

JOURNAL OF INTERDISCIPLINARY PERSPECTIVES



Volume 2, Issue 4
April 2024

Published monthly by:
The Wise Researcher
www.jippublication.com

JOURNAL OF
INTERDISCIPLINARY
PERSPECTIVES

Editorial Board

Editor-in-Chief

Angelo A. Acenas, PhD (c)

Editorial Board Members

Anastacio G. Pantaleon, Jr., PhD

John Robby O. Robinos, PhD

Josefina D. Ortega, PhD

Diosdedet C. Labordo Jr., PhD

Victoriano P. Barliso Jr., PhD

Christian T. Galgao, PhD

Jesson L. Hero, PhD

Maria Chona Z. Futalan, PhD

Debapriya Ghosh, PhD

Francis Ion C. Sangil, PhD

Princess Fe Caballes-Deliva, PhD

Edgar O. Fernandez, EdD

Roniel Sanchez Fortuna, EdD

Romario P. Ybañez, DPA

Rosalinda Saquing-Guingab, DComm

Ronald E. Almagro, PhD (c)

Carie Justine P. Estrellado, PhD (c)

Noel P. Munda, PhD (c)

Oroville J. Evarado Jr., PhD (c)

Renniel Jayson J. Rosales, PhD (c)

Jay B. Fallan, PhD (c)

Mee Ann Mae Loria-Tungol, PhD (c)

Nikka Mae J. Adling, PhD (c)

Raymund M. Igcasama, EdD (c)

Glen B. Millar, EdD (c)

Charlene Joy G. Oliveros, EdD (c)

Mary Joy E. Guevarra, EdD (c)

Frances Allen P. Eballa, EdD (c)

Mary Cecille C. Arciaga, EdD (c)

Francisco J. Sedillo Jr., DM (c)

Devin L. Revilla, DM (c)

Shiela Marie B. Alia, ME, MSc

Francis C. Rayo, MAEd

Jhonas S. Lumanlan, MAEd

Emmanuel L. Templa, MPA

John Louise M. Marcaida, MPES

Editorial Staff

Rosellnica B. Acenas, LPT

The **Journal of Interdisciplinary Perspectives (JIP)** is a scholarly publication that embraces both multidisciplinary and interdisciplinary approaches. It operates as a peer-reviewed, open-access journal available in both printed and online formats. Manuscripts meeting the general criteria of significance and scientific relevance are welcomed for submission to the Journal.

JIP publishes original research articles from diverse fields to foster cross-disciplinary collaboration and the exchange of ideas. We welcome contributions from a wide range of disciplines, including but not limited to: Education, Business and Management, Engineering, Science and Technology, Philosophy, Religion, Humanities, Psychology, Social Sciences, Information Technology, Economics, History, Languages, and Agriculture.

Our mission is to harness the power of research for positive impact by facilitating simplified, accessible, and quality publication of relevant research works across various disciplines at all levels of education.

Copyright 2024
By The Wise Researcher

All rights reserved.

Copying of a single article for research purposes is permitted, but multiple reproductions of parts thereof without the written permission of the copyright owners constitute a breach of copyright.

Published and exclusively distributed by **The Wise Researcher**
Address: Katipunan St, Tisa, Cebu City, Philippines
Tel # (+32) 238 2027
Email: submissions@jippublication.com

Table of Contents

	Page
1 Describing Syntactic Errors in Written Works of Grade 8 Students in English - A Phenomenological Study <i>Jhonnell A. Tizon, Jasmin Dela Cruz</i>	6
2 After-dark Filipino Learners: Addressing the Stress Level and Grit among Higher Educational Learners and its Relationship to Academic Performance <i>Kadesh Angela B. Caballero</i>	13
3 The Mediating Effects of Work-Life Balance on the Relationship of School Heads' Leadership Practices and Teachers' Work Satisfaction <i>Lelet U. Borreba, Joel D. Potane</i>	20
4 Assessing the Financial Literacy of the Blue-Collar Job Workers in Terms of Financial Management Practices <i>John Lloyd P. Alarcon, Joshua M. Pamisa, Daniella Sophia P. Alarcon, Joven Jonen V. Ellacone, Rodel John A. Esmalde, Dave Stephen C. Pedroza</i>	33
5 Behind the Scenes: Evaluating the Performance of University Support Personnel for Institutional Progress <i>Gilmilen C. Sanchez</i>	40
6 Perspectives of Mental Health Professionals on Self-Diagnosis and Romanticization of Mental Illnesses <i>Nathania Danielle T. Quijano, Angelie Jayne Naval, Darwin F. Ignacio</i>	50
7 Public Elementary Teachers' Motivation and Pedagogical Competence In Teaching Non-Readers: A Correlational Study <i>Wilson G. Ortega, Jr, Gideon S. Sumayo</i>	60
8 Curriculum Delivery of English Language Macro-skills vis-à-vis Strategic Approach of Bukidnon Jesuit Mission School Teachers <i>Kim Peter O. Diez</i>	68
9 Nurses Compliance Towards Infection Control Practices at Sulu Sanitarium and General Hospital <i>Sahid I. Sangkula</i>	80
10 Application of Herzberg's Two-Factor Theory: Motivational Factors and Hygiene Factors in the Financial Industry <i>Romario P. Ybanez</i>	92
11 The Moderation Analysis of Coping Strategies in the Relationship between Anxiety and Aggression among Security Personnel <i>John Raven G. Baldovino</i>	102
12 Effectiveness of an ICT-Skills Enhancement Short Course Program for Barangay Functionaries ICT-Based Office Operation <i>Marianne R. Gloria</i>	112
13 An Evaluation of the Efficiency of the Localize, Locate, and Pinpoint Strategy in Reducing Water Loss <i>Ken Lester O. Jariol</i>	120
14 The Interplay among Students' Social Behavior, Thinking Skills, and Academic Performance in Core Subjects <i>Abigail V. Santisteban, Maria Chona Z. Futalan</i>	130
15 Determinants of Primary School Teachers' Level of Self-Efficacy <i>Song Zishan, Jaruovic Rafols</i>	138

Describing Syntactic Errors in Written Works of Grade 8 Students in English - A Phenomenological Study

Jhonnell A. Tizon^{1*}, Jasmin Dela Cruz²

¹Siena College of San Jose, San Jose del Monte City, Bulacan, Philippines

²St. Dominic Academy of Pulilan, Inc., Pulilan, Bulacan, Philippines

*Corresponding Author email: jhonnell.tizon.a@gmail.com

Dated received: February 22, 2024

Date revised: March 2, 2024

Date accepted: March 5, 2024

Originality: 98%

Grammarly Score: 99%

Similarity: 2%

Recommended citation:

Tizon, J., & Dela Cruz, J. (2024). Describing Syntactic Errors in Written Works of Grade 8 Students in English – A Phenomenological Study. *Journal of Interdisciplinary Perspectives*, 2(4), 5-12.
<https://doi.org/10.5281/zenodo.10780466>

Abstract. This research aims to unravel the syntactic errors of the grade 8 learners of the OP-Siena school in Bulacan. The researchers use the phenomenological method, which is a qualitative method in research. An interview was utilized to gather the data needed for this research. The respondents were chosen purposively following the criteria set by the researchers. The study revealed that the usual written activity that students must accomplish is essay writing; the common error their teacher primarily identified is the error in using prepositions. The students also perceived the reason for their errors as psychological factors such as anxiety; they also recognized the environmental factors such as noise, not having enough time to accomplish their writing activity and the teachers' instruction delivery. It is recommended that learners should be given enough time to do a written activity like an essay, further stated by the study of Zafar (2023). Though essay writing can enhance the learner's paragraphing and vocabulary, it requires enough time; learners need most lessons to outline their ideas and, on average, two lessons to complete their essays. It also helps them to plan and organize their ideas during the allotted time. It is also recommended to attend to the needs of the learners, ensure an environment where they do not have to feel anxiety when asking a question, and celebrate every success of the students.

Keywords: Syntactic Performance; Environmental Aspect; Psychological Aspect; Essay; Writing Activities

1.0 Introduction

In linguistics, the accurate and precise formulation of language is paramount. Syntax, the set of rules governing the structure of sentences in a language, is the backbone for effective communication and program execution. However, the inevitable presence of errors in syntax poses significant challenges in linguistic analysis. Syntactic errors, characterized by deviations from the prescribed grammatical rules, can impede the understanding of language constructs or disrupt the functionality of written works. By unraveling the complexities of syntactic errors, seeking to enhance our knowledge of linguistic structures and contribute to the development of more robust written works and languages.

In a study titled *Analysis of Syntactic Errors in English Writing: A Case Study of Jazan University Preparatory Year Students*, they illustrate the integral role writing has played throughout history and across cultures. The origins of writing coincide with the political expansion of ancient societies, where a reliable method of transmitting information, managing finances, recording history, and other essential tasks was necessary. Writing is a pivotal invention in human development, offering lasting documentation of information, ideas, emotions, and discourse. Moreover, it facilitates communication not only amongst contemporaries but also with posterity. Written works are crucial in grading students' understanding of the school lesson. In written works, they have the freedom and ability to share their thoughts and knowledge of the topic presented. The importance of written

works encompasses a broad range of aspects and extends across various domains, reflecting its pervasive influence on communication, education, culture, and beyond. However, in the study conducted by Mushtaq et al. (2024), they discovered that choosing the right words and using punctuation correctly was a significant challenge for learners. Intermediate-level learners commonly make mistakes, which may result from a need for grammatical expertise. According to Nafsi et al. (2023), the primary reason for these local errors is a lack of proficiency in grammar and linguistics. Meanwhile, according to Sarder (2023), a lack of home language practice and inadequate teacher help has hindered students' language development. Therefore, one of the critical factors that will fully contribute to the development of the learners is the positive reinforcement of the significant people surrounding them.

Numerous studies revealed that the quality of education in the Philippines is steadily decreasing. Such an assumption is based on the scores obtained in achievement tests and board examinations. Both tertiary and primary and secondary school graduates are impacted. The Professional Regulatory Commission (PRC) has observed a consistent decline in the pass rates of board examinations across all fields of study. Moreover, one thing that is a buzz in today's time is the recent results of the Program for International Student Assessment, also known as PISA, wherein the Philippines ranked 77th out of 81 countries around the globe. Some factors may influence the learner's successful acquisition of the language, and one of those is classroom management; according to Braga & Queroda (2020), the instructor should also think about what kind of warm-up exercises could best assist the students in organizing, imagining, and producing their compositions. Hence, this study aims to identify the common syntactic errors in written works for grade 8 in English. The causes and the perception of their syntactic error in written works will be tackled in this study. Moreover, the main goal of this study is to provide practical recommendations to educators and curriculum development professionals on how they can develop learning methods to improve high school students' syntactic competence (Nassaji, 2017).

In recent years, the Siena College of San Jose, Inc. has aggressively pursued many strategies to improve their students' syntactic competence, including a partnership with Global Resources for Assessment Curriculum and Evaluation, Inc. On the other hand, St. Dominic Academy of Pulilan Inc. tries to examine ways to teach every Dominican that syntactic errors, be it in writing or speaking, may be enhanced due to practice and undertaking different exercises and activities. They have also teamed up with the Center for Educational Measurement (CEM) in recent years. Over the years, the two schools encompassed syntactic competencies among students essential for effective communication and writing skills. Implementing various practices develops and reinforces syntactic abilities in students, engaging them in various interactive activities that will strengthen grammar concepts, especially in writing.

Nevertheless, the evaluation findings indicate that students need to improve in English and tend to achieve lower scores in this subject. Considering the circumstances described, studying the syntactic performance in the written works of grade 8 students is crucial. The study's findings served as the basis for proposing an additional framework for syntactic mastery. This framework aims to facilitate interaction between variables that promote language acquisition and advance English proficiency, specifically in written works. Therefore, the significance of this study lies in its contribution to the understanding of the syntactic problems and challenges faced by junior high school students in the OP-Siena School in Bulacan, as well as the provision of valuable insights and suggestions for teachers and learners to improve their syntactic performance.

2.0 Methodology

2.1 Research Design

This research incorporated qualitative methods; specifically, the phenomenological approach was used as it has some unique advantages over other approaches in qualitative research and reveals valuable information about people's lived realities and experiences. Dovetail Editorial Team (2023) states that phenomenological research attempts to reveal the true nature of phenomena through individualized personal experiences. This method allows scholars to plumb the subjective accounts and interpretations of meanings to which respondents attach their experientials. To better understand the phenomenon of interest, phenomenological research emphasizes what the respondents think. This focus on lived realities is consistent with qualitative research's core values, providing insight into complex human interactions through awareness of personal experiences.

Furthermore, Phenomenology has an accommodating structure that combines descriptive and interpretative elements, enabling a comprehensive study of the phenomenon. Moreover, according to Gallagher (2022), intentionality is one of the leading phenomenological concepts, which means that the idea of consciousness is always focused on something. It is not merely the individual minds involved in our interaction with a world but also how we perceive and experience the external through social relationships. He claims that self and world knowledge are produced based on shared experiences or social relationships. In essence, the phenomenological approach is a valuable instrument by which researchers want to grasp human phenomena together with all their intricacy and depth.

2.2 Research Participants

The research respondents are high school learners from Siena College of San Jose, Inc. and St. Dominic Academy of Pulilan, Inc. This includes and is exclusive only to ten (10) Grade 8 Junior High School Learners – five from each OP Siena School in Bulacan, and all students who participated in this research are selected through a purposive sampling technique. It is a method employed in qualitative research to deliberately choose a particular set of individuals or units for examination. The respondents are deliberately selected rather than being chosen randomly. It is alternatively called judgmental or selective sampling (Dovetail Editors Team, 2023). Moreover, A purposive sample is one whose attributes are specified to be pertinent to the research (Andrade, 2020). Thus, the essential criteria include the following: a) The student is enrolled in Grade 8 at the OP-Siena School in Bulacan, b) for the Siena College of San Jose, Inc., The respondents have already participated in the Pass-test/Pre-test assessment administered by the Global Resources for Assessment Curriculum and Evaluation (GRACE), c) for St. Dominic Academy of Pulilan, Inc., the respondents have already participated in the Pre-test administered by the Center for Educational Measurement (CEM), d) from the results of both assessments, the learners from each school who scored low in their English subject are selected, and when combined, that would make a total of 10 respondents from the OP-Siena School in Bulacan.

The respondents were also informed through parental consent, and a letter approved by the administrators was also provided, assuring the confidentiality of their responses. Moreover, the researchers ensure that the learners are not obliged to include their names in the interview and are free to withdraw anytime.

2.3 Research Instrument

Where phenomenological research aims to reveal persons' lived experiences, semi-structured interviews provide an ideal blend of flexibility and structure. They have several unique advantages over the others. First of all, the open-ended questions help to elicit respondents' narratives in their own words that cannot be biased by researchers but rather reflect reality concerning respondents' subjective worlds (Moustakas, 2019). Secondly, applying a semi-structured guide with core research questions ensures concentration on the chosen phenomenon. It simultaneously facilitates simultaneous exploration of undetermined but valuable insights that may arise during the interview.

(Creswell & Poth 2018). This flexibility makes emergence possible with unexpected themes and circumvents from forcing an unalterable opinion on the respondents' living experiences (Liamputtong & Ezzy, 2020). Additionally, semi-structured interviews promote rapport and create a mutually beneficial interaction between the researcher and the participant for extensive analysis of emotion, thought process, and motivation (Koch & Bricken, 2020). This strengthens the respondent's trust and allows them to openly tell their lived experiences, thereby increasing the data quality of the findings for the study. Therefore, combining semi-structured interviews with phenomenological research provides a powerful combination of flexibility and structure that leads to rich data collection processes that improve rapport and facilitate understanding of the studied lived experience.

2.4 Data Gathering Procedure

First, the researchers wrote a letter to the school principal through the assistant principal asking permission to allow the researchers to conduct a study and see the GRACE and the CEM results to determine the possible research respondents. Attached to the letter provided was an ethical consideration where the researchers highlighted the safety of the respondent's privacy. Second, the researchers selected the respondents purposively, aligning with the selection criteria. Furthermore, the researchers now discussed the study's purpose and benefits

to the institution and the respondents. This will enlighten the respondents on the purpose of the study. Third, after the orientation, the respondents were given parental consent to be signed by their parents and guardians, allowing them to be part of the research. Lastly, the semi-structured interview was conducted, and the data gathered was interpreted thematically.

2.5 Data Analysis Procedure

Gathered data were analyzed using thematic analysis.

3.0 Results and Discussion

3.1 Usual Written Work in English Class

Table 1. Thematic Analysis of the usual written work the learners must do in English class

	Responses	
The usual written work that the learners are required to do in English class.	Respondents 1	Essay
	Respondents 2	Book Activity
	Respondents 3	Essay
	Respondents 4	Essay
	Respondents 5	Essay
	Respondents 6	Essay
	Respondents 7	Essay
	Respondents 8	Essay
	Respondents 9	Essay
	Respondents 10	Essay

As shown in Table 1, most respondents answered Essay on the usual activities they are required to do in their English class. According to Purdue OWL (n.d), essays are frequently given types of writing that all students must complete in academic settings. As a result, the student should develop their writing skills and comfort level with this writing early in their academics.

"Most of the time, our English teacher requires us to write an essay, and we have an activity notebook, and there, we compile all our Essays."

Essays can also be time-consuming, and according to some respondents,

"Sometimes I do not finish my essay writing because of the lack of time; I struggle to compose what is in my mind because of time pressure."

Though essay writing can enhance the learner's paragraphing and vocabulary, it requires enough time. As Zafar (2023) mentioned, learners needed most of the lesson to outline their ideas and, on average, two lessons to complete their essays. It also helped them plan and organize their ideas during the allotted time.

As for the learners from the OP-Siena School in Bulacan, they were given an Essay-type and book activity on their English subject. Their responses also highlighted the need to have enough time to finish their writing activity. As the previously cited study mentioned, students need enough time to plan and organize their ideas.

3.2 Common Errors in Written Work in English Class

Also, as depicted in Table 2, on the common errors that the teacher found in the Essay, the majority of the respondents identified Prepositions as a standard error found by their teacher with their essay writing, and according to the respondents,

"My English teacher always identifies my errors in prepositions, which are prevalent compared to the other."

"I already forgot the rules for using the prepositions."

"Sometimes it is tricky whether to use in or on."

Table 2. The common errors that the teacher found in the essay

		Responses
The common errors that the teacher found in the Essay.	Respondents 1	Preposition
	Respondents 2	Preposition
	Respondents 3	Verb
	Respondents 4	Preposition
	Respondents 5	Preposition
	Respondents 6	Preposition
	Respondents 7	Preposition
	Respondents 8	Verb
	Respondents 9	Preposition
	Respondents 10	Preposition

A preposition is a part of speech that is often confusing to use, and as mentioned by (Septiawan et al., 2020), For students learning English as a second language, prepositions and articles, mainly, are the most challenging elements in grammar. It is further supported by the study of Tulabot et al. (2018), who found that students frequently select improper and out-of-context prepositions. The findings of their study also demonstrated that students' understanding of the many purposes of prepositions needed to be improved.

Verbs are another standard error identified by the teacher during the learners' writing activity. According to Dasna et al. (2024), these mistakes have several reasons, including carelessness, linguistic exposure, and first language influence. Students' grammar errors are mostly seen and committed in their writing activity.

3.3 Students' Perception of the Cause of Their Errors

Table 3. Students' perception of the cause of their errors

		Responses
The cause of the identified errors as perceived by the learners.	Respondents 1	I have anxiety and am nervous to ask questions.
	Respondents 2	Lack of time
	Respondents 3	It is not easy to understand
	Respondents 4	There is not enough time
	Respondents 5	I am slow, and I need to pick up quickly.
	Respondents 6	Noise destruction from classmates
	Respondents 7	Unable to understand the "English" language
	Respondents 8	Do not know how to speak in English
	Respondents 9	Too shy to ask for clarification or join the discussion
	Respondents 10	Confused about the instruction given in "The English" language

Based on the perceived cause of students' errors, factors like environmental, personal/psychological, and even teaching processes were determined.

