Geneva: Retrieved from* https://www.who.int/mediacentre/communication-framework.pdf

World Population Review (2022).*Major cities population*. https://int.search.myway.com/web?o=1471972&l=dir&qo=serpSearchTopBox&p2=%5EY6%5Exdm269%5ETTAB02%5ENG&n=7848658a&ln=en&ueid=7844833d-6ac0- 4975-87e5-8816fbd38ef4&q=population+of+Port+Harcourt

Wu, Y. Chen, C. Chan, Y. (2020). *The outbreak of COVID-19: An overview .Journal of the ChineseMedical Association: 83 (3) p 217-220*

RESEARCH ARTICLE

# Academic Qualifications of ESL Teachers in Government Schools in the Eastern Province, Sri Lanka: Factors and Its Impact

**Abdul Farook Abdul Halik[1*], Rifka Nusrath.GM[2]**

[1]English Unit, T/Mu/Al Hilal Central College, Mutur, Sri Lanka
[2]Department of English Language Teaching, South Eastern University of Sri Lanka

Corresponding Author: Abdul Farook Abdul Halik, abdhulhalik@gmail.com
Received: 13 September, 2022, Accepted: 24 september,2022, Published: 24 September, 2022

**Abstract**
This study aimed at investigating the lower academic qualifications of ESL teachers in the Eastern Province, Sri Lanka and its impact on student's English language learning. This study was a descriptive survey research and mixed approach was applied in data collection and data presentation. The sample population of this study was 150 ESL teachers in government schools and 6 ADEs – English of 6 education zones in the Eastern Province. The research instruments of the study were a questionnaire and a focus interview. The results-based conclusions show that majority of the participants possess only A/L, NDE and HNDE qualifications whereas a few numbers of participants possess BA in English and postgraduate qualifications related to English. The reasons put forward by several teachers for possessing lower academic qualifications were: lack of income, remote opportunities and resources in participants' home city, holding only A/L, NDE and HNDE qualifications and issues in travelling long distance. Particularly, the government of Sri Lanka does not bear the course fee for educational qualifications or grant study leave for teachers and there are no any promotions and salary increment for educational qualifications in SLTS. This is one of the reasons for the failure to complete their basic degree and postgraduate studies related to English. The lower academic qualifications of the ESL teachers negatively impact on students' English language learning and development to a larger extent.

**Keywords:** Academic qualifications; English as a Second Language; Government Schools; Teachers

## Introduction

In terms of the education system in Sri Lanka, both primary and secondary education are implemented by government, government approved and private schools. The government and government approved schools' function under the purview of the Ministry of Education. According to school curriculum, English language is one of the main subjects from grade 1 to General Certificate of Education (GCE) – Advanced Level (A/L). With regard to school education system in Sri Lanka, Halik & Nusrath (2020) state that state and non-state academic organizations offer English as a main or optional subject in the curriculum. As a result, according to the education system of Sri Lanka, English has been offered as a compulsory subject from grade 3 to 13 at government schools. With the goal of enhancing English language competence among every student, a number of English as a Second Language (ESL) teachers are recruited to schools and the Ministry of education provides many resources for both students and ESL teachers in order to develop the English language skills. However, due to the recruitment of incompetent and disqualified teachers in English, students fail to reach the expected learning outcome and communicative competence. Therefore, English language teaching and learning has been dissatisfactory for several years, particularly in the Eastern Province, Sri Lanka.

According to the review of study on English language teaching in Sri Lanka, Wijeskera (2011/2012) asserts that English Language Teaching (ELT) in Sri Lanka has not been able to achieve its intended objectives. This failure in ELT is not a baseless assumption. It is proved by what we have experienced for the last forty or so years and evidenced by student performance at the two major examinations. The two examinations include: GCE – Ordinary Level (O/L) and GCE (A/L) examinations. The 2020 GCE (O/L) results percentage in English subject – Eastern Province was 60%. When the Eastern Province is compared to other provinces in Sri Lanka, this (60%) was the lowest percentage for English subject in GCE (O/L) – 2020. (Source: GCE (O/L) – 2020 (English Subject) Report – Eastern Province).