On psychological factors;

"I have anxiety and nervous to ask questions."

"Afraid of asking questions."

"I am slow, and I do not pick up easily."

"Too shy to ask for clarification or join the discussion."

Some students are too shy to clarify the lesson they are confused about. For this reason, they tend to be left behind with grammar lessons. However, students' needs also need to be understood by the teacher. They should

provide ways to cater to all types of learners because some learners are afraid of standing in front for some reason, and the study by Gatcho and Hajan (2019) where they were able to determine that students' fear of being judged poorly and anxiety related to speaking with others were the most likely to make individuals anxious. Moreover, from the study conducted by Leyaley (2023), students' passivity is caused by internal variables, including anxiety, a lack of confidence, and a fear of making mistakes.

On environmental factors;

"Noise destruction from classmates"

"Confused about the instruction given in "The English" language."

Environmental factors that the learners have identified also play a crucial part in knowledge retention. These factors not just only hinder the other learners from learning but also set an uncondusive learning place. Also, it gives an idea of the factors related to the teacher and how they instruct the student. A decrease in learning will arise when a teacher's instructional management is unsuitable for its learners. On the contrary, according to Francisco and Celon (2020), each incremental enhancement in the instructional management practices mentioned has a corresponding positive impact on students' academic performance. In addition, The classrooms need to be helpful to achieve success in your language studies. Enough room should be set aside for the activities that will be beneficial in the process of learning (Hafiz et al., 2018)

3.4 Students Perceived Rating on Their Syntactic Performance

Table 4. The students' rating on their syntactic performance

		Responses
Students' rating on their syntactic performance	Respondents 1	7
	Respondents 2	6
	Respondents 3	5
	Respondents 4	8
	Respondents 5	6
	Respondents 6	10
	Respondents 7	5
	Respondents 8	4
	Respondents 9	6
	Respondents 10	6

Most of the learners gave themselves a rating of six out of 10. Therefore, most of the respondents from OP-Siena School in Bulacan have a "Good" syntactical performance, above-average understanding of syntax, and few errors in sentence structure. It was followed by a rating of "five," which got two responses. Students who rated themselves "five" are considered to have an average understanding of syntax and occasional minor errors.

4.0 Conclusion

The usual written work that the learners must do in English class was identified as an Essay. Most respondents answered essays, garnering "nine" out of 10. Therefore, English teachers from the OP-Siena School in Bulacan require their students to have an Essay as their writing activity. The common errors that the teacher found in the Essay. Most respondents answered preposition as an error their English teacher identified and had "eight" responses. One aspect of grammar that the students find challenging to use is the preposition, which is further supported by the study of Septiawan et al. (2020), who mentioned that prepositions are a part of speech that is often confusing. The students perceive the cause of the identified errors. The students identified the different factors that affect their syntactic performance, and they can be grouped into different categories, such as psychological and environmental factors. In the aspect of psychology, students tend to be afraid of clarifying the lesson they are confused about, and some have anxiety and are nervous about asking questions.

On the other hand, in environmental factors, teacher factors play a vital role in the learning process of the learners, and teachers need to have enhancement in their instruction to cater to the needs of the learners. On the

students' rating of their syntactic performance, the majority of the learners rated themselves as having good syntactical performance, above-average understanding of syntax, and few errors in sentence structure. It can also be noted that though students commit errors, most specifically on prepositions, they are still optimistic about perceiving themselves on syntactic performance.

5.0 Contributions of Authors

Authors have equal contributions to this research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

8.0 Acknowledgment

We want to express our sincere gratitude to those who contributed to the success of this research to Doc. Crisanta De Leon of BSU-Malolos for encouraging us to conduct this research and for her guidance and support on our professional growth, to the OP-Siena School in Bulacan; St. Dominic Academy of Pulilan Inc., and Siena College of San Jose Inc., for allowing us to conduct this research in the school and for supporting us towards our professional development, to our respondents who gave their time and effort on answering our queries and for their enthusiasm and willingness to partake with this research, to our family for their support that motivates us on accomplishing this research, and above all to our almighty God who gave us strength to persevere and for giving us an intellect to finished the research.

9.0 References

- Andrade, C. (2020). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88. <https://doi.org/10.1177/0253717620977000>
- Braga, T. L. S., & Queroda, P. G. (2020). Composition writing skills of grade 8 students. *ASEAN Multidisciplinary Research Journal*. <https://www.paressu.org/online/index.php/aseanmrj/article/view/214>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry: Research design: An approach*. Sage Publications.
- Dasra, M., Sahid, S., & Murianty, R. (2024). The Identification of Subject Verb Agreement Mistake Committed by Fourth Semester Student Using Corder's Theory in the English Education Department at the University of Papua. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 11(2), 1886 - 1896. Retrieved from <https://ejournal.iainpalopo.ac.id/index.php/ideas/article/view/4351>
- Dovetail Editorial Team (2023). What is phenomenology in qualitative research? Retrieved from <https://dovetail.com/research/phenomenology-qualitative-research/#:~:text=Phenomenology%20is%20a%20type%20of,the%20audience%20you'r%20studying.>
- Dovetail Editorial Team (2023a). Retrieved from <https://dovetail.com/research/purposive-sampling/#:~:text=Purposive%20sampling%20is%20a%20technique,judgmental%20sampling%20or%20selective%20sampling.>
- Francisco, C. D. C., & Celon, L. C. (2020). Teachers' instructional practices and their effects on students' academic performance. *International Journal of Scientific Research in Multidisciplinary Studies*, 6(7), 64-71. https://www.isroset.org/journal/IJSRMS/full_paper_view.php?paper_id=101
- Gatcho, A. R. G., & Hajan, B. H. (2019). What Is So Scary about Learning English? Investigating Language Anxiety among Filipino College Students. *Online Submission*, 8(2), 127-143.
- Gallagher, S. (2022). What Is Phenomenology?. In: *Phenomenology*. Palgrave Philosophy Today. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-11586-8_1
- Hafiz, M. S., Omar, A.-M. A., & Khalil ur Rehman Muhammad Gul Sher. (2018). Analysis of syntactic errors in English writing: A case study of Jazan University preparatory year students. *Journal of Education and Practice*. <https://www.iiste.org/Journals/index.php/JEP/article/view/42190>
- Koch, T., & Bricken, A. (2020). *Semi-structured interviews in qualitative research: An introduction to health and social care research*. Palgrave Macmillan.

- Leyaley, R. V. G. (2023). Students' Passiveness in Speaking English: The Culprit behind the Silence in the Classroom. *Open Journal of Social Sciences*, 11(8), 98-111.
- Liamputtong, P., & Ezzy, D. (2020). *Qualitative research methods in organizational studies*. Oxford University Press.
- Moustakas, C. (2019). *Breaking through qualitative data analysis: An integrated approach to interpretive inquiry*. Guilford Publications.
- Mushtaq, M., Mahmood, M. A., Kamran, M., & Adeel, H. M. (2019). A Corpus-Based Analysis of EFL learners' errors in written composition at intermediate level. ResearchGate.
https://www.researchgate.net/publication/330886433_A_Corpus_Based_Analysis_of_EFL_Learners'_Errors_in_Written_Composition_at_Intermediate_Level
- Nafsi, T., Syed, A. F., Batoool, F., & Siddiqi, R. (2023). Local errors in written descriptive essays: A Comparative Study of 8th grade students of Sialkot, Pakistan. *Journal of Social Sciences Advancement*.
<https://www.scienceimpactpub.com/journals/index.php/jssa/article/view/592>
- Nassaji, H. (2017). *Teaching grammar in second language classrooms*. Routledge.
- Purdue OWL. (n.d.). Essay writing. Essay Writing - Purdue OWL® - Purdue University.
https://owl.purdue.edu/owl/general_writing/academic_writing/essay_writing/index.html
- Sarder, A. R. (2023, June 8). Addressing English language proficiency difficulties among grade 8 students: A case study of Rajshahi satellite town high school. SSRN.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4459484
- Septiawan, Y. (2020). An Investigation into The Grammatical Errors of Students' Writing. *Eduvelop: Journal of English Education and Development*. <https://doi.org/10.31605/eduvelop.v4i1.806>
- Zafar, T. (2023). *The Benefits of Using Mind Maps in L2 Essay Writing: Improving Grade 10 Emirati Boys' Achievement in English* (Doctoral dissertation, University of Birmingham).

After-dark Filipino Learners: Addressing the Stress Level and Grit among Higher Educational Learners and its Relationship to Academic Performance

Kadesh Angela B. Caballero
La Consolacion University Philippines, Malolos, Bulacan, Philippines

*Corresponding Author email: baincokadesh@gmail.com

Dated received: February 26, 2024

Date revised: March 2, 2024

Date accepted: March 5, 2024

Originality: 91%

Grammarly Score: 99%

Similarity: 9%

Recommended citation:

Caballero, K. A. (2024). After-dark Filipino Learners: Addressing the Stress Level and Grit among Higher Educational Learners and its Relationship to Academic Performance. *Journal of Interdisciplinary Perspectives*, 2(4), 13-19. <https://doi.org/10.5281/zenodo.10780714>

Abstract. In the Philippines, a distinctive phenomenon exists wherein some Filipino learners nationwide engage in their pursuit of education through evening classes. The complex interplay of factors deeply rooted in the socio-economic realities of the country drives this practice, although it is not uncommon. This study sought to describe the relationships between stress level, grit level, and academic performance of Filipino after-dark learners in higher education. A descriptive-correlational research method was employed with 185 participants who answered the survey questionnaire. The results revealed that in terms of stress levels, after-dark learners reported experiencing stress at a somewhat frequent level across various domains, including physical, interpersonal, academic, and environmental. Also, respondents displayed strong traits of grit, indicating their capability to overcome setbacks, maintain commitment to goals, and handle challenges with determination. Furthermore, the study found weak positive and negative correlations between GPA and stress level and grit, respectively. These correlations were not statistically significant, suggesting that other factors may influence academic performance.

Keywords: After-dark learners; Stress level; Grit; Higher education; Academic performance; Philippines

1.0 Introduction

According to Al-Shuaibi (2014), possessing essential knowledge in a field enables an individual to think, feel, and act in ways that support their success and enhance both their happiness and that of their community. Education also contributes to the development of an individual's personality, cognitive processes, interpersonal skills, and preparedness for life's occurrences. It elevates individuals to a higher social status within their cultural context and on a global scale.

A distinctive phenomenon unfolds each night. As the world quiets down, learners around the world engage in their nocturnal pursuit of education. The complex interplay of factors deeply rooted in the socio-economic realities of each country drives this practice, although it is not uncommon. One study examined the impact of "night class" on the performance of 65 undergraduate learners in the Faculty of Engineering, University of Uyo. A survey research design was used, and a response rate of 84.6% was obtained. The results showed that 41-45% of learners were affected by night classes, affecting their academic performance in terms of health, physical fitness, mental coordination, learning ability, and security. The study concluded that night class negatively impacts learners' academic performance. (KMDFace, 2017).

In the Philippines, the primary driver compelling Filipino learners to study at night is the demands of work or family during the day. Many learners manage multiple jobs or commitments, leaving the serenity of nighttime

as their only viable study period. The night's quietude provides an environment conducive to focused learning, devoid of the distractions and responsibilities associated with daylight hours (Sygaco, 2021).

Economic constraints also significantly influence this practice. Some learners, constrained by financial limitations, must work multiple jobs during the day, compelling them to dedicate their nights to studying. Despite these challenges, the determination and resilience of Filipino learners shine through as they persist in their pursuit of academic success (Sygaco, 2021). For many working professionals, the only available time for further education is after work hours, and night classes provide an opportunity for them to advance their education without disrupting their professional commitments (Carlton, 2023). Motivations behind the decision to study at night are multifaceted, including the need to acquire new skills or enhance existing ones to remain competitive in the job market, given the rapidly changing nature of many industries (Cappello, 2020).

After-dark learners are those who are engaged in night classes. They are motivated by a combination of professional advancement, the need for continuous learning, and the convenience of night classes. Their commitment to balancing work and study underscores their dedication and grit. However, it is essential to note that studying at night can have implications for learners' health and academic performance. Studies have shown that insufficient sleep negatively impacts academic performance, limiting the acquisition and retention of information. Therefore, learners must maintain a balanced lifestyle and ensure they get adequate sleep (Sygaco, 2021).

The primary rationale for undertaking this study is that schools need awareness of learners' lives, both at school and in their immediate surroundings. This understanding enables schools to tailor educational initiatives to the needs of after-dark Filipino learners, whether they are recent graduates from senior high school, individuals who have worked before enrolling in higher education, or those enrolled in night classes while working full-time or part-time during the day. A key strategy to achieve this is to listen to learners' voices. A deeper understanding of the current generation, experiencing heightened stress levels due to environmental pressures, is crucial. Educational institutions should establish procedures to address mental health concerns among youth and recognize the relationship between learner mental health, academic engagement, and the educational environment (Cleofas, 2019).

The study aimed to address the unique situation that after-dark Filipino learners face, desiring to continue learning despite schedules differing from the norm. Additionally, the study sought to contribute to the understanding of stress levels and grit among after-dark learners by exploring specific factors. Given the significant role education plays in individuals' lives, offering various benefits in diverse areas, it is crucial for future success and a wealth of opportunities.

2.0 Methodology

2.1 Research Design

This study employed a descriptive-correlational research method to describe the relationships between stress level, grit level, and academic performance of Filipino after-dark learners in higher education. Descriptive research involves systematically gathering, analyzing, and interpreting data to provide a comprehensive description and understanding of prevailing conditions, behaviors, or characteristics of a specific population, group, event, or phenomenon (Smith, 2018). Descriptive correlational research design allowed researchers to understand the strength and/or direction of the relationship between the variables of the study (Bhandari, 2022).

2.2 Research Participants

The study was conducted at a Philippine university. Participants were chosen to employ a purposive sampling method. The inclusion criteria include Filipino learners attending night classes and working or employed in the daytime. The selection criteria encompassed learners ranging from the 1st to the 4th year of college across any enrolled course, aged 18 years old and above, irrespective of gender or civil status.

2.3 Research Instrument

The researcher utilized two (2) standardized quantitative instruments and one (1) self-made descriptive correlational instrument as tools for collecting the data needed in the study. First, the stress level was assessed

with the help of the Stress Learner Inventory (SSI) developed by Arip et al. (2018). The questionnaire's reliability and validity were tested using Cronbach's alpha, with a result greater than 0.7. The researcher added questions related to the study, validated by experts in the field. Second, the grit level was surveyed with the assistance of a 12-item scale developed by Duckworth, et al. (2007), to weigh trait-level perseverance and passion for a longer period. The study result of Beri and Sharma (2019) revealed that the grit scale possessed good reliability, as the calculated value of Cronbach's alpha was 0.724, and the value of composite reliability ranged from .85 to .86, reflecting the high internal consistency of the construct. Third, the descriptive correlational self-made instrument consisted of two questions validated by three experts in the field. It focused on identifying the challenges encountered as after-dark learners during the academic journey and how they overcame them.

2.4 Data Gathering Procedure

The researcher obtained necessary permits for data collection, informed participants about the study's aims and criteria, and collected responses using Google Forms. After data analysis with a statistician's assistance, conclusions were drawn, and recommendations were made to address stress and grit levels. Upon approval from the relevant authorities, the study was presented to the university, highlighting key findings and recommendations for supporting after-dark learners. The goal was to contribute to a more equitable higher education system.

2.5 Data Analysis Procedure

The data gathered shall be compiled and processed through Statistical Packages for Social Sciences (SPSS), a widely recognized software suite for statistical analysis in social science research (Huck, 2016). SPSS is versatile and can be applied to various purposes such as market research, surveys, and data mining. To analyze and interpret the gathered data, the SPSS approach will be employed to assess the stress level, grit level, and academic performance of after-dark learners in higher education. Additionally, multiple regression analysis will be used in this study to understand the relationship between the three variables and the extent to which they correspond with each other. Finally, descriptive statistics, including measures such as mean and frequency, will be utilized by the researcher to summarize and present the data obtained from the respondents.

2.6 Ethical Considerations

The researcher carefully considered ethical considerations in conducting research, ensuring transparency, informed consent, voluntary participation, confidentiality, and the well-being of the participants. Before the survey, learners were thoroughly informed about the study's details and purpose. Respondents were made aware of the importance of their participation and consent, emphasizing voluntary involvement. The survey process was designed to guarantee voluntary and coercion-free participation, with confidentiality maintained by not requesting respondent identities. This approach aimed to protect research respondents and preserve anonymity. Throughout the research, the researcher refrained from altering or challenging respondents' responses and treated all participants equally. The study's findings are intended solely for academic purposes.

3.0 Results and Discussion

3.1 Stress Level of the Respondents

Table 1 illustrates the stress level of respondents across various domains, along with their respective mean values, standard deviations, and interpretations. The calculated weighted mean of stress level in terms of physical is 2.25, Interpersonal is 1.91, Academic is 2.30, and Environmental is 2.47. This suggests that, overall, respondents tend to experience stress at a frequent level in different given indicators, and areas of their lives, but it is not exceptionally intense.

Table 1. The stress level of the respondents

	Indicators	Mean	SD	Interpretation
Physical	1. Headache	2.34	0.84	Somewhat Frequent
	2. Backpain	2.53	0.95	Frequent
	3. Sleep Problem	2.88	0.99	Frequent
	4. Difficulty breathing	1.88	0.88	Somewhat Frequent
	5. Excessive worry	2.42	0.95	Somewhat Frequent
	6. Stomach pain/nausea	1.89	0.81	Somewhat Frequent
	7. Constant tiredness/fatigue	2.50	0.96	Frequent
	8. Sweating/sweaty hands	2.45	1.08	Somewhat Frequent

	9.	Frequent cold/flu/fever	1.84	0.72	Somewhat Frequent
	10.	Drastic weight loss	1.77	0.84	Somewhat Frequent
		Weighted Mean	2.25	0.90	Somewhat Frequent
Interpersonal Relationship	1.	I find it difficult to meet my high parent's expectations.	1.95	0.93	Somewhat Frequent
	2.	My parents treat me as a helpless person.	1.48	0.74	Never
	3.	I feel guilty if I fail to fulfill my parent's hope.	2.61	1.12	Frequent
	4.	My parents wish only for my success.	3.02	1.17	Frequent
	5.	I find it difficult to get along with groupmates in doing academic tasks.	2.05	0.90	Somewhat Frequent
	6.	My friends did not care about me.	1.58	0.80	Somewhat Frequent
	7.	I feel disturbed when having problems with my boyfriend/girlfriend.	1.56	0.85	Somewhat Frequent
	8.	My family is not supportive.	1.45	0.74	Never
	9.	My lecturers/ teachers are not supportive.	1.57	0.75	Somewhat Frequent
	10.	I feel frustrated by the lack of faculty management.	1.84	0.84	Somewhat Frequent
		Weighted Mean	1.91	0.88	Somewhat Frequent
Academic	1.	I have a financial problem because of the expenses of the university.	2.05	0.85	Somewhat Frequent
	2.	I find it difficult to juggle time between study and social activity.	2.16	0.80	Somewhat Frequent
	3.	I feel nervous about delivering the class presentation.	2.64	1.05	Frequent
	4.	I feel stressed as the submission deadline neared.	2.49	0.98	Somewhat Frequent
	5.	I feel stressed to sit for the examination.	2.45	0.99	Somewhat Frequent
	6.	I find it difficult to juggle time between study and societal involvement.	2.23	0.90	Somewhat Frequent
	7.	I lose interest in courses.	1.82	0.82	Somewhat Frequent
	8.	I feel burdened by my academic workload.	2.26	0.96	Somewhat Frequent
	9.	I feel stressed dealing with difficult subjects.	2.54	0.97	Frequent
	10.	I find it difficult to handle my academic problems.	2.36	0.91	Somewhat Frequent
		Weighted Mean	2.30	0.92	Somewhat Frequent
Environmental	1.	I have a transportation problem.	2.12	1.00	Somewhat Frequent
	2.	I feel stressed by the bad living conditions of the room.	1.86	0.89	Somewhat Frequent
	3.	The surrounding noise distracted me.	2.64	1.05	Frequent
	4.	Pollution makes me uneasy.	2.63	1.00	Frequent
	5.	Hot weather makes me avoid going out.	2.91	1.02	Frequent
	6.	Messy living conditions distracted me.	2.74	1.01	Frequent
	7.	I feel frustrated with inadequate campus facilities.	2.22	0.90	Somewhat Frequent
	8.	Crowding makes me feel uneasy.	2.52	1.01	Frequent
	9.	Waiting in a long line made me feel uneasy.	2.59	1.01	Frequent
	10.	I feel scared of being in an insecure place.	2.50	1.08	Frequent
		Weighted Mean	2.47	1.00	Somewhat Frequent

3.2 Grit Level of the Respondents

Table 2 presented below illustrates the grit level of respondents across various domains, along with their respective mean values, standard deviations, and interpretations. The weighted mean, which stands at 3.70 (SD = 0.95), signifies that, on average, the respondents strongly demonstrate qualities of grit. This interpretation, "Mostly like me," suggests that most respondents consistently exhibit these traits, with only minor variations in individual responses.

Table 2. The grit level of the respondents

	Indicators	Mean	SD	Interpretation
1.	I have overcome setbacks to conquer an important challenge.	3.69	0.90	Mostly like me
2.	New ideas and projects sometimes distract me from previous ones.	3.51	0.96	Mostly like me
3.	My interests change from year to year.	3.77	0.99	Mostly like me
4.	Setbacks don't discourage me.	3.34	0.97	Somewhat like me
5.	I have been obsessed with a certain idea or project for a short time but later lost interest.	3.52	1.04	Mostly like me
6.	I am a hard worker.	4.02	0.96	Mostly like me
7.	I often set a goal, but later choose to pursue a different one.	3.50	1.01	Mostly like me

8.	I have difficulty maintaining my focus on projects that take more than a few months to complete.	3.48	1.02	Somewhat like me
9.	I finish whatever I begin.	3.95	0.91	Mostly like me
10.	I have achieved a goal that took years of work.	3.84	0.87	Mostly like me
11.	I become interested in new pursuits every few months.	3.74	0.95	Mostly like me
12.	I am diligent.	3.99	0.83	Mostly like me
Weighted Mean		3.70	0.95	Mostly like me

3.3 General Point Average of the Respondents

Table 3 presented below illustrates the general point average (GPA) of the respondents along with their respective frequency and percentage. GPA ranges from 1 to 1.49 with 42 respondents (22.70%), 1.5 to 1.99 with 131 respondents (70.81%), 2 to 2.49 with 8 respondents (4.32%), and 2.5 to 2.99 with 4 respondents (2.16%).

Table 3. The general point average of the respondents

GPA	Frequency	Percentage
1.00 - 1.49	42	22.70%
1.50 - 1.99	131	70.81%
2.00 - 2.49	8	4.32%
2.50 - 2.99	4	2.16%
Total	185	100.00%

3.4 The Relationship between the Stress Level, Grit Level, and Academic Performance of After-dark Learners

The correlation between GPA and stress level (Pearson Correlation) is 0.072, indicating a weak positive correlation. The p-value is 0.331, which is not statistically significant. Since the significance level (Sig) is > 0.05 , the null hypothesis is accepted. Similarly, the correlation between GPA and grit level (Pearson Correlation) is -0.063, indicating a weak negative correlation. The p-value is 0.391, which is not statistically significant. Again, since the significance level (Sig) is > 0.05 , the null hypothesis is accepted.

Given these results, it's essential to consider other potential factors that could influence the performance of learners academically. A study carried out in the Philippines identified several significant contributors to academic performance, including self-driven activities, challenges, learning styles, references utilized in learning, frameworks in learning, and adapting components in learning (Peñeda, Ticoy, & Rabuya, 2019). This suggests that individual learning approaches, coping strategies, and the nature of learning challenges play a crucial role in academic outcomes.

Another study emphasized the impact of various external factors on learners' academic performance. These factors include the learners' environment, parenting style, characteristics of the learners, level of internet effectiveness, teachers' effectiveness, lack of motivation, and learners' career choices (Briones, Dagamac, David, & Landero, 2021). This highlights the significance of external influences, support systems, and motivational factors in shaping academic success.

Furthermore, a study focusing on first-year university learners identified several key factors that affect academic performance. These integrate learners' inspiration, lecturers' educational information, abilities, proficient information and accreditations, learning assets and conditions, and course structures (Le et al., 2020). This underscores the multifaceted nature of academic performance, suggesting that a combination of internal and external factors, along with the educational environment, can collectively impact learners' success in higher education.

4.0 Conclusion

Based on the conclusion of the study, several conclusions were formulated:

In terms of stress levels, after-dark learners reported experiencing stress at a somewhat frequent level across various domains, including physical, interpersonal, academic, and environmental. However, stress levels were not overwhelmingly severe. Respondents displayed strong traits of grit, indicating their capability to navigate through difficulties, maintain commitment to goals, and handle challenges with determination.

The data presented in the study reflected the distribution of General Point Averages (GPAs) among 185 respondents, with the majority falling within the 1.5 to 1.99 GPA range. Furthermore, the study found weak positive and negative correlations between GPA and stress level and grit, respectively. These correlations were not statistically significant, suggesting that other factors may influence academic performance.

Considering these findings, several recommendations are proposed. Firstly, stress management workshops should be offered to help learners cope with stress more effectively, providing practical strategies for dealing with various stressors. Techniques such as mindfulness, relaxation exercises, and cognitive behavioral strategies can be taught to help learners manage their stress more effectively. By learning to cope with stress, learners can improve their mental well-being, which can positively impact their academic performance.

Additionally, the implementation of grit enhancement programs is suggested to cultivate the exhibited grit traits among respondents. These programs can help learners persevere and stay committed to their academic goals, even in challenging situations. Activities could include goal-setting workshops, resilience training, and motivational talks. By enhancing grit, learners can remain focused and committed to their academic goals, even when faced with challenges.

For learners with low GPAs, it is recommended to provide additional academic support and resources, including tutoring, study skills development, and academic advising. Institutions can create a supportive environment for learners to thrive and overcome academic challenges by implementing these supports. Each learner's journey is unique and personalized support can make a big difference in their success.

Lastly, further research is encouraged to explore additional factors, influencing academic performance among after-dark learners. Factors such as self-driven learning, learning styles, support systems, and the impact of environmental factors should be investigated to justify a better comprehensive understanding of the extraordinary challenges confronted by this group.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest about the publication of this paper.

8.0 Acknowledgment

The researcher extends heartfelt gratitude to everyone who supported this endeavor.

9.0 References

- Al-Shuaibi, A. (2014, January). The Importance of Education. Research Gate.
https://www.researchgate.net/publication/260075970_The_Importance_of_Education
- Arip, M. a. S. M. (2018). LEARNER STRESS INVENTORY (SSI) Development, Validity And Reliability of Learner Stress Inventory (SSI). ResearchGate.
https://www.researchgate.net/publication/329555313_LEARNER_STRESS_INVENTORY_SSI_Development_Validity_And_Reliability_of_Learner_Stress_Inventory_SSI
- Beri, N., & Sharma, A. (2019). An evaluative study of reliability and validity of Grit 12 item scale in Indian Context. *Journal of Indian Association for Child and Adolescent Mental Health*, 15(3), 48–60.
<https://doi.org/10.1177/0973134220190304>
- Bhandari, P. (2022, December 5). Correlational Research | Guide, design & examples. Scribbr.
<https://www.scribbr.co.uk/research-methods/correlational-research-design/>

- Briones, S. K. F., Dagamac, R. J. R., David, J. D., & Landerio, C. A. B. (2022). Factors affecting the learners' scholastic performance: A survey study. *Indonesian Journal of Educational Research and Technology*, 2(2), 97–102. <https://doi.org/10.17509/ijert.v2i2.41394>
- Cappello, K. (2020, December 21). The Impact of Sleep on Learning and Memory Chronobiology and Sleep Institute | Perelman School of Medicine at the University of Pennsylvania. Retrieved December 6, 2023, from <https://www.med.upenn.edu/csi/the-impact-of-sleep-on-learning-and-memory.html>
- Carlton, G. (2023, March 22). What Are Night Classes? 6 Tips to Help You Succeed | BestColleges (T. Epps, Ed.). BestColleges.com. Retrieved December 6, 2023, from <https://www.bestcolleges.com/blog/what-are-night-classes-tips-to-succeed/>
- Cleofas, J. V. (2019). Learner involvement, mental health and quality of life of college learners in a selected university in Manila, Philippines. *International Journal of Adolescence and Youth*, 25(1), 435–447. <https://doi.org/10.1080/02673843.2019.1670683>
- Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Personality Processes And Individual Differences Grit: Perseverance and Passion for Long-Term Goals.
- Huck, S. W. (2016). *Using SPSS and PASW: An Integrated Guide to Research Design and Statistics*. SAGE Publications.
- KMDFace, D. (2017). Effect of “Night Class” on academic performance of learners in the Faculty of Engineering, University of UYO. Uniuyo. https://www.academia.edu/31923419/Effect_of_Night_Class_on_Academic_Performance_of_Learners_In_the_Faculty_of_Engineering_University_of_Uyo
- Peñeda, F. P., Ticoy, T. A., & Rabuya, C. J. (2019). Filipino Learners' Perceptions of Factors Affecting Their Academic Performance in School: A Qualitative Study. *Journal of Education and Society*, 3(1), 19–30. Retrieved from <https://lnu.edu.ph/lnujournals/index.php/jes/article/view/24>
- Smith, J. (2018). Descriptive research methods: An overview. *Journal of Social Sciences*, 42(3), 123-137.
- Sygaco, K. P. (2021). The Correlation of Sleep and Academic Performance. *Asian Journal of Interdisciplinary Research*. <https://doi.org/10.34256/ajir2115>

The Mediating Effects of Work-Life Balance on the Relationship of School Heads' Leadership Practices and Teachers' Work Satisfaction

Lelet U. Borreba^{1*}, Joel D. Potane²

¹Graduate Student, Capitol University, Cagayan de Oro City, Philippines

²Graduate School Faculty, Capitol University, Cagayan de Oro City, Philippines

*Corresponding Author email: 2078644@g.cu.edu.ph

Dated received: February 26, 2024

Date revised: March 3, 2024

Date accepted: March 8, 2024

Originality: 91%

Grammarly Score: 99%

Similarity: 9%

Recommended citation:

Borreba, L., & Potane, J. (2024). The Mediating Effects of Work-Life Balance on the Relationship of School Heads' Leadership Practices and Teachers' Work Satisfaction. *Journal of Interdisciplinary Perspectives*, 2(4), 20–32. <https://doi.org/10.5281/zenodo.10792110>

Abstract. This study sought to determine whether work-life balance mediates the relationship between school leaders' leadership and teachers' job satisfaction. The descriptive-correlational research design was used in the study, which involved 176 randomly selected public school elementary teachers from the Division of Misamis Oriental, Philippines. The main data source for this study was a modified, and validated survey questionnaire. The study found that most respondents were female and that the 31-45 age bracket is particularly well represented. Furthermore, the prevalence of Teacher I positions suggested that the study sample was primarily composed of entry-level teaching roles. In terms of service years, those with 6-10 years were the largest group. However, in terms of civil status, the results revealed a predominance of married people. The most common category of children is those with 2-3 children, and the most common income category is 25,001-30,000 per month. In addition, work-life balance does not differ significantly by gender, age, service years, civil status, children, or income level. It implies that different groups may have unique needs and preferences for maintaining and achieving work-life balance. Furthermore, no direct correlation has been found between work-life balance and satisfaction; therefore, school administrators must investigate this relationship further. The indirect, direct, and total effects were not statistically significant, suggesting that work-life balance does not mediate the relationship between leadership and job satisfaction. Schools and educational institutions can investigate further the benefits of focusing on leadership development programs that improve leadership skills and practices to positively influence teacher satisfaction.

Keywords: Leadership practices; Work life-balance; Job satisfaction; Descriptive-correlational; Path analysis

1.0 Introduction

Teachers are knowledge architects and shape the minds of the next generation, building nations. Today's fast-paced society makes it hard for teachers to balance work and family. Teachers are struggling in today's work and life (Del Rosario & Galang, 2021). Teaching has one of the unstable work-life balances (Kang, & Park, 2020). Because it affects individual and organizational performance, balancing work and life must always be a top priority for employees and employers (Has, & Karthikeyan, 2015). Individuals in the professional experience, particularly teachers, face more challenges than any other profession in effectively balancing their work and personal lives, and the job of academics causes strain, making it difficult for them to meet their social, family, and work obligations efficiently.

On the other hand, teachers' job satisfaction is critical and can influence the completion of various curricula regardless of the learning platform. It is also important for schools' achievement of their objectives and overall

growth (Saito & Raisanen, 2019). Satisfied teachers effectively perform their duties and contribute to the institution's development and success (Klassen, & Tze, 2014). Quality teaching in schools cannot be achieved without highly satisfied teachers (Todorova et al., 2021). According to Castano and Fernandez (2020), teachers must play a dynamic role in preparing students for the 21st century. This includes maintaining positive interpersonal relationships and dealing with intrapersonal conflicts that may arise in school, which can significantly impact teachers' work satisfaction and performance. Most primary school teachers were stressed at work, which decreased their productivity (Yusuf & Valentine, 2015). Job dissatisfaction and poor school facilities stressed primary school teachers. Stress also decreased teacher productivity.

Furthermore, individuals' work and family lives are thought to be the sources of both satisfaction and stress. Globalization has altered the workplace, resulting in job restructuring, increased workload demand, part-time employment, and job insecurity. People strongly believe that work is the ultimate source of stress and distress. Work stress negatively affects employees' performance, particularly by affecting employees' mental health (Chen, 2002). Furthermore, work stress is widely recognized as a factor influencing job satisfaction. When someone is stressed about their employees, it is difficult to be satisfied with them. When work stress is not handled properly, it will decrease the job satisfaction level of employees (Jessica et al., 2023).

Work satisfaction can also mediate the effect of leadership on employee performance, suggesting that satisfied employees perform better under the leadership (Pudyaningsih et al, 2020). It was then emphasized that school leaders' leadership promotes teachers' work-life balance by implementing teacher-centered and development-oriented school policies that address work deterrence, absences, low productivity, and rising levels of work-related anxiety or stress.

As a result, the researcher was motivated to conduct this study to determine the mediating effects of work-life balance on the relationship between school heads' leadership practices and teachers' job satisfaction in public elementary schools in the District of Tagoloan, Division of Misamis Oriental.

2.0 Methodology

2.1 Research Design

The study utilized the descriptive-correlational research design. Calderon, et al. (2012) define descriptive research as a fact-finding investigation. It helps understand the main causes of situations. Subsequently, Khan (2019) described that descriptive-correlational research design uses quantitative methods, describes, records, analyzes, and interprets conditions that exist. It involves some type of comparison or contrast and attempts to discover the relationship between existing non-manipulated variables. However, Hayes Process mediation analysis was used to determine if work-life balance mediates school head leadership practices and teacher work satisfaction.

2.2 Research Locale

The study was carried out in Tagoloan District, Province of Misamis Oriental, Northern Mindanao, Philippines. This study's research area included ten public elementary schools in Tagoloan District, Division of Misamis Oriental. Each school has an average of twenty (20) teachers and one (1) elementary school head. Tagoloan is a 1st class municipality in the province of Misamis Oriental, Philippines. It is located to the east of Cagayan de Oro and located southeast of Macajalar Bay. Tagoloan is a coastal municipality in Misamis Oriental. The municipality occupies 117.73 square kilometers (45.46 square miles), or 3.76 percent of Misamis Oriental.

2.3 Research Participants

The total population of elementary teaching personnel in the Tagoloan District Division of Misamis Oriental is 321. A minimum acceptable sample size of 176 teachers was recommended for the survey at a 5% margin error and 95% confidence interval. These public elementary teachers were randomly selected from the target population. These teachers also came from the 10 elementary schools in the district of Tagoloan, Division of Misamis Oriental. They were chosen regardless of their sex, age, position, length of service, civil status, number of children, and monthly gross income.

2.4 Research Instrument

This study used an adopted, modified, and validated survey questionnaire as the main instrument and primary data source to answer the research questions. This study followed ethical guidelines, and respondents' participation was voluntary. To validate the instruments, several steps were taken. To ensure study objectives were met, education and assessment experts reviewed the adapted and modified questionnaires. Second, a pilot test with a small sample of respondents identified question-wording ambiguities and assessed the instruments' clarity and comprehensiveness.

2.5 Data Gathering Procedure

This study used specific steps to collect data. First, permission to conduct the study was sought from the school division Superintendent on the recommendation of the Dean of the Graduate School. Second, the researcher introduced herself and explained the rationale for conducting the study to the teacher-respondents who would fill out the questionnaires. Teachers were asked to evaluate school leaders' leadership practices, work-life balance, and job satisfaction. Third, the researcher briefly explained to the teachers how each research questionnaire was completed and returned. Fourth, once all the respondents had answered and completed the research questionnaires, the researcher personally collected them. Lastly, the researcher assured the respondents that all of their responses would be kept strictly confidential and that the study's findings would only be used for academic and educational purposes.

2.6 Ethical Considerations

This research study followed ethical guidelines. The respondents' participation was voluntary. They were to opt to dismiss themselves from the study at any point in time they felt uncomfortable. Their participation was protected from harm: physical, social, psychological, and all other forms of harm were kept to an absolute minimum. The dignity and well-being of elementary teachers who responded were always protected. The research data remained confidential throughout the study, and the respondents' rights were protected, ensuring scientific or academic integrity. Furthermore, to ensure that this research study is free of plagiarism or research misconduct, proper result communication must be practiced.

3.0 Results and Discussion

Table 1. Frequency and percentage distribution of respondents in terms of sex

Sex	Frequency	Percentage (%)
Male	31	17.6
Female	145	82.4
Total	176	100.0

The results (see Table 1) showed a significant gender imbalance among the 176 participants in the study. Among them, 31 respondents (17.6 percent of the total sample) identified as male. In contrast, the vast majority of 145 participants, 82.4 percent, identified as women. This gender distribution revealed a significant over-representation of female respondents in the study relative to their male counterparts. It implies that teaching is regarded as a suitable profession for women. This perception could have been shaped by cultural expectations and social norms. This societal perception has contributed to the over-representation of women in the teaching workforce (Bongco et al., 2020).

Table 2. Frequency and percentage distribution of respondents in terms of age

Age	Frequency	Percentage (%)
20-25	3	1.7
26-30	10	5.7
31-35	64	36.4
36-40	24	13.6
41-45	62	35.2
46-50	0	0.0
51-55	2	1.1
56-60	11	6.3
Total	176	100.0

The result illustrated a diverse range of ages among the 176 participants (see Table 2). Several respondents fall within the age categories of 31-35 (36.4%) and 41-45 (35.2%). No participants in the study are reported to be in the age range of 46-50. The distribution indicated a concentration of respondents in the middle-age range, with a particularly high representation in the 31-45 age bracket. It suggests that teachers aged 31 to 40 years old tend to have higher student engagement compared to younger or older teachers. There is a notable distinction among age, experience, and teacher effectiveness. Individuals aged 31 to 40 are potentially more inclined to remain current with educational trends and research in comparison to their older counterparts. This ability can contribute to their capacity to craft more effective and engaging learning experiences for students (Mohd et al. 2018). However, the age group of 51-55 years old was found little. It shows that this age group is considered few in a particular school or district.