The requirement of National Diploma, Higher National Diploma and Bachelor Degree for recruitment of English teachers is one of the factors for the recruitment of incompetent ESL teachers to schools. As a result, many number of ESL teachers in the Eastern Province of Sri Lanka are in teaching service with the same qualifications. According to a study about ELT in Kinniya

Education Zone in Trincomalee district, one of the education zones in the Eastern Province, Halik (2021) finds that as far as the findings of the participants' educational qualifications are concerned, only 15% of the participants possess BA in English and none of the participants had done any postgraduate programmes related to their field to improve their knowledge and teaching skills.
As far as the ESL teachers in Sri Lanka are concerned, majority of the teachers do not have postgraduate studies related to English. A few numbers of teachers possess Postgraduate Diploma (PGD) and Master Degree in their field of teaching since most of the teaching appointments are given for Diploma and HND holders for English subject. Although Bachelor of Arts (BA) Degree holders are recruited into teaching service, apart from BA in English degree graduates, English medium graduates are too recruited as teachers of English.
Moreover, except a few graduate teachers, most of the graduates who serve as teachers of English follow Postgraduate Diploma in Education (PGDE) for promotion. PGDE programmes covers majorly: teaching methodology, educational psychology and measurement. The syllabus outline of PGDE does not consist any study areas about English. Despite these, various factors affect the lower academic qualifications of the ESL teachers in the Eastern Province. This current study aims at investigating the academic qualifications of the ESL teachers in the Eastern Province, Sri Lanka and the factors that affect their lower academic qualifications & its impact on students' learning.

**Research Questions**

The following questions were formulated based on the problem of this study. They are as follow.
1. Do a large number of ESL teachers in the Eastern Province possess lower academic qualifications?
2. Does the lower academic qualifications of the ESL teachers affect students' English language learning and development?
3. Why do most of the ESL teachers not pursue higher studies to develop their field of expertise and subject knowledge?

**Methodology**

**Research Objectives**

The following objectives are addressed in this study. They are as follow.
1. To investigate whether majority of the ESL teachers in the Eastern Province, Sri Lanka possess lower academic qualifications
2. To explore to what extend ESL teachers' lower academic qualifications affect students' English language learning and development
3. To identify the factors that affect the ESL teachers' subject knowledge and competence through pursuing postgraduate studies

**Research Design**

This study was a descriptive survey research. Mixed approach was applied in data collection and data presentation: both qualitative and quantitative approaches were used for collecting primary data as qualitative and quantitative instruments were chosen for data collection. Both qualitative and quantitative approaches were used for data analysis and presentation. The sampling technique of this study was a random sampling.

**Sample Size**

In this study, 150 ESL teachers in government schools in the Eastern Province, Sri Lanka and 6 Assistant Directors of Education – English (ADE – English) were chosen as the sample size of this study. As far as the Eastern Province of Sri Lanka is concerned, there are three districts: Trincoamlee, Batticaloa and Ampara. Fifty (50) ESL teachers were randomly chosen from each district. The teachers include: junior and senior teachers in national and provincial schools in the Eastern Province. Similarly, 2 ADEs were chosen from each district.

**Research Instruments**

A questionnaire and a focus interview were used as data collection instruments of this study. The questionnaire consisted of both close-ended and open-ended questions. The questions were set based on the questions and objectives of the study. The close-ended questions were set focusing on participants; personal information and their academic qualifications whereas the open-ended questions were set focusing on the factors that affect continuing their postgraduate studies related to their field of expertise. Moreover, the focus interview was used to gather opinions among the selected ADEs in English regarding the impact of teachers' academic qualifications and subject knowledge on students' learning and development.

**Data Collection Procedure**

The secondary data were collected through secondary sources such as journal research articles, census reports, university handbooks and Eastern Provincial Education Department reports whereas the primary data were collected using the questionnaire and the interview. A Google Form link was randomly sent to the selected ESL teachers in each district, and they were requested to fill in the Google Form. The opinion survey was carried out using the Google Form. Likewise, the selected ADEs in English were interviewed through telephone conversation. Prior to the interview, the researcher received the consent and appointment from the selected ADEs.

**Results and Discussion**

This section presents the findings of the data analysis and the discussion of the findings. The findings reveal the academic qualifications of the selected ESL teachers in the Eastern Province, factors that hinder following postgraduate studies, impact of lower academic qualifications on student's English language learning and development and suggestions to encourage teachers to follow postgraduate studies in English.

**Academic Qualifications of the Participants**

The following graph shows the academic qualifications of the selected participants. The abbreviations in the graph are as follow: A/L – Advanced Level, NDE – National Diploma in English, HNDE – Higher National Diploma in English, BA – Bachelor of Arts, B-Ed – Bachelor of Education, PGD – Postgraduate Diploma, MA – Master of Arts, M.Ed – Master of Education, M.Phil – Master of Philosophy and PhD – Doctor of Philosophy.

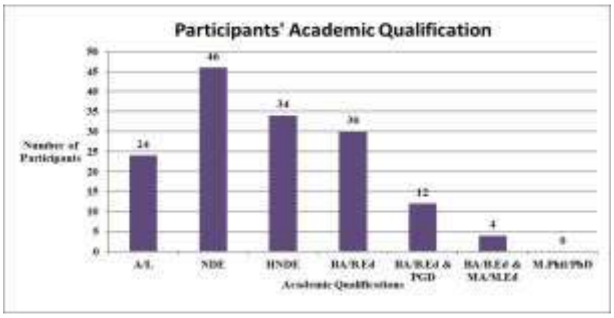



**Figure. 1** (Participants' Academic Qualifications)

As presented above through the graph, the findings are obvious that A/L qualified teachers were recruited into SLTS 3 – 2 categories. Later, they completed Government Teachers' Training course, specialized in English which is conducted by the National Teachers' Training Colleges. Similarly, majority of the participants were NDE holders who are also trained teachers, produced by Sri Lanka National Colleges of Education. Therefore, both category teachers are categorized as trained teachers, and they are promoted as the years are fulfilled for promotion in SLTS. It is noteworthy to mention that most of the trained teachers of English do not pursue their higher studies as they think that they possess sufficient teaching skills and subject knowledge.

However, their subject knowledge and communicative competence seems lower as they are not updated. According to a survey of 412 teachers from across Sri Lanka, the proportions of English language levels among English teachers within the secondary school system in Sri Lanka, the results show that Listening is B2 (Upper Intermediate) among the biggest group (38%), Reading is B1 (Intermediate) among 39% of them, Speaking is B1 or B2 among most teachers (44% and 41% respectively), and writing is B2 among 51% of the teachers. (Allan & Mackenzie, 2019).

Further, according to the findings, a very few numbers of teachers possess postgraduate qualifications. In particular, those who possess postgraduate diploma, their field of study is specialized in Education. Only two participants out of 12 specialized in Teaching English as a Second Language (TESL). According to the opinions among the teachers in Sri Lanka Teaching Service (SLTS) and the primary data collection of this current study, most of the graduate teachers are willing to pursue PGDE which is a professional qualification. The reasons behind their preference to obtain PGDE or M.Ed is; promotion is given only for professional qualifications and the course fee is covered by the Provincial Department of Education or Ministry of Education only for professional qualifications, not for educational qualifications.

In particular, even the teachers of English in the Eastern Province complete their PGDE or M.Ed programme in Tamil medium. The primary reason for choosing Tamil medium courses is, as because no institutions such as Eastern University, Sri Lanka, NIE Study Centre for Eastern Province and the Open University of Sri Lanka (OUSL) regional centre and study centres in the Eastern Province offer English medium courses. The ESL teachers in the Eastern Province are not ready to travel out of their Province, and pursue English medium courses.

It is noteworthy that the curriculum of professional courses focuses on developing teaching profession. Instead, it does not cover any course content to develop subject knowledge in the field of expertise. Major areas of study in PGDE and M.Ed course content are: Education Administration and Management, Teaching Methodology, Educational Measurement and Evaluation, Educational Psychology, Principle of Education, Research Methodology, Philosophy and Guidance and Counseling (Source: PGDE Handbook - 2014/2015 of University of Peradeniya & M.Ed Course Brochure – 2021/2022 of OUSL) . Therefore, the professional qualifications cannot help the ESL teacher develop their subject knowledge.

On the other hand, as far as educational qualifications such as PGD in TESL, MA in English Studies, MA in Linguistics, MA in English etc. programmes offered by state universities in Sri Lanka are concerned, they cover major course contents: Research Methodology, World Englishes, Sri Lankan Writing in English, Sociolinguistics, English Literature, Methods in language teaching, assessment in TESL, Syntax, Morphology, Phonetics and Phonology, Applied Linguistics, Psycholinguistics, Semantics and Pragmatics (Source: Postgraduate Prospectus, Handbook and Guidebook of state universities in Sri Lanka). Therefore, the above course contents can help the ESL teachers develop their advanced grammar competence, academic writing skills, Linguistics competence, literary competence and effective communication skills. If the teachers have vast knowledge and skills in English, they well be a boon and asset to the students. Students can develop their English language proficiency if the qualified teachers are utilized. However, since the ESL teachers in the Eastern Province possess lower academic qualifications, students' English language learning and development is affected. For instance, due to lack of English teachers to teach English Literature, a very few students prefer English Literature in grade 10, and the results production in GCE (O/L) examination seems lower. According to Halik (2021), just

51 students opted English Literature in grade 10 in the academic year – 2021 in Trincomalee District. Since the ESL teachers do have the literary competence, students are not encouraged to prefer English Literature for GCE (O/L). Moreover, teachers fail to improve students' communicative competence.