Table 3. Position-related distribution of respondents' frequencies and percentages

Position	Frequency	Percentage (%)
Teacher I	134	76.1
Teacher II	5	2.8
Teacher III	28	15.9
Master Teacher I	9	5.1

As shown in Table 3, the prevalence of Teacher I positions suggested a predominant representation of entry-level teaching roles within the study sample. The limited presence of respondents in higher-level teaching positions, such as Teacher II, Teacher III, and Master Teacher I, may impact the generalization of the study's findings to educators in more advanced roles. On the other hand, the Master Teacher position in elementary school has its ratio to the total number of teacher positions. It suggests that the knowledge and experience gap of teachers in higher-level positions, such as Teacher II, III, and Master Teacher I, results in unique knowledge and experience acquired through years of practice, leadership roles, and professional development. The study might underrepresent educators who have chosen not to pursue promotions. To obtain the most accurate and up-to-date information, it is advisable to consult the latest DepEd publications or reach out to relevant education authorities.

Table 4. Frequency and percentage of respondents by service years

Number of Years in Service	Frequency	Percentage (%)
0-5	14	8.0
6-10	86	48.9
11-15	39	22.2
16-20	24	13.6
21-25	0	0.0
26-30	4	2.3
31-above	9	5.1

The finding revealed a varied distribution across different tenure categories (see Table 4). The largest group consisted of those with 6-10 years of service, accounting for 48.9% of the total respondents. There are no respondents in the 21-25 years in the service category. With a concentration in the mid-range of service years, this distribution showed the diverse range of experience levels among respondents. It implies that more experienced teachers understand their subject matter better and can explain concepts more clearly. Sancar et al. (2022) stated that a robust teaching community where a culture of continuous learning and mutual support flourishes ultimately benefits both educators and, by extension, the students they serve. Through these collaborative efforts, educators create an atmosphere conducive to growth, innovation, and the sustained advancement of the educational landscape.

Table 5. Frequency and percentage distribution of respondents in terms of number of civil status

Civil Status	Frequency	Percentage (%)
Single	56	31.8
Married	118	67.0
Widowed	2	1.1

The result in Table 5 indicated a predominance of married individuals, comprising 67.0% of the total sample. Single respondents represent 31.8%. This distribution reflects a relatively stable and predominantly married population within the study, suggesting that most of the teachers involved are in committed relationships. It

suggests that there is a positive sign for the overall stability of marital relationships among educators. The findings suggest that there may be something about the teaching profession that protects against marital dissolution. Mishra (2020) explains that it is conceivable that educators may possess more robust social support structures, or that the inherent nature of their profession imbues a sense of purpose and significance, potentially serving as a stabilizing factor for marital relationships.

Table 6. Frequency and percentage distribution of respondents in terms of number of number of children

Number of Children	Frequency	Percentage (%)
0-1	78	44.3
2-3	80	45.5
4-5	9	5.1
6-7	9	5.1

The data in Table 6 show a varied pattern in terms of family size among the study participants. The most common category is observed for those with 2-3 children, accounting for 45.5%. A comparable percentage is respondents with 0-1 child, representing 44.3% of the total sample. The categories of 4-5 children and 6-7 children both constitute 5.1% each. This distribution provides valuable insights into the family composition of the surveyed teachers, suggesting a diverse range of family sizes. The number of children a teacher has an impact on various aspects of their professional and personal lives, including work-life balance, financial considerations, and time management. It suggests that it can be complicated for teachers to have multiple roles can be demanding for teachers with families. Beyond the classroom, responsibilities like childcare, homework assistance, and extracurricular activities fill their plate. This often translates to longer hours, a shrinking personal space, and the struggle to truly leave work behind.

Table 7. Frequency and percentage distribution of respondents in terms of the number of sources of income of the respondents

Source of Income	Frequency	Percentage (%)
10,001-15,000	35	19.9
15,001-20,000	25	14.2
20,001-25,000	8	4.5
25,001-30,000	71	40.3
30,001-35,000	28	15.9
35,001-40,000	7	4.0
40,001-45,000	2	1.1

The most prevalent income category is 25,001-30,000, encompassing 40.3% of the total respondents (see Table 7). and the categories of 40,001-45,000 and above are relatively smaller, with 1.1%. This distribution reflects a diverse range of income levels among the participating teachers, with their salary of 25,001-30,000 with a considerable proportion falling within the mid-range income brackets. It implies from this study that distribution illustrates a broad spectrum of income levels within the cohort of participating teachers. Specifically, a considerable number of teachers in this group report a salary falling within the range of 25,001 to 30,000. This concentration within the mid-range income brackets suggests that a sizeable portion of the teachers in the study or survey fall within a similar earnings category. This story of the income distribution, taken in the larger context of the study or survey, deepens our understanding of the socioeconomic variables influencing the teaching profession within the targeted cohort (Andreas et al. 2020).

Table 8. Consolidated findings of the level of school heads' leadership practices

Indicators	Mean	SD	Description	Interpretation
Strategic Leadership	3.48	0.56	Always	Very High
Managing School Operations and Resources	3.56	0.52	Always	Very High
Focusing on Teaching and Learning	3.63	0.48	Always	Very High
Developing Self and Others	3.59	0.51	Always	Very High
Total Measure	3.57	0.34	Always	Very High

Note: 3.25-4.00 Always Very High
 2.50-3.24 Frequently High
 1.75-2.49 Seldom Low
 1.00-1.74 Never Very Low

The mean scores and standard deviations (SD) indicate consistently high ratings, suggesting a positive perception among respondents regarding the school heads' practices (see Table 8). This suggested that school heads are consistently engaging in leadership practices, creating a favorable school climate, involving teachers in

planning, motivating innovative teaching approaches, closely monitoring teacher performance, authorizing decision-making, and providing support and supervision. The leadership practices focused on teaching and learning receive very high assessments. This result suggested that school heads are consistently conducting instructional supervision, providing clinical supervision, encouraging remedial instruction, offering training programs for teaching improvement, integrating learning strategies, and providing training on assessments. The implications of these consolidated findings suggested that the school heads are consistently demonstrating effective strategic leadership practices across various dimensions. The high ratings implied a strong alignment between the school heads' practices and the expectations and needs of the teaching staff, contributing to a positive school climate, efficient resource management, effective teaching and learning, and ongoing professional development. These findings underscore the importance of leadership practices in fostering a conducive and thriving educational environment. School administrators should continue to prioritize and refine these practices, ensuring sustained positive outcomes for both educators and students. Moreover, according to Gutierrez et al., (2023), a more harmonious and productive school community may result from this.

Table 9. Consolidated findings on teacher work-life balance

Indicators	Mean	SD	Description	Interpretation
Flexible Work Options	2.94	0.44	Frequently	High
Dual Career Assistance	2.97	0.43	Frequently	High
Personal Growth Opportunities	2.92	0.42	Frequently	High
Professional Development	2.94	0.44	Frequently	High
Total Measure	2.94	0.26	Frequently	High

The mean scores and standard deviations (SD) indicate consistently positive ratings, suggesting a high level of perceived work-life balance among teachers (see Table 9). Dual career assistance indicates a frequently occurring level of dual career assistance and a high level of perceived support. While there is strong encouragement for part-time teaching jobs and developing skills for dual opportunities, there is room for improvement in promoting harmonious work in dual careers. For personal growth opportunities, it suggests a frequently occurring level of personal growth opportunities and a high level of perceived support. Teachers appreciate mentoring assistance, leadership skill development, and professional development programs, but there is room for improvement in areas like mental and health growth and fostering trusting relationships. The overall total measure underscores a frequently occurring level of work-life balance and a high level of perceived support across the dimensions of flexible work options, dual career assistance, personal growth opportunities, and professional development. The implications of these consolidated findings suggested that teachers, in general, perceive a high level of work-life balance and support from the school administration across various dimensions. The positive ratings across these areas indicate a proactive approach to addressing the diverse needs and preferences of the teaching staff. However, the specific areas identified for improvement, such as promoting harmonious work in dual careers, fostering mental and health growth, and aligning professional development with individual goals, should be considered for targeted interventions. School administrators can further refine policies and initiatives to ensure sustained positive outcomes in promoting work-life balance for teachers.

Table 10. Consolidated findings of the extent of teachers' work satisfaction

Indicators	Mean	SD	Description	Interpretation
Security	2.65	0.51	Frequently	High
Work Environment	2.73	0.51	Frequently	High
Job Responsibilities	2.80	0.46	Frequently	High
Community Attachment and Linkages	2.80	0.51	Frequently	High
Total Measure	2.75	0.24	Frequently	High

The mean scores and standard deviations (SD) offer an overall assessment of teachers' satisfaction, with the data indicating a consistently high level of perceived satisfaction as shown in Table 10. In terms of security, teachers express a frequently occurring level of job security and protection by civil service law. The work environment receives a frequently occurring level of satisfaction with interpersonal dynamics, safety, and overall well-being within the workplace. Regarding job responsibilities, teachers feel satisfied with their primary duties, as indicated by a mean score of 2.80 and a standard deviation of 0.46. Community attachment and linkages also contribute to high levels of satisfaction, with a mean score of 2.80 and a standard deviation of 0.51, reflecting positive perceptions of collaboration and engagement with the community. The overall total measure, with an overall mean score of 2.75 and a standard deviation of 0.24, underscores a frequently occurring level of work

satisfaction among teachers across the evaluated dimensions. The findings suggested that teachers, in general, have an important level of work satisfaction. The positive ratings across various dimensions, including security, work environment, job responsibilities, and community engagement, indicate a positive and supportive working environment. School administrators can build on these strengths by continuing to support and enhance initiatives that contribute to teacher satisfaction. Acknowledging the importance of these factors and maintaining open lines of communication can further contribute to sustained job satisfaction among teachers. Regular assessments and feedback mechanisms can help identify areas for improvement and guide continuous efforts to create an optimal working environment for educators (Epstein, 2018).

Table 11. Test of Difference in work-life balance when grouped according to sex

Work-Life Balance ¹	Sex Group		t-value	p-value	Remarks
	Male (n=31)	Female (n=145)			
Flexible Work Options	2.99 (0.41)	2.93 (0.45)	0.646	0.519	Not sig.
Dual Career Assistance	2.96 (0.46)	2.97 (0.42)	-0.176	0.860	Not sig.
Personal Growth Opportunities	2.99 (0.37)	2.90 (0.43)	0.983	0.327	Not sig.
Professional Development	2.98 (0.34)	2.93 (0.46)	0.547	0.585	Not sig.
Total Measure	2.98 (0.24)	2.93 (0.26)	0.842	0.401	Not sig.

Note: ¹Values expressed in Mean (SD)

The results showed that there are no statistically significant differences in work-life balance components between male and female teachers (see Table 11). For flexible work options, the mean scores for males (M=2.99) and females (M=2.93) are not significantly different with a t-value of 0.646 and a p-value of 0.519. Similarly, dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure all exhibit non-significant differences between the two gender groups, as indicated by the p-values greater than 0.05. The findings suggested that, based on this sample, there is no apparent gender-based disparity in the perceived work-life balance among teachers. The non-significant differences indicate that both male and female teachers have similar perceptions regarding flexible work options, dual career assistance, personal growth opportunities, professional development, and overall work-life balance. These results are in line with the body of research suggesting that there is no difference in teacher work-life balance based on gender. In a similar vein, a 2019 study by Clotfelter, Ladd, and Marx discovered that the likelihood of instructors quitting their professions is the same for both genders.

Table 12. Test of difference in work-life balance when grouped according to age

Work-Life Balance ¹	Age Group					F-value	p-value	Remarks
	20-30 (n=13)	31-35 (n=64)	36-40 (n=24)	41-45 (n=62)	51-60 (n=13)			
Flexible Work Options	2.96 (0.38)	2.95 (0.46)	2.91 (0.49)	2.93 (0.43)	2.98 (0.43)	0.086	0.987	Not sig.
Dual Career Assistance	2.88 (0.37)	2.99 (0.46)	3.06 (0.46)	2.91 (0.40)	3.06 (0.39)	0.960	0.431	Not sig.
Personal Growth Opportunities	3.02 (0.37)	2.90 (0.39)	2.85 (0.48)	2.91 (0.42)	3.05 (0.56)	0.705	0.589	Not sig.
Professional Development	2.96 (0.34)	2.92 (0.45)	2.87 (0.53)	2.94 (0.44)	3.08 (0.43)	0.508	0.730	Not sig.
Total Measure	2.96 (0.24)	2.94 (0.27)	2.92 (0.26)	3.04 (0.34)	2.94 (0.26)	0.632	0.640	Not sig.

Note: ¹Values expressed in Mean (SD)

The results indicated that there are no statistically significant differences in work-life balance components across various age groups (see Table 12). For flexible work options, the F-value is 0.086 with a p-value of 0.987, indicating that the mean scores for the age groups 20-30, 31-35, 36-40, 41-45, and 51-60 are not significantly different. Similarly, no significant differences are found in dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure. Age does not significantly influence perceptions of work-life balance among teachers in the given sample. The result depicted that age is not a significant factor influencing the perceived work-life balance among teachers. This study examined the relationship between work-life balance and age among teachers. The findings revealed that teachers of all age groups experienced work-life conflict, but the impact of this conflict on job satisfaction was stronger for younger teachers. These studies provide evidence to support the claim that school administrators can create more successful work-life balance programs for teachers by considering the specific needs and preferences of different age groups. By considering the unique challenges and opportunities faced by teachers of different ages, school

administrators can develop programs that are more likely to help teachers achieve a healthy balance between their work and personal lives (Saksena & Sharma, 2018).

Table 13. Test of difference in work-life balance when grouped according to position

Work-Life Balance ¹	Position Group				F-value	p-value	Remarks
	T1 (n=134)	T2 (n=5)	T3 (n=28)	MT1 (n=9)			
Flexible Work Options	2.93 (0.44)	2.91 (0.46)	3.03 (0.46)	2.90 (0.50)	0.471	0.703	Not sig.
Dual Career Assistance	2.96 (0.42)	3.01 (0.46)	3.03 (0.48)	2.96 (0.44)	0.231	0.875	Not sig.
Personal Growth Opportunities	2.89 (0.42)	3.04 (0.43)	2.99 (0.39)	3.06 (0.62)	0.992	0.398	Not sig.
Professional Development	2.90 (0.45)	3.09 (0.35)	3.08 (0.43)	2.95 (0.46)	1.509	0.214	Not sig.
Total Measure	2.92 (0.24)	3.01 (0.35)	3.03 (0.28)	2.97 (0.38)	1.750	0.159	Not sig.

Note: ¹Values expressed in Mean (SD)

The results revealed that there are no statistically significant differences in work-life balance components across various position groups (see Table 13). For flexible work options, dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure, it suggests that position does not significantly influence perceptions of work-life balance among teachers in the given sample. The findings suggested that the position held by teachers does not play a significant role in influencing their perceived work-life balance. School administrators can use this information to design inclusive work-life balance initiatives that cater to teachers across different positions. It is contrary to the statement of Van Erde (2018) influence on educators' views of work-life balance; that is, educators were more likely to see a gradual rise in job satisfaction among those who reported having a better work-life balance. These studies offer proof in favor of the hypothesis that their employment does not significantly influence teachers' perceptions of work-life balance.

Table 14. Test of difference in work-life balance when grouped according to years of service

Work-Life Balance ¹	Years of Service Group					F-value	p-value	Remarks
	0-5 (n=14)	6-10 (n=86)	11-15 (n=39)	16-20 (n=24)	≥26 (n=13)			
Flexible Work Options	2.87 (0.42)	2.96 (0.44)	2.91 (0.46)	2.95 (0.46)	2.98 (0.43)	0.191	0.943	Not sig.
Dual Career Assistance	2.99 (0.47)	2.93 (0.46)	3.01 (0.42)	2.98 (0.32)	3.06 (0.39)	0.480	0.751	Not sig.
Personal Growth Opportunities	2.89 (0.44)	2.89 (0.42)	2.91 (0.40)	2.98 (0.42)	3.05 (0.56)	0.568	0.686	Not sig.
Professional Development	2.90 (0.34)	2.95 (0.50)	2.90 (0.42)	2.90 (0.32)	3.08 (0.43)	0.503	0.734	Not sig.
Total Measure	2.91 (0.21)	2.93 (0.25)	2.93 (0.28)	2.95 (0.24)	3.04 (0.34)	0.604	0.660	Not sig.

Note: ¹Values expressed in Mean (SD)

The results revealed that there are no statistically significant differences in work-life balance components across various years of service groups (Table 14). For flexible work options, dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure, it discloses that the number of years in service does not significantly influence perceptions of work-life balance among teachers in the given sample. The findings show that the years of service of teachers do not play a significant role in influencing their perceived work-life balance. School administrators can use this information to design work-life balance initiatives that are inclusive and applicable to teachers at various stages of their careers. Continuous dialogue and feedback mechanisms with teachers across different experience levels can further refine and enhance work-life balance strategies to ensure they align with the evolving needs of educators throughout their careers. Studies show that teachers' work-life balance is unaffected by their years of service. Young teachers may need more help with time management and work-life balance (Saksena & Sharma, 2018).

Table 15. Test of difference in work-life balance when grouped according to civil status

Work-Life Balance ¹	Civil Status Group		t-value	p-value	Remarks
	Single (n=56)	Married (n=118)			
Flexible Work Options	2.90 (0.49)	2.96 (0.42)	-0.763	0.447	Not sig.
Dual Career Assistance	2.95 (0.45)	2.98 (0.42)	-0.439	0.661	Not sig.
Personal Growth Opportunities	2.94 (0.39)	2.91 (0.45)	0.447	0.655	Not sig.
Professional Development	2.95 (0.47)	2.92 (0.43)	0.332	0.740	Not sig.
Total Measure	2.93 (0.25)	2.94 (0.27)	-0.181	0.857	Not sig.

Note: ¹Values expressed in Mean (SD)

2 widowed respondents were excluded in the analysis (due to a very small sample size)

The results disclosed that there are no statistically significant differences in work-life balance components across different civil status groups (see Table 15). For flexible work options, dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure, the t-values and p-values are

not significant, indicating that civil status does not significantly influence perceptions of work-life balance among teachers in the given sample. The findings unveiled that civil status is not a significant factor influencing the perceived work-life balance among teachers. School administrators can use this information to design work-life balance initiatives that are inclusive and applicable to teachers regardless of their marital status. School administrators, regardless of their civil status, can foster a more equitable and supportive work-life balance for all teachers by adopting a comprehensive approach to the issue. Increased teacher retention, job satisfaction, and well-being may result from this (Day & Fletcher, 2019).

Table 16. Test of difference in work-life balance when grouped according to number of children

Work-Life Balance ¹	Number of Children Group				F-value	p-value	Remarks
	0-1 (n=78)	2-3 (n=80)	4-5 (n=9)	6-7 (n=9)			
Flexible Work Options	2.97 (0.46)	2.92 (0.43)	2.97 (0.45)	2.87 (0.48)	0.230	0.876	Not sig.
Dual Career Assistance	2.98 (0.47)	2.95 (0.37)	2.98 (0.47)	3.02 (0.55)	0.108	0.955	Not sig.
Personal Growth Opportunities	2.90 (0.41)	2.97 (0.42)	2.63 (0.46)	2.93 (0.46)	1.789	0.151	Not sig.
Professional Development	2.95 (0.46)	2.96 (0.41)	2.69 (0.65)	2.89 (0.40)	1.075	0.361	Not sig.
Total Measure	2.95 (0.26)	2.95 (0.26)	2.82 (0.22)	2.93 (0.24)	0.750	0.524	Not sig.

Note: ¹Values expressed in Mean (SD)

No statistically significant differences in work-life balance components were found across groups by child count (see Table 16). For flexible work options, dual career assistance, personal growth opportunities, professional development, and the total work-life balance measure, the F-values and p-values are not significant, indicating that the number of children does not significantly influence perceptions of work-life balance among teachers in the given sample. The findings revealed the number of children is not a significant factor influencing the perceived work-life balance among teachers. School administrators can use this information to design work-life balance initiatives that consider the diverse family structures of teachers. Recognizing that teachers with different numbers of children may have varying family responsibilities, providing flexible policies and support mechanisms can contribute to a more inclusive and supportive work environment. School teachers' work-life balance is impacted by their childcare responsibilities. The study's conclusions showed that schoolteachers' work-life balance was not significantly impacted by the number of children they had. The study did find, however, that the age of children and childcare responsibilities from spouses and elder parents did have a significant impact on work-life balance (Padma & Reddy, 2018).

Table 17. Test of difference in work-life balance when grouped according to gross monthly income

Work-Life Balance ¹	Gross Monthly Income Group					F (p-value)	Remarks
	10001-15000 (n=35)	15001-20000 (n=25)	2001-25000 (n=8)	25001-30000 (n=71)	30001-35000 (n=28)		
Flexible Work Options	3.04 (0.42)	2.87 (0.39)	2.92 (0.45)	2.93 (0.47)	2.94 (0.44)	2.90 (0.50)	0.49 (0.79) Not sig.
Dual Career Assistance	2.85 (0.41)	2.96 (0.40)	2.98 (0.50)	2.99 (0.45)	3.06 (0.37)	2.96 (0.44)	0.83 (0.53) Not sig.
Personal Growth Opportunities	2.98 ^b (0.41)	3.04 ^b (0.35)	2.54 ^a (0.43)	2.87 ^b (0.42)	2.92 ^b (0.41)	3.06 ^b (0.62)	2.27* (.05) Sig.
Professional Development	2.95 (0.34)	2.96 (0.36)	2.53 (0.57)	2.94 (0.48)	3.00 (0.48)	2.95 (0.46)	1.54 (0.18) Not sig.
Total Measure	2.95 (0.22)	2.96 (0.25)	2.74 (0.22)	2.93 (0.25)	2.98 (0.29)	2.97 (0.38)	1.16 (0.33) Not sig.

Note: ¹Values expressed in Mean (SD) *significant at .05 level ab-based on Duncan test

The results indicated that there are no statistically significant differences in flexible work options, dual career assistance, professional development, and the total work-life balance measure across various gross monthly income groups (Table 17). For these components, the F-values and p-values are not significant, suggesting that the source of income does not significantly influence perceptions of work-life balance among teachers in the given sample. However, for personal growth opportunities, the F-value is significant at the 0.05 level. Post hoc analysis using the Duncan test reveals that there are significant differences between some sources of income groups. Specifically, teachers in the income range of 15,001-20,000 (M=3.04) and 20,001-25,000 (M=2.54) have significantly different perceptions of personal growth opportunities. The findings revealed that the gross monthly income may influence teachers' perceptions of personal growth opportunities. School administrators can use this information to tailor specific interventions and support mechanisms related to personal growth for teachers with varying income levels. Recognizing that personal growth may be perceived differently by teachers with different income levels, targeted initiatives can address educators' unique needs and aspirations across various financial circumstances. However, Kessler and Molzahn (2018) say one explanation could be that companies are coming to understand the importance of these perks and are providing them to all workers, no matter how much money they make.

Table 18. Simple regression analysis of testing the influence of school heads' leadership practices on teachers' work-life balance

Predictor	Regression Coefficient	S.E.	t-value	p-value	Remarks
Intercept	2.678	0.203	13.195	<.001	Significant
Leadership Practices	0.074	0.057	1.303 ^{ns}	0.194	Not significant

R² = 0.010 ANOVA for Regression: F=1.697, p=0.194

Note: ns-not significant at .05 level

As shown in Table 18, the regression coefficient for the predictor variable "Leadership Practices" is 0.074. The standard error associated with this coefficient is 0.057. The t-value for the predictor is 1.303, and the corresponding p-value is 0.194. The overall model R-squared value is 0.010, indicating that the predictor variable (Strategic Leadership) explains a small proportion of the variance in teachers' work-life balance. The ANOVA for the regression model yields an F-value of 1.697 with a corresponding p-value of 0.194. The p-value for the predictor variable "Strategic Leadership" is not significant at the 0.05 level ($p = 0.194$), suggesting that, in this analysis, school heads' leadership does not have a statistically significant influence on teachers' work-life balance. The findings suggested that there is insufficient evidence to conclude a significant relationship between school heads' leadership and teachers' work-life balance. The specific predictor variable of leadership practices does not appear to be a significant factor in explaining the variability in teachers' work-life balance. School administrators may want to consider exploring additional factors or refining measures related to leadership practices to understand their potential impact on work-life balance better. Furthermore, according to Gronlund and Kauffman (2018), the research indicates that the work-life balance of teachers should be considered when assessing initiatives aimed at improving schools.

Table 19. Simple regression analysis of testing the influence of teachers' work-life balance on work satisfaction

Predictor	Regression Coefficient	S.E.	t-value	p-value	Remarks
Intercept	2.422	0.203	11.926	<.001	Significant
Work-Life Balance	0.110	0.069	1.598 ^{ns}	0.112	Not significant

R² = 0.014 ANOVA for Regression: F=2.553, p=0.112

Note: ns-not significant at .05 level

In Table 19, the regression coefficient for the predictor variable "Work-Life Balance" is 0.110. The standard error associated with this coefficient is 0.069. The t-value for the predictor is 1.598, and the corresponding p-value is 0.112. The overall model R-squared value is 0.014, indicating that the predictor variable (Work-Life Balance) explains a tiny proportion of the variance in teachers' work satisfaction. The ANOVA for the regression model yields an F-value of 2.553 with a corresponding p-value of 0.112, suggesting that, in this analysis, teachers' work-life balance does not have a statistically significant influence on their work satisfaction. The findings suggest that there is insufficient evidence to conclude a significant relationship between teachers' work-life balance and their work satisfaction. The specific predictor variable of work-life balance does not appear to be a significant factor in explaining the variability in teachers' work satisfaction. School administrators may want to explore additional factors or refine measures related to work-life balance and work satisfaction to better understand their potential impact. The insufficient evidence shows to conclude a significant relationship between school heads' leadership practices and teachers' work satisfaction. School administrators may want to explore additional factors or refine measures related to leadership practices to understand their potential better. Erturk (2022) asserts that the connection between teachers' job satisfaction and work-life balance is nuanced and erratic. While some research found no association at all or even a negative relationship.

Table 20. Mediation analysis

Effect	Estimate	SE	Z	p-value	% Mediation	Remarks
Mediation Estimates						
Indirect	0.008	0.008	1.021	0.307	36.4	Not significant
Direct	-0.014	0.052	-0.280	0.780	63.6	Not significant
Total	-0.006	0.052	-0.120	0.905	100.0	Not significant
Path Estimates						
SLP → WLB	0.074	0.056	1.310	0.190		Not significant
TWLB → TWS	0.112	0.069	1.627	0.104		Not significant
SLP → TWS	-0.014	0.052	-0.280	0.780		Not significant

Note: not significant at .05 level

The mediation estimates include both indirect and direct effects (see Table 20). The indirect effect of SLP on TWS through the mediator WLB is estimated at 0.008, with a standard error of 0.008. The Z-value is 1.021, and the p-value is 0.307. The indirect effect is not statistically significant at the 0.05 level. The percentage of mediation is calculated to be 36.4%.

The direct effect of SLP on TWS, not mediated by WLB, is estimated at -0.014, with a standard error of 0.052. The Z-value is -0.280, and the p-value is 0.780. The direct effect is not statistically significant at the 0.05 level. The percentage of mediation for the direct effect is calculated to be 63.6%. The total effect, representing the overall relationship between SLP and TWS, including both direct and indirect pathways, is estimated at -0.006, with a standard error of 0.052. The Z-value is -0.120, and the p-value is 0.905. The total effect is not statistically significant at the 0.05 level. Path estimates for the relationships SLP → WLB, WLB → TWS, and SLP → TWS are also provided. None of these paths are statistically significant at the 0.05 level. Moreover, the mediation analysis suggests that work-life balance does not significantly mediate the relationship between school heads' leadership practices and teachers' work satisfaction. Both the indirect and direct effects, as well as the total effect, are not statistically significant, indicating that work-life balance does not play a mediating role in this relationship based on the data analyzed.

Teachers' perceptions of autonomy, competence, and relatedness may all be directly impacted by the leadership practices used by school heads. These elements are crucial for job satisfaction, and school administrators may affect them by giving teachers the freedom to choose how they want to handle their work, giving them feedback and encouragement, and fostering a supportive culture (Kundu & Verma, 2023).

4.0 Conclusion

School leaders recognize that everyone's work-life balance is unique, and there is no one-size-fits-all solution. Teachers can achieve work-life balance by setting boundaries, prioritizing self-care, and delegating responsibilities. School leaders who prioritize work-life balance and help their employees set healthy boundaries can boost teacher well-being and job satisfaction. Continuous monitoring and analysis of leadership practices, work-life balance, and job satisfaction indicators can help teachers improve their workplaces through targeted interventions. School administrators can investigate additional factors or refine measures related to leadership practices to better understand their potential impact on work-life balance.

5.0 Contributions of Authors

The authors indicate equal contribution to each section. The authors reviewed and approved the final work.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

8.0 Acknowledgment

The researcher would like to thank the Almighty Father, the source of everything and who made this study possible. The researcher would like to express her sincere gratitude to her adviser, Dr. Joel D. Potane for sharing his expertise, guidance, and valuable suggestions throughout all stages of the work which have contributed greatly to the improvement of her study; She is especially indebted to Dr. Junge B. Guillena, who have been supportive of her professional goals and who worked actively to provide her with the information and additional help; To her esteemed and extraordinary panelists: Dr. Olga C. Alonsabe, Dr. Janet C. Parpa, Dr. Josephine Oted, Dr. Peter Xenos, their expertise and guidance have greatly contributed to the improvements of the study; The researcher would also wish to express her gratitude to Dr. Edwin C. Du, Dean of the Graduate School, who also contributed much for the development and success of her study; She also grateful to all of those with whom she has the pleasure to work during throughout this journey, and other related projects. She is thankful to her parents whose love and guidance are with her in whatever she dreams. They are her ultimate

inspiration; Most importantly, she wished to thank her supportive husband Modesto and her three wonderful children: Dexter, Leo Mar, and Annie, who provide her unending inspiration.

9.0 References

- Almazan, M. (2023). Disbursement and utilization of maintenance and other operating expenses (MOOE) funds of public schools in the Philippines. *International Journal for Multidisciplinary Research*, 5(5). <https://doi.org/10.36948/ijfmr.2023.v05i05.6689>
- Ancho, I., & Bongco, R. (2019). Exploring Filipino teachers' professional workload. *Journal Of Research, Policy & Practice of Teachers & Teacher Education*, 9(2), 19-29. <https://doi.org/10.37134/jrpptte.vol9.no2.2.2019>
- Aquino, C. J., Afalla, B. T., & Fabelico, F. L. (2021). Managing educational institutions: School heads' leadership practices and teachers' performance. *International Journal of Evaluation and Research in Education (IJERE)*, 10(4), 1325. <https://doi.org/10.11591/ijere.v10i4.21518>
- Baluyos, G. R., Rivera, H. L., & Baluyos, E. L. (2019). Teachers' job satisfaction and work performance. *Open Journal of Social Sciences*, 07(08), 206-221. <https://doi.org/10.4236/jss.2019.78015>
- Campo, A. M., Avolio, B., & Carlier, S. I. (2021). The relationship between telework, job performance, work-life balance and family supportive supervisor behaviours in the context of COVID-19. *Global Business Review*, 097215092110499. <https://doi.org/10.1177/09721509211049918>
- Chen B, Wang L, Li B and Liu W (2022) Work stress, mental health, and employee performance. *Front. Psychol.* 13:1006580. doi: 10.3389/fpsyg.2022.1006580
- Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools*. Routledge.
- Erturk, R. (2022). The relationship between school administrators' supportive behaviors and teachers' job satisfaction and subjective well-being. *International Journal of Contemporary Educational Research*, 8(4), 184-195. <https://doi.org/10.33200/ijcer.956667>
- Estacio, M. R., & Estacio, D. L. (2022). Public school heads' leadership style and best practices in the department of education in Bulacan, Philippines. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(9), 1622-1629. <https://doi.org/10.11594/ijmaber.03.09.03>
- Falk, A., & Fischbacher, U. (2001). A theory of reciprocity. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.203115>
- Feeney, M. K., & Stritch, J. M. (2017). Family-friendly policies, gender, and work-life balance in the public sector. *Review of Public Personnel Administration*, 39(3), 422-448. <https://doi.org/10.1177/0734371x17733789>
- García-Cabrera, A. M., Lucia-Casademunt, A. M., Cuéllar-Molina, D., & Padilla-Angulo, L. (2018). Negative work-family/family-work spillover and well-being across Europe in the hospitality industry: The role of perceived supervisor support. *Tourism Management Perspectives*, 26, 39-48. <https://doi.org/10.1016/j.tmp.2018.01.006>
- Gonzales, M. (2022). EI and work-life balance. *Emotional Intelligence for Students, Parents, Teachers and School Leaders*, 219-247. https://doi.org/10.1007/978-981-19-0324-3_10
- Haider, S., Jabeen, S., & Ahmad, J. (2018). Moderated mediation between work life balance and employee job performance: The role of psychological wellbeing and satisfaction with coworkers. *Revista de Psicología del Trabajo y de las Organizaciones*, 34(1), 29-37. <https://doi.org/10.5093/jwop2018a4>
- Harris, B., & Gilbert, J. (2023). Resilient school leaders – Strive for a work-life balance. *The Resilient School Leader*, 13-18. <https://doi.org/10.4324/9781003301356-3>
- Hernandez, M. M., Mendoza, S. D., & Pacheco, M. M. (2023). Innovative leadership practices and management styles of school heads in the school's division of Bulacan. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(6), 1904-1913. <https://doi.org/10.11594/ijmaber.04.06.16>
- Li, J., Wang, Q., & Zhou, X. (2023). Spousal religious difference, marital satisfaction, and psychological well-being of Chinese older adults. *Family Relations*. <https://doi.org/10.1111/fare.12977>
- MacKinnon, D. P., & Valente, M. (2019). Mediation analysis. *Psychology*. <https://doi.org/10.1093/obo/9780199828340-0245>
- Mardlotillah, I. A., & Fahmawati, Z. N. (2023). Work-life balance and psychological well-being in company employees. <https://doi.org/10.21070/ups.2834>

- Mishra, S. (2020). Social networks, social capital, social support and academic success in higher education: A systematic review with a special focus on 'under represented' students. *Educational Research Review*, 29, 100307.
- Najera, N. C., & Gearlan, A. A. (2021). Phenomenologizing the leadership practices of the selected school heads in the Philippines. *Journal of Educational Management and Leadership*, 2(1), 1-9. <https://doi.org/10.33369/jeml.v2i1.15297>
- Nizam, K. (2022). Impact of supervisor support, work-health balance, and career commitment on employees' work-life balance in manufacturing firms of Pakistan: Mediating role of job stress. *Global Journal for Management and Administrative Sciences*, 3(3), 21-43. <https://doi.org/10.46568/gjmas.v3i3.117>
- Ordu, A. (2021). The mediating role of work-life balance and job satisfaction in the relationship between person-job fit and life satisfaction among teachers. *Psycho-Educational Research Reviews*, 10(2), 29-41. https://doi.org/10.52963/perr_biruni_v10.n2.02
- Panganiban, A. C. (2018). Practices and techniques of school heads of Region IV-A (Calabarzon) in influencing people: Towards school leader program/Course design. *KnE Social Sciences*, 3(6), 98. <https://doi.org/10.18502/kss.v3i6.2376>
- Paragas, J. P. (2020). Quality management practices and performance of public secondary school heads in Pangasinan, Philippines. *International Journal of Multidisciplinary: Applied Business and Education Research*, 1(1), 6-13. <https://doi.org/10.11594/ijmaber.01.01.03>
- Quines, L. A., & Monteza, M. T. (2023). The mediating effect of teacher collegiality on the relationship between instructional leadership and professional development of teachers. *European Journal of Education Studies*, 10(3). <https://doi.org/10.46827/ejes.v10i3.4716>
- Rosario, A. G., & Galang, C. P. (2021). Thriving amidst the pandemic: Examining the lived experiences of work from home Filipino teachers. *International Journal of Social Learning (IJSL)*, 2(1), 39-54. <https://doi.org/10.47134/ijsl.v2i1.46>
- Sahito, Z., & Vaisanen, P. (2019). A literature review on teachers' job satisfaction in developing countries: Recommendations and solutions for the enhancement of the job. *Review of Education*, 8(1), 3-34. <https://doi.org/10.1002/rev3.3159>
- Sancar, R., Atal, D., & Deryakulu, D. (2021). A new framework for teachers' professional development. *Teaching and Teacher Education*, 101, 103305.
- Sarmiento, A. (2023). School heads' leadership qualities and its relationship to teachers' job satisfaction and school performance. *International Journal of Research Publications*, 124(1). <https://doi.org/10.47119/ijrp1001241520234855>
- Susanto, P., Hoque, M. E., Jannat, T., Emely, B., Zona, M. A., & Islam, M. A. (2022). Work-life balance, job satisfaction, and job performance of SMEs employees: The moderating role of family-supportive supervisor behaviors. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.906876>
- Talukder, A. K., & Galang, M. C. (2021). Supervisor support for employee performance in Australia: Mediating role of work-life balance, job, and life attitude. *Journal of Employment Counseling*, 58(1), 2-22. <https://doi.org/10.1002/joec.12154>
- Tongcua, R. S., Tongcua, M. M., & Cerbo, T. C. (2022). Legacy leadership competency among public elementary school heads at Bago city Philippines: Practices and organizational thrust. *International Journal of Research and Innovation in Social Science*, 06(12), 105-109. <https://doi.org/10.47772/ijriss.2022.61212>
- Victoria O., A., Olive U., E., Babatunde H., A., & Nanle, M. (2019). Work-life balance and employee performance: A study of selected deposit money banks in Lagos state, Nigeria. *The Journal of Social Sciences Research*, (512), 1787-1795. <https://doi.org/10.32861/jssr.512.1787.1795>
- Villafranca, D. E. (2022). Servant leadership, decision making, and instructional leadership practices of school heads in selected elementary schools in Deped Cabuyao. *International Journal of Multidisciplinary Research and Analysis*, 05(05). <https://doi.org/10.47191/ijmra/v5-i5-21>
- Zhao, K., Zhang, M., Kraimer, M. L., & Yang, B. (2019). Source attribution matters: Mediation and moderation effects in the relationship between work-to-family conflict and job satisfaction. *Journal of Organizational Behavior*, 40(4), 492-505. <https://doi.org/10.1002/job.2345>

Assessing the Financial Literacy of the Blue-Collar Job Workers in terms of Financial Management Practices

John Lloyd P. Alarcon*, Joshua M. Pamisa, Daniella Sophia P. Alarcon,
Joven Jonen V. Ellacone, Rodel John A. Esmalde, Dave Stephen C. Pedroza

Paramount School of Arts, Languages, Management, and Sciences, Inc., Valencia City, Bukidnon, Philippines

*Corresponding Author email: alarcon.johnlloydpalmes@gmail.com

Dated received: February 20, 2024

Date revised: March 3, 2024

Date accepted: March 8, 2024

Originality: 98%

Grammarly Score: 99%

Similarity: 2%

Recommended citation:

Alarcon, J. L., Pamisa, J., Alarcon, D. S., Ellacone, J. J., Esmalde, R. J., & Pedroza, D. S. (2024). Assessing the Financial Literacy of the Blue-Collar Job Workers in terms of Financial Management Practices. *Journal of Interdisciplinary Perspectives*, 2(4), 33-39. <https://doi.org/10.5281/zenodo.10795516>

Abstract. The study aimed to assess the financial literacy of blue-collar workers in Valencia City, Philippines, based on their financial management practices. It employed a quantitative approach, using descriptive statistics to analyze data collected from 100 randomly chosen participants. The study found that blue-collar workers in Valencia City showed moderate proficiency in saving, managing expenses and bills, and setting financial goals. They also displayed a fair understanding of financial management principles. However, investment practices were limited due to concerns about scams and distrust, while debt management was rarely practiced due to income fluctuations from hourly wages and project-based work. Despite these challenges, the overall results suggest a moderate financial literacy level of among this group. The study recommends that financial literacy education must be improved. It also encourages companies to provide financial education programs for their employees. And support initiatives that expand access to affordable financial services and promote fair lending practices for low- and moderate-income individuals.