**Effect of ESL Teachers' Lower Academic Qualifications on Students' English Language Learning**

As per the opinion survey among the ADEs in English, the followings are the negative impacts on students' English language learning and development due to lower academic qualifications of the ESL teachers in the Eastern Province.

- Language skills development are not focused.
- Difficulties in teaching school textbook effectively.
- Teachers do not have sufficient subject knowledge.
- Neither pronunciation rule are taught nor are pronunciation errors corrected.
- Some teachers are not updated.
- Modern language teaching approaches, methods and techniques are not implemented.

As presented above, as far as school setup in the Eastern Province is concerned, more focus is given only to teaching grammar, reading and writing. Writing is covered based on the textbook. Despite focusing listening and speaking skills in school textbook, these kills are skipped by most of the teaching since they are unable to orally communicate in English effectively. As a result, majority of the students' speaking ability seems lower in school context in the Eastern Province, particularly, rural and semi-urban schools. The findings of a study on oral communicative skills of GCE (OL) students in government schools in Trincomalee District conducted by Halik & Jayasunthara (2021) show that majority of the participants' lexical resource was lower. As a result, their oral communicative skills were poor. Moreover, very little focus has been given to teaching pronunciation rules and practicing pronunciation.

Further, young NDE, HNDE, English medium degree holders as well as some of the senior trained teachers encounter challenges in teaching the textbook effectively. They are unable to strictly follow the teachers' guide. As a result, most of them skip the lessons that seems challengeable to teach. Each unit of every English textbook (grade 6 – 11) begins with the role play. Students should be trained to enact the role play. However, since they are unable to enact the role play effectively. They make the speaking lesson a reading lesson, and students are instructed to read out the role play and answer the questions followed by the role play. As far as the grammar and reading lessons are concerned. Some grammar lessons such as conjunctions, prepositions, use of tense, passive voice and reported speech, and advanced reading passages and poems seem to be challengeable for some ESL teachers to explain them to students effectively. This challenge is as because of lack of subject knowledge (Advanced grammar competence). As a result, students' fail to understand grammatical competence and reading and comprehension skills.

Another significant negative impact is, neither pronunciation rule is taught nor are pronunciation errors corrected in the classroom since listening and speaking lessons are not emphasized, and they do not have understanding about phonetics and phonology. It is noteworthy that some ESL teachers are not updated. They are not willing to develop their knowledge in spite of knowing that English language is updated day by day. As a result, they use the same traditional teaching approaches and existing limited knowledge in English. In particular, those who teach in rural and semi-urban schools get remote opportunities to update them by themselves.

There are several second/foreign language teaching approaches, and innovative methods and techniques such as Direct Method, Audiolingual Method, Task Based Learning Method and Communicative Language Teaching Method and Learner-Centered Learning Method which aim at improving language skills of the students. However, due to lack of knowledge about language teaching methods and techniques, they use traditional teaching methods in school set up (Grammar Translation Method).

**Reasons for the Failure to Pursue Higher Studies (Postgraduate Degrees) in English**

According to the opinion survey of the selected participants, the following reasons were put forward for the failure to pursue their higher studies in English.

- Issues in traveling long distance
- Lack of opportunities and Resources in the Eastern Province to pursue postgraduate degrees
- Family situation and financial barrier
- Lack of income (lower salary)
- Mentality that higher educational qualification is not necessary
- No basic degree to pursue postgraduate degree

The above factors were stated by the large number if participants. In particular, the greatest number of ladies' teachers had NDE and HNDE. They had stated that due to various responsibilities, they were unable to travel long distance and continue their higher studies since there are no any courses offered by the state higher educational institutions in their district. It is noteworthy that there are very remote opportunities in the Eastern Province to pursue higher studies in English. No universities in the Eastern Province: South Eastern University of Sri Lanka (SEUSL), Eastern University, Sri Lanka (EUSL) and OUSL Regional Centre in Batticaloa offer external degree and postgraduate programmes in English. Therefore, most of the teachers fail to travel outside the province and continue their higher studies in other state universities.