Keywords: Financial literacy; Financial management; Financial education; Income; Debt management

1.0 Introduction

The interconnectedness of the global economy is driving significant changes in the financial world. As economies grow and intertwine, new financial products and services demand greater financial literacy from individuals and businesses (Herawati, Candiasa, Yadnyana, & Suharsono, 2018). The growing complexity and accessibility of financial options, combined with dynamic markets and readily available debt, leaves many workers unprepared to make informed financial decisions. From saving and investing to managing debt, individuals face a challenging landscape with ever-evolving terminology and options. This lack of preparedness can lead to unhealthy financial choices that impact their personal lives and potentially their workplace well-being (Mbarire & Ali, 2014).

Workers' financial well-being boils down to their net wealth at a given moment, shaped by their monthly financial management strategies. This involves meticulously planning and tracking income and expenses for better financial standing. It's about being proactive with your money to improve your overall financial health (Arlinawati, Sawitri, & Utomo, 2020). A strong understanding of personal finance, or financial literacy, empowers individuals to navigate their financial journey effectively. According to Oppong et al. (2023), financial literacy empowers individuals, households, and organizations to make informed choices about budgeting, saving, investing, and managing risks. This knowledge, crucial throughout life, ultimately leads to achieving financial goals and improving overall well-being through sound financial decisions at every stage.

This study explored the financial literacy and behavior of blue-collar job workers by assessing their financial management practices. Specifically, it aimed to evaluate the financial literacy of the blue-collar job worker in terms of their savings, investment practices, expenditures, bills, debt management, and long-term financial goals.

2.0 Methodology

2.1 Research Design

This research utilized a quantitative research design, utilizing the descriptive technique. This approach highlights target estimations and statistical, mathematical, or numerical investigation through surveys.

2.2 Research Locale

The study was conducted in Valencia City, Bukidnon, Philippines known for its agriculture and commerce. The city covers 63,126 hectares, with over half dedicated to farming. Its annual income is Php 1.5 billion and the minimum wage ranges from Php 378 to Php 405. The study's participants were chosen randomly.

2.3 Research Participants

This study randomly selected 100 blue-collar workers, including construction workers, farmers, mechanics, house helpers, utility and maintenance workers, and security guards.

2.4 Research Instruments

The study adapted and used a reliable questionnaire (Cronbach's alpha = 0.87) developed by Earvin John Medina with modification. This questionnaire employed a Likert scale (detailed in Table 1) where participants rated their agreement with various statements, providing ordinal data indicative of their understanding and practices. The questionnaire is divided into six dimensions of financial management practices of blue-collar job workers. The savings will determine how much employees divide their income for different purposes. Investment practices will evaluate how much employees invest the rest of their money that exceeds their living expenses in other investment companies. It is a significant area because the investments will depend on how the employees manage and divide their money for other purposes. Expenditure Management measures how employees work their money for important things and prioritize expenses. Bill Management estimates how employees pay their bills at the right time. Debt Management measures how employees manage financial difficulties and multiple debts. Financial goals measure the extent to which employees work their money well and set aside their money for long-term financial goals.

2.5 Data Gathering Procedure

Before administering the research instrument, the researchers will seek approval from the school administrator and the academic coordinator for the formality of the research endeavour. Before disseminating the survey questionnaires, the researchers discussed the nature of the study with its respondents and sought their consent.

2.6 Data Analysis Method

The study employed descriptive statistics, specifically the mean of the ratings on the Likert scale, to analyze the data and understand the average financial literacy practices among blue-collar workers.

3.0 Results and Discussion

3.1 Descriptive Analysis of Financial Literacy of the Blue-Collar Job Workers

Financial Literacy in terms of Saving Practices

Table 1 presents the financial literacy of blue-collar job workers regarding savings. It reveals the overall means of 3.70 (acceptable) of the blue-collar job employees. The study results imply that saving a portion of their salary or income is moderately practiced by blue-collar job workers. According to Brochado and Mendes (2021), keeping a portion of one's income constitutes a positive financial well-being. It provides purchasing power protection in an event like income shock or emergency. Research suggests a clear link between financial literacy and savings habits, independent of income and education. People with stronger financial literacy are much more likely to save money, using both formal bank accounts and informal methods, compared to those with lower

financial literacy. This underscores financial literacy's crucial role in promoting healthy saving behaviors, regardless of other socioeconomic factors (Morgan & Long, 2020). On the other hand, the study of Pillay, Kelly, & Tones (2010) explains that having low wages for blue-collar job workers constitutes less money savings practices. Most of their income is enough to sustain their necessities, leaving no room for savings.

Table 1. Practices of the blue-collar job workers in terms of savings

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. Saving money is necessary.	4.38	Strongly Agree	Highly Practiced
2. I save a part of my income regularly.	3.82	Agree	Moderately Practiced
3. I can save despite having a low salary.	3.70	Agree	Moderately Practiced
4. I save money via savings accounts, property, or collective investment schemes.	3.06	Undecided	Fairly Practiced
5. I invest my savings in banks because I trust them.	3.28	Undecided	Fairly Practiced
6. I am willing to risk some of my money for savings and investments.	3.40	Agree	Moderately Practiced
7. I see the significance of making savings.	4.04	Strongly Agree	Highly Practiced
8. I am mindful of my income and expenses.	4.20	Strongly Agree	Highly Practiced
9. I have a budgetary plan.	3.84	Agree	Moderately Practiced
10. I set aside money for future needs.	3.82	Agree	Moderately Practiced
11. I save and spend the rest of the money on my daily.	4.02	Agree	Moderately Practiced
12. I spend money on everyday needs and save the rest.	3.82	Agree	Moderately Practiced
13. I spend all the money on everyday needs without saving any portion.	2.68	Disagree	Seldom Practiced
Overall Result	3.70	Agree	Moderately Practiced

Financial Literacy in terms of Investment Practices

Table 2 shows the investment practices of blue-collar job employees. It reveals the overall mean of 3.04 (undecided). Schneider, Hastings, & LaBriola (2018) reveal that blue-collar workers have less opportunity for investments due to the class and income divide. Higher-income individuals have more access to different investment platforms, especially in corporate fields. Additionally, based on the study of Cingano (2014), blue-collar job workers and low-income earners are prone to and have been a target of investment scams throughout the year, creating fear towards investment.

Table 2. Practices of the blue-collar job workers in terms of investments

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. I invest a portion of money that exceeds my estimated expenses.	3.54	Agree	Moderately Practiced
2. I invest in insurance plans.	3.32	Undecided	Fairly Practiced
3. I invest in real estate and other properties.	2.64	Undecided	Fairly Practiced
4. I invest in company shares.	2.38	Disagree	Seldom Practiced
5. My investments are diversified to balance the risk.	2.34	Disagree	Seldom Practiced
6. I consider the external and internal factors before I invest.	2.56	Disagree	Seldom Practiced
7. I seek professional advice before I invest.	3.54	Agree	Moderately Practiced
8. It is terrible to invest money that exceeds my expenses.	4.02	Agree	Moderately Practiced
Overall Result	3.04	Undecided	Fairly Practiced

Financial Literacy in terms of Expenditure Management

Table 3. Practices of the blue-collar job workers in terms of expenditure management

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. I prioritize the necessary items.	4.30	Strongly Agree	Highly Practiced
2. I buy something after carefully considering whether I can afford it.	4.54	Strongly Agree	Highly Practiced
3. I compare the prices when buying things.	4.30	Strongly Agree	Highly Practiced
4. I use a budgetary plan.	3.98	Agree	Moderately Practiced
5. I keep track of my expenses.	3.66	Agree	Moderately Practiced
6. I buy products that are recommended by others.	3.86	Agree	Moderately Practiced
7. I have control over my needs and wants.	4.18	Agree	Moderately Practiced
Overall Result	4.12	Agree	Moderately Practiced

Table 3 shows the expenditure management practices of blue-collar job workers. It reveals the overall mean of 4.12 (agree) for the blue-collar employees. This implies that blue-collar employees moderately practiced expenditure moderation, such as checking and comparing prices, monitoring expenses, creating budget plans, etc. In the study of Guillermo and Bambalan (2021), expenditure management is one aspect of financial management practices that needs monitoring and enhancement. One of the problems revealed in the study is the need for more control over spending. According to Doniego (2021), blue-collar job workers are mindful of expenses. The employees usually adjust their costs based on their average income.

Financial Literacy in terms of Bill Management

Table 4. Practices of the blue-collar job workers in terms of bill management

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. I pay my bills as soon as they are available.	3.68	Agree	Moderately Practiced
2. I pay my bills on the due date.	3.39	Undecided	Fairly Practiced
3. I strictly monitor my financial affairs.	3.64	Agree	Moderately Practiced
Overall Result	3.57	Agree	Moderately Practiced

Table 4 shows the bill management practices of blue-collar job employees. It reveals the overall mean of 3.57 (agree) for the blue-collar job workers. High-income employees, especially in the corporate and managerial fields, paid their bills ahead of time for credit points and rebates. At the same time, skilled laborers struggle to keep up with their bills and payments, leading to debt (Prawitz & Cohart, 2014). According to the Bureau of Consumer Financial Protection, in 2018, low-income (blue-collar) employees struggled to pay their bills because of their low wages. The study found that nearly half (43%) of the blue-collar workers surveyed reported struggling to cover their monthly expenses and bills. This financial strain can lead to negative consequences such as late fees, high interest charges, and even loss of valuable assets.

Financial Literacy in terms of Debt Management

Table 5. Practices of the blue-collar job workers in terms of debt management

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. I rely on expenses on loans.	2.20	Disagree	Seldom Practiced
2. I have been involved in financial troubles.	2.22	Disagree	Seldom Practiced
3. I have too much debt as of now.	3.04	Undecided	Fairly Practiced
4. I avoid financial trouble as much as possible.	2.86	Undecided	Fairly Practiced
Overall Result	2.58	Disagree	Seldom Practiced

Table 5 shows the debt management practices of blue-collar employees. It reveals the overall mean score for blue-collar jobs, which is 2.58 (disagree), which is seldom practiced. Yulianah, Nurjannah, & Sa'diyah (2023) reveals that blue-collar employees avoid debt despite low incomes. Seventy-eight respondents said they preferred to maximize and save a portion of their income rather than borrow money. According to Pitale and Nerlekar (2020), one must prioritize the goals to handle the debt correctly. Uncontrolled debt can be a ticking time bomb. Excessive borrowing can quickly snowball into financial stress and even bankruptcy, highlighting the importance of responsible debt management.

Financial Literacy in terms of Financial Goals

Table 6. Practices of the blue-collar job workers in terms of financial goals

INDICATORS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
1. I set and strive to achieve long-term financial goals.	4.04	Agree	Moderately Practiced
2. It is necessary to have financial goals.	4.34	Strongly Agree	Highly Practiced
3. Setting five-plus-year goals is necessary.	3.64	Agree	Moderately Practiced
4. I allot money for long-term investments.	3.62	Agree	Moderately Practiced
5. Investing is a long-term financial goal.	3.96	Agree	Moderately Practiced
6. Spending money is more satisfying than saving it for the long term.	2.90	Undecided	Fairly Practiced
7. Given the guaranteed availability, I'd take the Php 100,000 today over waiting a year for Php 110,000.	3.50	Agree	Moderately Practiced
Overall Result	3.71	Agree	Moderately Practiced

Table 6 shows the perspective toward the financial goals of blue-collar job workers. It reveals the overall mean score of 3.17 (agree), which is "moderately practiced". This implies that most respondents put a significant value on setting and planning for long-term financial stability. In the study of Kiymaz and Öztürkkal (2019), financial goal leads to financial satisfaction and improved economic well-being in lower-income families because of the security it provides for future needs. It would be beneficial for future research to explore the link between lack of future financial planning and negative impacts on both current and retirement well-being. This could provide valuable insights into the importance of long-term financial planning for overall well-being. The study of Dewi, Febrian, Effendi, Anwar, & Nidar (2020) reveals that planning and applying financial goals affect financial decision-making. Thus, forming positive economic behavior.

3.2 Summary of the Findings for Financial Literacy Dimensions

Table 7. Practices of the blue-collar job workers in terms of financial goals

DIMENSIONS	MEAN	DESCRIPTIVE RATING	INTERPRETATION
Savings	3.70	Agree	Moderately Practiced
Investing	3.04	Undecided	Fairly Practiced
Expenditure Management	4.12	Agree	Moderately Practiced
Bill Management	3.57	Agree	Moderately Practiced
Financial Goal Management	3.71	Agree	Moderately Practiced
Debt Management	2.58	Disagree	Seldom Practiced
Overall Result	3.45	Agree	Moderately Practiced

Table 7 presents the overall score of 3.45 (Agree) from all the dimensions of financial literacy of blue-collar job workers. Savings (3.70), Expenditure management (4.12), Bill management (3.57), and Financial Goal Management (3.71) are moderately practiced by participants while investing (3.04) is fairly practiced, and debt management (2.58) is seldom practiced.

This implies that despite the challenges in financial management, the workers showcase good financial literacy. Because careless financial management practices are the leading cause of financial failure. Inefficient financial management and the uncertainty of income fluctuation often led to severe problems (Khan & Kader 2019).

Empowering households and financial institution employees with enhanced financial literacy is critical to unlocking a more stable and prosperous future. Informed budgeting, saving, and borrowing habits lead to greater financial security for individuals and families, enabling better planning for long-term goals like retirement and supporting loved ones. This ripple effect extends to the financial institutions themselves, benefitting from a more financially savvy customer base and a knowledgeable workforce, ultimately reducing risk, and fostering a healthier economic environment (Gachango, 2014; Hitka, Lorincova, Balážová, & Caha 2021).

4.0 Conclusion

Managing finances is crucial for blue-collar workers because it empowers them to overcome unique challenges like hourly wages, potential job instability, and limited access to financial resources. Responsible money management allows them to build emergency funds, secure their future through retirement savings, and avoid predatory financial practices, ultimately leading to greater peace of mind and control over their well-being. Blue-collar workers require holistic financial empowerment: accessible financial education workshops, employer-facilitated retirement plans with auto-enrolment, early wage access options, and partnerships with credit unions or low-cost banking solutions can counter predatory practices and promote informed saving. Tailored programs addressing debt management, budgeting, and risk management alongside career advancement opportunities equip them to build financial resilience and long-term security. Remember, addressing the systemic issues limiting wealth accumulation is crucial for lasting impact.

5.0 Contributions of Authors

The authors all contributed to this research and approved the final version of this document.

6.0 Funding

This research was conducted without specific funding from any grant-providing organization.

7.0 Conflict of Interests

The authors disclose no potential biases or competing interests that could influence the findings or interpretation of this research.

8.0 Acknowledgment

The authors thank the following significant people: Jennebeth Pamisa, Joash Pamisa, Hilton Alarcon, Jeanette Alarcon, Sabina Laura Andrea Alarcon, Leilah Pallada, Jovenone Ellacone, Cenderella Ellacone, Elizar Pedroza, Merlyn Pedroza, Rodney Esmalde, and Madelyn Esmalde. The same gratitude is extended to Paramount School of Arts, Languages, Management, and Sciences, Incorporated, for allowing us to conduct this study and utilizing the resources needed for its success.

9.0 References

- Arlinawati, M., Sawitri, N. N., & Utomo, K. W. (2020). The sensitivity of financial position and financial behavior of young workers. *Jurnal Manajemen*, 24(2), 232-249.
- Brochado, A. & V. Mendes. (2021). Savings and financial literacy: a review of selected literature. *European Review of Business Economics*, I (1): 61-72.
- Bureau of Consumer Financial Protection (2018). *Consumer Insights on Paying Bills*. Retrieved from https://files.consumerfinance.gov/f/documents/bcfp_consumer-insights-paying-bills_report.pdf
- Cingano, F. (2014), "Trends in Income Inequality and its Impact on Economic Growth", *OECD Social, Employment and Migration Working Papers*, No. 163.
- Dewi, V. I., Febrian, E., Effendi, N., Anwar, M., & Nidar, S. R. (2020). Financial literacy and its variables: The evidence from Indonesia. *Economics and Sociology*, 13(3), 133-154.

- Doneigo, N.E. (2021). Spending Practices and Money Management Strategies of Aspiring Accountants: An Investigation. *International Journal of Arts, Sciences and Education*, 2(1), 252-264.
- Gachango, D. M. (2014). Effect of financial literacy on personal financial management practices: a case of employees in finance and banking institutions in Kenya (Doctoral dissertation, University of Nairobi).
- Guillermo, C.M., & Bambalan, M.L. (2021). Financial management practices of SPUP employees and related factors. *Research Digest*, pp. 85-101
- Herawati, N. T., Candiasa, I. M., Yadnyana, I. K., & Suharsono, N. (2018). Factors that influence financial behavior among accounting students in Bali. *International Journal of Business Administration*, 9(3), 30-38.
- Hitka, M., Lorincova, S., Potkany, M., Balážová, Ž., & Caha, Z. (2021). Differentiated approach to employee motivation in terms of finance. *Journal of Business Economics and Management*, 22(1), 118-134.
- Khan, A. & Kader, A.Z. (2019). Financial management practices on financial performance. *Globus: An International Journal of Management & IT*, 11(1), 6-20.
- Kiyamaz, H. & Öztürkkal, B. (2019). Perceived Financial Needs, Income Sources, and Subjective Financial Well-Being in an Emerging Market. *Journal of Financial Counseling and Planning*, 30 (2), 191-201.
- Mbarire, T. T., & Ali, A. I. (2014). Determinants of financial literacy levels among employees of Kenya Ports Authority in Kenya. *Research Journal of Finance and Accounting*, 5(16), 44-52.
- Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behavior in Laos. *Journal of Asian Economics*, 68, 101197.
- Oppong, C., Salifu Atchulo, A., Akwaa-Sekyi, E. K., Grant, D. D., & Kpegba, S. A. (2023). Financial literacy, investment and personal financial management nexus: Empirical evidence on private sector employees. *Cogent Business & Management*, 10(2), 2229106.
- Pillay, H., Kelly, K., & Tones, M. (2010). Training and development for transitional employment in mature-aged manual workers. *Australian Journal of Adult Learning*, 50 (1), 116 - 140
- Pitale, P.P. & Nerlekar, V. (2020). A Study of Debt Management practices of Millennial in India. *Journal of Seybold Report*, 15(8), 1757-1780.
- Prawitz, A.D., & Cohart, J. (2014). Workplace Financial Education Facilitates Improvement in Personal Financial Behaviors. *Journal of Financial Counseling and Planning*, 25(1), 5-26.
- Schneider, D., Hastings, O. P., & LaBriola, J. (2018). Income Inequality and Class Divides in Parental Investments. *American Sociological Review*, 83(3), 475-507.
- Yuliana, M., Nurjannah, D., & Sa'diyah, C. (2023). The Effect of Financial Literacy, Personality, and Financial Attitude on Financial Behavior Management in Malang SMEs. *Jurnal Manajemen Bisnis dan Kewirausahaan*, 3(02), 138-147.

Behind the Scenes: Evaluating the Performance of University Support Personnel for Institutional Progress

Gilmilen C. Sanchez

Foundation University, Dumaguete City, Negros Oriental, Philippines

Author email: gilmilen.sanchez@foundationu.com

Dated received: February 27, 2024

Date revised: March 7, 2024

Date accepted: March 12, 2024

Originality: 98%

Grammarly Score: 99%

Similarity: 2%

Recommended citation:

Sanchez, G. (2024). Behind the Scenes: Evaluating the Performance of University Support Personnel for Institutional Progress. *Journal of Interdisciplinary Perspectives*, 2(4), 40-49.

<https://doi.org/10.5281/zenodo.10803711>

Abstract. To remain competitive in the higher education market, Higher Education Institutions (HEIs) have to provide quality services to their clientele (Legcevic, 2014; Guaimalon et al., 2022). These services must be aligned with the mission, vision, and long-term goals of the university, which include employee productivity and service sustainability. This study sought to assess the university support personnel's performance for institutional progress and students' satisfaction. It also determined the relationship between the support personnel's profile, in terms of sex and length of service, and their performance. The descriptive-correlational design was applied in this inquiry wherein all 97 regular support personnel were the respondents and were evaluated by their supervisor and two randomly selected senior co-workers. A standardized questionnaire was utilized to gather data on the performance of the support personnel. Weighted Mean, Spearman's Rank Order Correlation Coefficients, and Chi-Square Test were used as statistical tools. The data revealed that the performance of the support personnel "exceeds expectations" in the following areas: work quantity, work quality, work relationships, work skills, job knowledge, and time record. The results further indicated that the work performance in terms of extension work is classified as "meeting the expectations." Moreover, the study found that the support personnel's length of service is inversely related to their work performance and that female personnel performed better at work than their male counterparts.

Keywords: Support personnel; Work quantity; Job knowledge; Work performance; Work quality

1.0 Introduction

Performance has always been a top issue in any firm as it is a sign of how well workers are doing (Andreas, 2022). It deals with how closely an employee's productivity level complies with the performance expectations the company has set (Diamantidis & Chatzoglou, 2019; Mohammad, 2020). It is also the outcome of the employees' quality and quantity of work as they accomplish their assigned tasks (Kurniawan et al., 2019; Jufrizen & Sitorus, 2021). Moreover, the outcomes of the employee's work can be used to evaluate performance, which is a combination of their skills, efforts, and opportunities (Soedarso 2018).

Performance can be enhanced in an environment that prioritizes the needs of the workers. Havaei et al. (2020) define the environment as encompassing all elements impacting employees' task performance. Research by Badrianto and Ekhsan (2019) and Havaei et al. (2020) underscores that an unfavorable work environment detrimentally affects productivity and employee motivation. Conversely, when individuals can fulfill their assigned tasks in a secure, healthy, and pleasant atmosphere, it is deemed conducive or positive (Hidayat & Latief, 2018). Although the work environment does not directly execute the company's production process, it has a substantial bearing on the employed personnel (Al Sabei et al., 2020). Undoubtedly, having happy and satisfied personnel increases work productivity (Harini et al., 2020).

Every company relies on its personnel to function. To achieve high productivity and performance – which are both essential to the sustainability of the company – employees are expected to perform their jobs effectively, expeditiously, and to the best of their abilities. They are also expected to manifest self-discipline (Bawamenewi et al., 2024), effective time management (Odoh & Moluno, 2024), willingness to learn new things (Tannady et al., 2023), and good relationships with their colleagues (Rustiawan et al., 2023). These characteristics of employees are essential, especially to the support staff of the university. While many studies have investigated the performance of employees in government agencies, banks, or hotels, the current study focused on university staff members who act as the support network of an academic institution whose major clientele is the students. These support staff are assigned to the different auxiliary services of the institution. These services, according to Bonnarens et al. (2021), are crucial for students to attain a fulfilling experience and exemplary academic-related performance. Nonetheless, this aspect of the university has not received enough research.

In this study, the performance of the support staff or personnel was measured in terms of (a) work quantity; (b) work quality; (c) work relationships; (d) work skills; (e) time record; (f) job knowledge; and (g) extension work. The connection between the support personnel's profile (i.e. sex and length of service) and their performance was also explored.

2.0 Methodology

2.1 Research Design

The descriptive-correlational design was applied in this inquiry. The performance of the support personnel was described and correlated to their profile in terms of sex and length of service.

2.2 Research Locale

The study considered the support personnel of a private university in Dumaguete City, Negros Oriental, Philippines. The university is a non-sectarian and non-profit institution recognized for its Corporate Social Responsibility (CSR). In terms of instructional facilities, the school uses technology as its basic learning resource. It is also recognized for its green and eco-friendly campuses that are powered by technology and marked by paperless transactions.

2.3 Research Participants

The respondents of the study were the 97 support personnel consisting of the non-teaching staff mostly assigned in the offices and those in charge of the buildings and grounds department. These support personnel were rated by their respective supervisors and two randomly selected senior co-workers. This was done to avoid bias in the evaluation of the personnel's performance.

2.4 Research Instrument

The study used a validated questionnaire with reliable items to examine every construct of the support personnel's performance. The Cronbach's Alpha coefficients are the following: 0.923 for quantity of work; 0.895 for quality of work; 0.756 for work relationships; 0.875 for work skills; 0.701 for job knowledge; and 0.724 for time record.

In describing the personnel's performance, the following scales of the weighted means and verbal descriptions (VD) were used: 4.21 – 5.00 as Outstanding (O); 3.41 – 4.20 as Exceeds Expectations (EE); 2.61 – 3.40 as Meets Expectations (ME); 1.81 – 2.60 as Needs Improvement (NI); and 1.00 – 1.80 as Unsatisfactory (U).

2.5 Data Gathering Procedure

The researcher observed proper protocols in gathering the data. A letter of request to conduct the study was first sent to the HR department of the university with the endorsement of the university's dean of the graduate school. The signed and approved request was then presented to the deans/heads and respective supervisors of the support staff. The yearly performance of the support personnel, as rated by their supervisors, was obtained from the HR office. To validate the document, two randomly selected senior colleagues were tasked to re-evaluate it. The results were then consolidated, processed using JAMOVI software, analyzed, and interpreted.

2.6 Ethical Considerations

All necessary ethical considerations and protocols for the entire duration of the study were stringently followed. The researcher maintained the confidentiality of all data obtained, including the support personnel's identity as well as their ratings. Moreover, the researcher ensured that the study was approved by the Ethical Committee of the University Research Office.

3.0 Results and Discussion

3.1 Support Personnel Performance in Terms of Work Quantity

Table 1 reflects the level of performance of the support personnel in terms of quantity of work, which is measured based on competence, effectiveness, accuracy, thoroughness and neatness, and cost control objectives. Performance has always been a top issue in any firm as it is a sign of how well workers are doing (Andreas, 2022). As theorized by Negara, Fadli, and Suherman (2023), paying attention to the employees' performance is how the company works to raise the standard of its human resources.

Table 1. Support personnel's performance in terms of work quantity (n = 97)

Performance Indicators	Explanation	w \bar{x}	VD
Competence	The staff knows all aspects of his assigned tasks and works with minimal supervision.	4.13	EE
Effectiveness	The staff is organized & systematic in their work. He can bring out the best results in his work assignments. & creates a favorable impression with every work output.	4.11	EE
Accuracy	The staff does work correctly and can easily follow instructions given by the supervisor/head.	4.14	EE
Thoroughness & Neatness	The staff makes sure that the assigned work is accomplished thoroughly and neatly.	4.12	EE
Cost Control Obj.	The staff performs the work at the lowest cost with minimum use of additional manpower by using efficient methods without compromising quality service.	4.09	EE
Composite		4.14	EE

As presented in the table, the level of performance of the support personnel is "exceeding expectations" in all areas as evidenced by the values of the weighted means ranging from 4.09 to 4.13. This finding suggests that the personnel consistently perform above most of the performance standards and have made valuable contributions to the efficiency and productivity of the organization through such performance in terms of quantity. This is in line with what Sembiring et al. (2021) highlighted in their study that the efficiency of employees' work helps a company achieve organizational objectives and boost performance. Audenaert et al. (2019) also opined that it is essential to have the capacity to accomplish tasks to meet the organization's goals.

3.2 Support Personnel Performance in Terms of Work Quality

Table 2 displays the level of performance of the support personnel in terms of work quality, which covers proper use of work hours, volume of work accomplished, ability to meet schedules, and productivity level. As reflected in the table, the support personnel got an "outstanding" rating (w \bar{x} = 4.21) under proper use of work hours. This signifies that the personnel adhere to work hours even when the supervisor is not around and keep their supervisors updated on their whereabouts. The university places a strong emphasis on punctuality within its workforce, ensuring adherence through the utilization of biometric technology and turnstiles to monitor employee attendance and absences rigorously. The punctuality of support personnel significantly impacts employee morale and productivity, with tardiness resulting in adverse effects.

Furthermore, the data indicate that the support personnel's performance "exceeds expectations" in terms of the volume of work accomplished, ability to meet schedules, and productivity level. This result implies that the personnel go beyond the performance standards and have significantly increased the organization's production and efficiency in terms of quality. It also affirms the assertion of Hidayat and Latief (2018) that individual employee performance, as evaluated by quantity and quality, has a considerable impact on the success of the organization.

Table 2. Support personnel performance in terms of work quality (n = 97)

Performance Indicators	Explanation	w \bar{x}	VD
Proper Use of Work Hours	The staff observes work hours even when the supervisor/head is not around. He keeps the supervisor/head informed of his/her whereabouts.	4.21	O
Volume of Work Accomplished	The staff can meet a target work assignment and is willing to accept new and unexpected additional assignments as demanded by the work situation. He is willing to go the "extra mile".	4.19	EE
Ability to Meet Schedules	The staff is a fast worker who meets target schedules and deadlines.	4.14	EE
Productivity Level	The staff maximizes the use of eight (8) hours, with visible results	4.14	EE
Composite		4.17	EE

3.3 Support Personnel in Terms of Work Relationships

Table 3 exhibits the level of performance of the support personnel in terms of work relationships, which include the ability to work with superiors and co-workers, build rapport with co-workers and the public, and be a good influence.

Table 3. Support personnel performance in terms of work relationships (n = 97)

Performance Indicators	Explanation	w \bar{x}	VD
Ability to Work with Superiors & Co-Workers	The staff always exercises tact, manifests humility, does not boast of achievements, elicits respect, and does not entertain rumors in the workplace.	4.24	O
Rapport with Co-Workers & the Public	The staff responds to queries from co-workers and the public quickly and courteously, showing flexibility within the bounds of existing rules and regulations and displaying a pleasant disposition at all times.	4.16	EE
Good Influence	The staff possesses the ability to be a role model to other employees in the workplace.	4.11	EE
Composite		4.17	EE

As shown, the support personnel received an "outstanding" ($w\bar{x} = 4.24$) rating in terms of their ability to work with superiors and co-workers. This means the personnel have exceeded all the performance expectations in terms of work relationships, have always shown tactfulness, have displayed humility and respect, and have avoided workplace gossip. This further connotes that the support personnel maintain a harmonious and productive atmosphere at work.

Correspondingly, Hidayat and Latief (2018) posited that a workplace is considered favorable when employees get to effectively perform and accomplish their tasks. On the contrary, according to Badrianto and Ekhsan (2020) and Havaei et al. (2020), an unfavorable working environment will adversely affect productivity and, ultimately, employee motivation.

Meanwhile, the table also displays that the support personnel's performance "exceeds expectations" in terms of rapport with co-workers and the public ($w\bar{x} = 4.16$) and that the personnel has a positive influence on others ($w\bar{x} = 4.16$). This means the personnel quickly respond to queries from co-workers and the public in a manner that displays the core values of the university. In addition, it implies that the personnel possess characteristics that are worth emulating.

Relationships in the workplace are crucial. As pointed out by Elliott et al. (2023), connection with co-workers seems to have a greater impact on well-being outcomes. Van der Borg et al. (2017) also recognized the influence of relationships among co-workers that results in the success of team-based skills training.

3.4 Support Personnel Performance in Terms of Work Skills

Table 4 reveals the level of performance of the support personnel in terms of work skills, which comprise planning and organizing work, the ability to communicate, problem-solving and judgment, and initiative.

Table 4. Support personnel performance in terms of work skills (n = 97)

Performance Indicators	Explanation	w \bar{x}	VD
Planning and Organizing Work	The staff shows orderliness in his workplace, files communication data neatly for easy access, anticipates things to be accomplished and schedules work to achieve maximum results.	4.00	EE
Ability to Communicate	The staff knows how to answer the telephone, easily follows verbal instructions, speaks correct English, and writes grammatically correct communications/reports.	3.98	EE
Problem Solving and Judgment	The staff identifies a problem on a timely basis and properly analyzes it. Develops possible solutions, exercises sound judgment and acts upon the best solution. Advises supervisor/head appropriately or asks for assistance, as needed.	4.00	EE
Initiative	The staff can take appropriate action without being told and consistently strives to produce the best output in any given task.	4.17	EE
Composite		4.04	EE

As depicted in the table, the support personnel's performance is rated by their supervisors and senior colleagues as "exceeding expectations," as made evident in the values of the weighted means ranging from 3.41 to 4.20, signifying that the support personnel show orderliness in the workplace such that communication files are accessible anytime. The personnel can also converse appropriately with clients and know how to solve problems that may arise in the workplace. Furthermore, these personnel can evaluate and initiate things independently and with less guidance from their superiors. These skills shown by the personnel are heightened through the initiative of the school administration to provide the personnel with opportunities to attend seminars on how to organize their workplace. The continuous Saturday hangouts (seminars), for example, cover relevant training on improving communication skills, telephone etiquette, mind management, and a lot more. The honing and enhancement of the personnel's abilities are geared towards a better support system in the university.

Indeed, it was emphasized by Jermsittiparsert and Boonratanakittiphumi (2019) that to enhance expertise and keep a competitive advantage, employees must constantly advance their skills and knowledge. Al-kharabsheh et al. (2023) also argued that the motivation to accomplish job obligations is high among skilled workers.

3.5 Support Personnel Performance in Terms of Job Knowledge

Table 5 presents the level of performance of the support personnel in terms of job knowledge, which includes a degree of technical knowledge, and understanding of and compliance with job procedures and methods and university objectives. The data show that the support personnel's performance "exceeds expectations" in all three areas, as evidenced by the values of the weighted means ranging from 4.16 to 4.09. This finding suggests that the personnel have exceeding knowledge of their responsibility and how the work is done. It also means the support personnel contribute to the attainment of the university objectives by displaying desirable character.

Table 5. Support personnel performance in terms of job knowledge (n = 97)

Performance Indicators	Explanation	w \bar{x}	VD
Degree of Technical Knowledge	The staff does not need to be taught a given task more than once. Has the technical skills necessary to perform work assignments and demonstrates such skill during everyday work hours.	4.09	EE
Understanding & Compliance of Job Procedures & Methods	The staff knows the totality of procedures in his work area, complies with such procedures, and can relay them to co-workers and the public effectively.	4.09	EE
University Objectives	The staff contributes to the attainment of the university objectives by exhibiting sound character, broad culture, and skillful potential towards a vocational and /or professional career.	4.16	EE
Composite		4.12	EE

According to Irawati et al. (2021), to produce high-quality work, every employee needs to possess the required know-how and abilities, as well as self-discipline, determination, good morale, and experience. Jermsittiparsert and Boonratanakittiphumi (2019) also asserted that for employees to keep a competitive edge and expand their expertise, they must constantly update their knowledge and skills.

3.6 Support Personnel Performance in Terms of Time Record

Table 6 discloses the level of performance of the support personnel in time record, punctuality, and intermittent attendance. As indicated, the support personnel are rated “outstanding” by their supervisor and senior colleagues in time record with $w\bar{x} = 4.33$. The personnel are also viewed as “exceeding expectations” in terms of punctuality ($w\bar{x} = 3.92$) and intermittent attendance ($w\bar{x} = 4.13$).

Table 6. Support personnel performance in terms of time record (n = 97)

Performance Indicators		Explanation	$w\bar{x}$	VD
Time Record	5	= Present all work hours.	4.33	O
	4	= Absent (3) days without approved leave.		
	3	= Absent (6) days without approved leave.		
	2	= Absent (10) days without approved leave.		
	1	= Absent (12) days or average of absence per month without approved leave.		
Punctuality	5	= Arrived earlier or on time during all work hrs.	3.92	EE
	4	= Late 2 times due to uncontrollable factors.		
	3	= Late 4 times due to uncontrollable factors.		
	2	= Late 6 times due to uncontrollable factors.		
	1	= Late 8 times due to uncontrollable factors.		
Intermittent attendance	5	= Does not leave work in all work hours.	4.13	EE
	4	= Present on time however leaves 2 times due to uncontrollable factors.		
	3	= Present on time however leaves 4 times due to uncontrollable factors.		
	2	= Present on time however leaves 6 times due to uncontrollable factors.		
	1	= Present on time however leaves 8 times due to uncontrollable factors.		
Composite			4.13	EE

These findings simply show how the support personnel value their work knowing full well that their attendance and punctuality affect the productivity of their department. This is an affirmation of the statement made by Zaman and Zulganef (2023) that employees are unable to do their tasks by the deadline when jobs are repeatedly put off and piled up.

3.7 Support Personnel Performance in Terms of Extension Work

Table 7 provides the data on the performance of the support personnel in terms of extension. The university sees to it that the employees are involved in the community. The personnel are encouraged to take part in the university’s extension program in the adopted barangays. They participate in tree planting activities and facilitate lectures to the 4Ps beneficiaries.

Table 7. Support personnel performance in terms of extension work (n = 97)

Performance Indicators		Explanation	$w\bar{x}$	VD
Extension Work	5	= Joined extension activities in our adopted barangay 5 times and above in the current year.	3.35	ME
	4	= Joined extension activities in our adopted barangay 4 times due to uncontrollable factors.		
	3	= Joined extension activities in our adopted barangay 2 times due to uncontrollable factors.		
	2	= Joined extension in our adopted barangay activities 2 times due to uncontrollable factors.		
	1	= Joined extension activities in our adopted barangay 1 time due to uncontrollable factors.		
Composite			3.35	ME

As reflected in the table, the support personnel’s performance “meets expectations” with $w\bar{x} = 3.35$. This indicates that the support personnel have met the performance expectations in terms of their participation in extension activities designed for them. This is the lowest of all the ratings regarding the support personnel’s performance. The researcher would like to emphasize that almost 25% of the support personnel included in this study come from the Buildings and Grounds Department and these people work from Monday to Saturday. Their line of work is different from those assigned to the different offices. This might be one of the reasons that, generally, the rating is lowest in this area.

3.8 Relationship between the Profile of the Support Personnel and Their Level of Performance

Table 8 reflects that the sex of the support personnel is significantly related to their level of performance in terms of work quality ($p = 0.030$), job knowledge ($p = 0.008$), work relationships ($p = 0.013$), and work skills ($p = 0.007$). All their p -values are less than the level of significance (0.05). Considering the values of the weighted means, the figures attest that female support personnel outperform their male counterparts. This finding suggests that females displayed better work quality, were more knowledgeable in their jobs, had better work relationships, and were more skillful than their male counterparts. These findings are parallel with those of Casanova and Pagua (2022) wherein they identified a significant association existing between sex and job performance in favor of the female employees. However, these findings do not support the claim of Padios, Haguisan III, and Sagala (2022) that no significant differences are found between the employees' job resiliency and work values.

Table 8. Relationship between the profile and level of performance of the support personnel ($n = 97$)

Variables Correlated to Motivation	Computed Value	p-value	Remark
Sex and...	χ^2		
• Work Quantity	1.87	0.171	Not significant
• Work Quality	4.73	0.030	Significant
		Male: $w\bar{x} = 4.37$ Female: $w\bar{x} = 4.59$	
• Work Relationships	6.16	0.013	Significant
		Male: $w\bar{x} = 4.32$ Female: $w\bar{x} = 4.57$	
• Work Skills	7.39	0.007	Significant
		Male: $w\bar{x} = 4.24$ Female: $w\bar{x} = 4.52$	
• Job Knowledge	6.94	0.008	Significant
		Male: $w\bar{x} = 4.27$ Female: $w\bar{x} = 4.54$	
• Time Record	0.21	0.648	Not significant
• Extension Work	1.39	0.499	Not significant
	2.64	0.104	Not significant
Length of Service and...	r_s		
• Work Quantity	-0.142	0.165	Not significant
• Work Quality	-0.276	0.006	Significant
• Work Relationships	-0.342	0.001	Significant
• Work Skills	-0.203	0.046	Significant
• Job Knowledge	-0.178	0.080	Not significant
• Time Record	-0.293	0.004	Significant
• Extension Work	-0.257	0.011	Significant

Level of significance = 0.05

On the other hand, the personnel's length of service was found to be significantly and inversely related to their quality of work ($p = 0.006$), work relationships ($p = 0.001$), work skills (0.046), time record (0.004), and extension work (0.011). All the p -values are less than the level of significance (0.05). The negative r_s -values indicate that the younger the support personnel are, the higher their performance is in the enumerated areas than those support personnel who have been in the university for a longer time. This result implies that those who are new tend to exert more effort that is visible to their supervisor and senior colleagues. This finding does not coincide with the statement of Muslim et al. (2020) that work experience is what a person personally acquires throughout their day-to-day employment and so it has an effect on their work performance. Muslim et al. also added that employees with more experience demonstrate better job performance because they are more knowledgeable and are better at organizing what they know.