Another significant factor is that financial barrier. Teaching salary is lower when compared to the salaries of Instructors and Lecturers in higher educational institutions. Their monthly salary is affordable only to manage their family. As a result, the greatest number of teachers conduct private classes for additional income. Since they spend their weekend (Saturday and Sunday) for conducting private classes, they are unable to allocate the weekend for higher studies. Moreover, Provincial Department of Education does bot either reimburse the course fee or grant study leave for educational qualifications as if reimbursing the course fee and granting study leave for professional qualifications.

Further, as discussed above, trained teachers of English think that their subject knowledge and teaching skills are sufficient to teach English effectively, and pursuing higher studies is not necessary. Yet, they possess limited knowledge in English. Another reason stated by most of the teachers that they did not have basic degree in English to pursue their postgraduate study programmes in English. Due to remote opportunities and financial barriers, they are unable to complete their basic degree in English.

These are the primary reasons for the failure to pursue their higher studies to develop their advanced subject knowledge and language teaching skills according to participants; opinions.

## Conclusions

The conclusions of this study can be drawn based on the findings that according to the selected ESL teachers' response, majority of the participants possess only A/L, NDE and HNDE qualifications whereas a few numbers of participants possess BA in English and postgraduate qualifications related to English. As a result, their advanced knowledge in English and communicative competence seems lower. Moreover, some reasons were stated by majority of the participants with regard to the failure to pursue their higher studies. They are: lack of income, remote opportunities and resources in participants' home city, holding only A/L, NDE and HNDE qualifications and issues in travelling long distance.

In particular, the government of Sri Lanka does not bear the course fee for educational qualifications or grant study leave for teachers as though education related professional qualifications such as PGD/PGD in Education and Education Management, M.Ed/M.Ed in Education Management, Teacher Education etc, M.Phil in Education and PhD in Education. Further, teachers do have promotion for professional qualifications whereas there are no any promotions and salary increment for educational qualifications in SLTS. Due to above reasons, they failed to complete their basic degree in English and postgraduate studies related to English. As a consequence, the lower academic performance of the ESL teachers negatively impacts on students' English language learning. Therefore, the outcome of result production in English has been dissatisfactory in the Eastern Province when it is compared to other provinces in Sri Lanka.

This issue of lower academic qualifications of the ESL teachers in the Eastern Province can be overcome and they can be encouraged to pursue their higher studies when the government bear the course fee and grant study leave for educational qualifications as though bearing the course fee and granting study leave for professional qualifications, and consider educational qualifications for SLTS promotion and salary increment.

## References


Abdul Halik A.F. 2021. English Language Teaching in Government Schools in Sri Lanka: A Survey based on Kinniya Education Zone, Trincomalee. International Journal of Multidisciplinary Studies (IJMS), 8(1), 59 – 68.

Abdul Halik, A. F & Jayasundara, N. S. (Trincomalee District of Sri Lanka. The Journal of the Faculty of Humanities, 28, 81 -92. 2021). Lack of Vocabulary: A Barrier to the Oral Communication Skills of GCE A/L Students in the

Abdul Halik, AF & Rifka Nusrath, GM. 2020. Challenges Faced by ESL Teachers in Teaching English to the Students in Rural Schools: A Study Based on Five Rural Schools in the Kinniya Education Zone, Trincomalee, Sri Lanka. International Journal of Scientific and Research Publications, 10(11), 174 – 181.

Allan, D & Alan S. M. (2019). Investigating English Language Teacher Proficiency in State Secondary Schools in Sri Lanka. British Council.

Degree of Master of Education Programme. Course Brochure – 2021/2022. The Open University of Sri Lanka.

Ekiz, S & Kulmetov, Z. (2016). The Factors Affecting Learners' Motivation in English Language Education. Journal of Foreign Language Education and Technology, 1(1).

GCE (O/L) – 2020 (English Subject) Report – Eastern Province, Sri Lanka

Postgraduate Diploma in Education Programme. Handbook - 2014/2015. Department of Education, Faculty of Arts, University of Peradeniya.

Wijeskera, HD 2011/2012. Dreams Deferred: English Language Teaching in Sri Lanka. Journal of Humanities & Social Sciences, 7(8).