The above discussion again does not discredit the performance of support personnel who have been loyal to the university. With thorough perusal of the raw data, the figures indicate "exceeding expectations" performance among these support personnel.

4.0 Conclusion

The consistency of the support personnel in performing their tasks in various dimensions reflects the effectiveness of the recruitment and hiring practices of the university, an admirable organizational culture, good leadership, and commitment to employee development. The support personnel's commitment, competence, and effectiveness reinforce the institution's reputation and mission while also improving the student experience and campus atmosphere. Their desirable performance likely has positive contributions to the overall success and effectiveness of the institution in the delivery of its functions. It is therefore recommended that the school administration (a) ensure that the support personnel are given avenues for continuous training and development to maintain or further improve their abilities related to their work, and (b) establish regular team-building activities to sustain the positive relationships among co-support personnel.

5.0 Contributions of Authors

This study has a single author and her adviser reviewed and approved the final version of this paper.

6.0 Funding

This research was funded by the Commission on Higher Education (CHED) through the Scholarships for Instructors' Knowledge Advancement Program (SIKAP) for Higher Education Institutions (HEI) teaching and non-teaching personnel.

7.0 Conflict of Interests

The author declared that she has no conflicts of interest as far as this study is concerned.

8.0 Acknowledgment

The author is grateful to CHED and Foundation University administrations for their valuable collaboration and support and for providing all qualified staff members this opportunity to participate

9.0 References

- Al Sabei, SD, Labrague, LJ, Miner Ross, A., Karkada, S., Albashayreh, A., Al Masroori, F., & Al Hashmi, N. (2020). Nursing work environment, turnover intention, job burnout, and quality of care: The moderating role of job satisfaction. *Journal of Nursing Scholarships*, 52(1), 95–104. <https://doi.org/10.1111/jnu.12528>
- Al-Kharabsheh, S. A., Attiany, M. S., Alshawabkeh, R. O. K., Hamadneh, S., & Alshurideh, M. (2023). The impact of digital HRM on employee performance through employee motivation. *International Journal of Data and Network Science*, 7(1), 275–282. <https://doi.org/10.5267/j.ijdns.2022.10.006>
- Andreas, D. (2022). Employee performance: The effect of motivation and job satisfaction. *Produktif: Jurnal Kepegawaian dan Organisasi*, 1(1), 28–35. <https://jurnalpustek.org/index.php/sdmo/article/view/10>
- Audenaert, M., Decramer, A., George, B., Verschueren, B., & Van Waeyenberg, T. (2019). When employee performance management affects individual innovation in public organizations: The role of consistency and LMX. *The International Journal of Human Resource Management*, 30(5), 815–834. <https://doi.org/10.1080/09585192.2016.1239220>
- Badrianto, Y., & Ekhsan, M. (2019). The effect of work environment and motivation on employee performance at pt. Hasta multi prosperous Cikarang. *Journal of Research in Business, Economics, and Education*. <https://e-journal.stiekusumanegara.ac.id/index.php/jrbee/article/view/8>
- Bawamenewi, P., Irawan, P. R., & Imanuddin, K. (2024). The influence of work discipline on employee performance at the Berkas Kasih Imanuel Jakarta Foundation. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)*, 8(1), 316–321. <http://dx.doi.org/10.58258/jisip.v8i1.6201>
- Bonnarens, L., Moons, I., De Pelsmacker, P., Lievens, A., & Keignaert, K. (2021). Experiences of students with auxiliary services journeys in higher education. *Student Support Services*, 1–27. https://doi.org/10.1007/978-981-13-3364-4_42-1
- Casanova, V. S., & Paguia, W. M. (2022). Employability and job performance of graduates of Occidental Mindoro State College Graduate School. *Higher Education Studies*, 12(2), 193. <https://doi.org/10.5539/hes.v12n2p193>

- Diamantidis, A. D., & Chatzoglou, P. D. (2019). Factors affecting employee performance: an empirical approach. *International Journal of Productivity and Performance Management*, 68(1), 171–193.
<https://doi.org/10.1108/ijppm-01-2018-0012>
- Elliott, K., Quinn, M., Stirling, C., Sanderson, K., Robinson, A., Martin, A., & Scott, J. (2023). Developing the occupational communion scale: Belonging-Based social connections are vital for work engagement, Self-Efficacy, and positive affect in aged care workforces. *The Gerontologist*, 63(6), 1028–1038.
<https://doi.org/10.1093/geront/gnac190>
- Guaimalon, T., Elias, S. A., & Haron-Boquia, A. (2022). University Status Assessment: A Baseline Study. *IJASOS-International E-journal of Advances in Social Sciences*, 8(23), 468-478.
- Harini, S., Maulana, L. H., Sudarjati, S., & Juniarti, D. (2020). Performance, job stress and human capital motivation: a study on employee perspective. *International Journal of Scientific & Technology Research*.
<http://repository.unida.ac.id/id/eprint/976>
- Havaei, F., Astivia, OLO, & MacPhee, M. (2020). The impact of workplace violence on medical-surgical nurses' health outcome: A moderated mediation model of work environment conditions and burnout using secondary data. *International Journal of Nursing Studies*
<https://doi.org/10.1016/j.ijnurstu.2020.103666>
- Hidayat, A. (2021). Pengaruh kompensasi dan motivasi terhadap kinerja karyawan dengan kepuasan kerja sebagai variabel intervening. *Jurnal Ilmu Manajemen (JIMMU)*, 6(2), 165-177.
- Hidayat, M., & Latief, F. (2018). The influence of developing human capital management toward company performance (The evidence from developer companies in South Sulawesi Indonesia). *SEIKO: Journal of Management & Business*, 2(1), 11-30.
<https://journal.stieamkop.ac.id/index.php/seiko/article/download/322/168>
- Irawati, L., Khaeruman, & Farradia, Y. (2021). Analysis of the work motivation factors on an employee performance. *International Journal of Educational Research & Social Sciences*, 2(4), 730–735.
- Jermstittiparsert, Kittisak, and Chanatat Boonratanakittiphumi. 2019. “The mediating role of knowledge management and the moderating role of additive manufacturing (Industry 4.0) in the Relationship between Knowledge Management Capability and Firm Performance: A Case of KPMG Thailand.” *International Journal of Innovation, Creativity and Change* 8 (8): 430–49.
- Jufrizen, J., & Sitorus, T. S. (2021, July). Pengaruh Motivasi Kerja dan Kepuasan Kerja Terhadap Kinerja Dengan Disiplin Kerja Sebagai Variabel Intervening. In *Seminar Nasional Teknologi Edukasi Sosial dan Humaniora* (Vol. 1, No. 1, pp. 844-859).
- Kurniawan, R. A., Qomariah, N., & Winahyu, P. (2019). Dampak Organizational Citizenship Behavior, Motivasi Kerja, Dan Kepuasan Kerja Terhadap Kinerja Karyawan. *Jurnal Penelitian IPTEKS*, 4(2), 148-160.
- Legcevic, J. (2014). The role of university in economic development-The case of Croatia.
https://www.academia.edu/12348027/The_role_of_university_in_economic_development_the_case_of_croatia
- Mohammad, A. A., Alshura, M. S., Al-Hawary, S. I. S., Al-Syasneh, M. S., & Alhajri, T. M. (2020). The influence of internal marketing practices on the employees' intention to leave: A study of the private hospitals in Jordan. *International Journal of Advanced Science and Technology*, 29(5), 1174-1189.
- Muslim, M., Nurwanah, A., Sari, R., & Arsyad, M. (2020). Effect of work experience, independence, integrity, competence and ethics of audit quality auditors. *Equilibrium Discourse (Journal of Economic Research Thought)*, 8(2), 100-112.
- Negara, M. P. A., Fadli, U. M., & Suherman, E. (2023). An analysis of employee service performance of Pt Fuji Seat Indonesia. *Jurnal Ekonomi*, 12(01), 1389-1396.
- Odoh, C. O. (2024). Time management and employee productivity in government institutions in Delta State. *International Journal of Public Administration Studies*, 3(2), 130.
<https://doi.org/10.29103/ijpas.v3i2.13891>
- Padios, R. M., Haguisan III, I. A., & Sagala, G. B. (2022). Job resiliency, work-life balance, and work values of the employees in a Catholic college. *Philippine Social Science Journal*, 5(2), 19-29.
<https://doi.org/10.52006/main.v5i2.526>
- Rustiawan, I., Ausat, A. M. A., Gadzali, S. S., Suherlan, S., & Azzaakiyyah, H. K. (2023). Determinants of employee dedication to the company as a whole. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(1), 708-712. <https://doi.org/10.31004/cdj.v4i1.12454>

- Sembiring, M., Jufrizen, J., & Tanjung, H. (2021). Efek Mediasi Kepuasan Kerja pada Pengaruh Motivasi Dan Kemampuan Kerja Terhadap Kinerja Pegawai. *Maneggio: Jurnal Ilmiah Magister Manajemen*, 4(1), 131-144.
- Soedarso, S. (2018). *Manajemen Kinerja & Globalisasi*, 1st Edition, Bandung Pustaka Fahima
- Tannady, H., Wardhana, A., & Sudrajat, D. (2023). Enhancing workforce agility of national insurance firm's employees by effective e-learning management and growth mindset. *JAMBU AIR: Journal of Accounting Management Business and International Research*, 1(1), 31-39.
- Van Der Borg, W. E., Verdonk, P., Dauwerse, L., & Abma, T. A. (2017). Work-related change in residential elderly care: Trust, space and connectedness. *human relations*, 70(7), 805-835.
<https://doi.org/10.1177/0018726716684199>
- Zaman, R. A., & Zulganef, Z. (2023). Effect of work motivation and job satisfaction on employee performance (Case study at Islamic bank of BJB Jakarta). *International Journal of Global Operations Research*, 4(1), 1-12. <http://www.iorajournal.org/index.php/ijgor/index>

Perspectives of Mental Health Professionals on Self-Diagnosis and Romanticization of Mental Illnesses

Nathania Danielle T. Quijano*, Angelie Jayne Naval, Darwin F. Ignacio
Notre Dame of Dadiangas University, General Santos City, South Cotabato, Philippines

*Corresponding author email: quijanonathania@gmail.com

Dated received: February 27, 2024

Date revised: March 8, 2024

Date accepted: March 12, 2024

Originality: 90%

Grammarly Score: 99%

Similarity: 10%

Recommended citation:

Quijano, N. D., Naval, A. J., & Ignacio, D. (2024). Perspectives of Mental Health Professionals on Self-Diagnosis and Romanticization of Mental Illnesses. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 50-59. <https://doi.org/10.5281/zenodo.10804283>

Abstract. In today's interconnected world, many individuals worldwide have become susceptible to the influences of the rising trends of self-diagnosis and the romanticization of mental illnesses, primarily facilitated by online platforms. This study explored the viewpoints of mental health professionals on the trends of self-diagnosis and romanticization of mental illnesses, including concerns about the accuracy of self-diagnoses, the impact of romanticization on individuals, and potential interventions to mitigate the issues. This research narrows its focus on the first-hand experiences and insights shared by mental health professionals, precisely five (5) psychologists, and five (5) guidance counselors in General Santos City and Davao City, shedding light on how these trends significantly shape individuals' perceptions of mental health. Using Braun and Clarke's (2006) thematic analysis, results from semi-structured interviews highlighted the harmful impacts of these trends. Additionally, the findings suggest a need for increased awareness and education surrounding mental health, as well as collaborative efforts to counter the negative consequences of self-diagnosis and romanticization of mental illnesses.

Keywords: Self-Diagnosis; Romanticization; Mental illnesses; Mental health professionals; Phenomenology

1.0 Introduction

Mental health professionals have made countless attempts to eradicate the stigma against mental health. Various studies and articles highlighted the importance of empowering people's awareness of mental health (Nabors et al., 2014; Salerno, 2016; World Health Organization [WHO], 2013, pp. 9-13). These efforts are gradually reaching fruition, evidenced by how society acknowledges their importance. However, as mental health awareness spreads, the trend of romanticizing the issues attached to it also prevails (Dunn, 2017; Jadayel et al., 2015; Lee & Vidamaly, 2021; Oumeddour Chiraz, 2021; Schipper, 2022; Shrestha, 2018). The intentions of campaigning for the normalization of mental health have shifted from the fight against being stigmatized to resisting the trend of being sensationalized.

To sensationalize a subject, one must present information in a way that arouses interest and excitement from the public. In mental health, sensationalization manifests in the alarming rise of the dangerous trend of romanticizing mental illnesses. It is more apparent throughout different social media platforms wherein people describe mental health issues in a way that makes an individual believe that they would be "special" or "quirky" when labeled as someone suffering from a supposed mental illness (Jadayel et al., 2015). This perspective also normalizes mental illnesses as attractive and desirable rather than admitting that it is a real problem that affects people's lives in many ways (Marquardt, 2020, as cited in Cuason, 2022). Romanticizing mental illnesses is dangerous because it downplays people with real mental health issues, making it even more difficult for them to

reach out for help. The phenomenon gives mental health professionals a more complicated job of distinguishing genuinely suffering patients from those who treat mental illness as a unique personality trait.

Furthermore, one of the most significant issues generated by the romanticization of mental illnesses is self-diagnosis, which refers to identifying or diagnosing oneself without consulting a mental health expert. People frequently use Google to research symptoms they are experiencing to determine their illnesses (Thatcher, 2021). Self-diagnosis is one of the factors that can mentally and emotionally harm people due to being purely exposed to social media. Most people in this generation resort to self-diagnosis applications or websites rather than seeing a mental health professional (Jutel & Lupton, 2015). Self-diagnosis is currently ubiquitous, with people preferring to diagnose themselves using the Internet as a source of mental health information (Gass, 2016). In consequence, people take professional mental health care for granted, and the extent of the reach of its services, including proper psychological assessments, accurate diagnosis, and effective treatment plans, becomes limited. Misinformation and misrepresentation block access to mental health care. These are the biggest obstacles to positive, accurate, and realistic mental health promotion (Allison et al., 2020). The misrepresentation of mental illnesses through its glamorization is also taken advantage of by social media influencers who exploit this for financial benefits as they wear and market merchandise with words such as "My anxieties have anxieties," "MENTAL," or "OCD," treating these serious mental health issues as aesthetics (Zhang, 2019). In a local setting, although there are scarcities to notable studies about the issues mentioned above, the researchers have observed that young people are tolerant of romanticizing mental illnesses. On the researchers' university campus, several students wear merchandise with the term "Antisocial Club," and they are also easily influenced by media representation. Relative to this, the trend of romanticizing mental illnesses as desirable with a faded flower aesthetic, and as a result, self-diagnosis follows. In the Philippines, several mental health groups are starting to remind the public of the dangers of self-diagnosis, especially since the previous pandemic has made it more difficult for people to ask for professional help (Ganancial, 2020). According to a study, Filipinos, one of the most active social media users in the world, have a higher chance for Filipinos to be more prone to self-diagnosis (Asian Journal News, 2021). Thus, this practice may become a catalyst for forming new misconceptions about mental health in the Philippines.

In recent years, there has been a decline in the stigma toward mental health because people have the autonomy to seek help by visiting a mental health professional. Consequently, due to the prevalence of mental health concerns in this generation and the widespread discussion and romanticization of mental health concerns on social media and other platforms, it has become routine for people to experience mental illnesses - a mental health hazard for this generation. People choose to self-diagnose, and their reasons vary from attention-seeking tendencies to wanting to be labeled as different or unique. With its transition from being stigmatized to sensationalized, the danger of self-diagnosis and romanticizing mental illnesses puts people's mental well-being and holistic health at risk. For those who need serious treatment, their authenticity and credibility are threatened by those who try to attach mental illnesses to normalcy; suppose there is no action towards this dangerous trend. In that case, there will be more misinformed people who will engage in glamorizing mental illnesses, which should be discussed with the utmost concern as it may mean the difference between life and death for people who are genuinely suffering from mental health problems. Thus, this paper aims to explore the perspectives of mental health professionals towards the rising trend of self-diagnosis and romanticization of mental illnesses and identify the challenges or experiences they face, along with the possible factors that fuel this trend and its consequences.

2.0 Methodology

2.1 Research Design

The study used a qualitative type of research. In contrast to a quantitative research design, the qualitative study focused on exploring real-world problems by gathering non-numerical data, such as perceptions and experiences, from its participants (Brannan et al., 2022). Specifically, the study employed phenomenological inquiry. A phenomenological approach is a type of qualitative research that focuses on extracting the participants' lived experiences within a certain context (Neubauer et al., 2019). Phenomenology is suitable for this study since its objective was to determine the perspectives of mental health professionals on self-diagnosis and the romanticization of mental illnesses.

2.2 Research Locale

The researchers conducted the study in two selected cities, General Santos City and Davao City. The two locales were chosen because they are where the participants are staying or working. Also, their psychological clinics or guidance centers are situated there. The medium of conducting interviews was a combination of onsite and online for the convenience of the participants.

2.3 Research Participants

The researchers used the purposive sampling technique to determine the participants. Purposive sampling selects a sample from a population based on common characteristics and whether each participant fits the criteria set by the researchers (Nikolopoulou, 2022). In this study, the researchers invited ten (10) mental health professionals to the participants. The researchers established a set of criteria for the participants through an informal pre-survey which was conducted among different schools, universities, psychological clinics, and hospitals that had employed mental health professionals. The participants included five (5) practicing psychologists with three (3) or more years of work experience as counselors or therapists, and five (5) practicing registered guidance counselors with three (3) or more years of work experience as counselors or therapists.

2.4 Research Instrument

The researchers gathered the necessary data using a semi-structured interview guide questionnaire containing open-ended questions. A semi-structured interview is a data collection method that follows a predetermined set of questions on a thematic framework (Berler & Magaldi, 2020; Ignacio, 2023). The questionnaire was verified and thoroughly checked by the validators for relevancy and to ensure that the content of the questions could answer the problem statement.

2.5 Data Gathering Procedure

This qualitative study followed a data-gathering procedure suggested by Ignacio (2023). The process included visiting the research locale, formulating an interview guide validated by research experts, and conducting one-on-one interviews with ten mental health professionals. The participants' responses were analyzed using Virginia Braun and Victoria Clarke's thematic analysis.

2.6 Ethical Considerations

To guarantee the participants' privacy, the researchers made sure to protect the respondent's data with utmost confidentiality. The researchers did not collect any personal data from the participants that were not necessary for the study. Only personal information that was needed for the study was collected by the researchers.

3.0 Results and Discussion

3.1 Perspectives of Mental Health Professionals on Self-Diagnosis

There are nine themes that emerged from the experiences of Mental Health Professionals on self-diagnosis, namely: difficulty accessing mental health services, client's lack of knowledge, unreliable sources of diagnosis, irresponsible information dissemination, social media triggers, internalizing diagnoses, ineffective self-help methods, harmful impacts of self-diagnosis, and preventive measures.

Theme 1: Difficulty Accessing Mental Health Services

The first theme describes the experiences of mental health professionals on self-diagnosis in difficulty assessing mental health services. Barriers and treatment gaps in mental health care exist, which is why self-diagnosis also exists. People, particularly those in poverty and with limited awareness of mental health issues, often struggle to access high-quality mental health services. These individuals in need of mental health care are often the ones who face the most significant challenges in gaining access to the necessary services (Tuliao, 2013). It can also be noted that there is a stark difference between the availability, affordability, and accessibility of mental health services between the Philippines, and other countries such as the UK (Department of Health & Lea, 2014; Lally et al., 2019). In summary, those in poverty and with limited awareness of mental health issues find it particularly difficult to access high-quality mental health services, creating substantial challenges for individuals in need of care.

Theme 2: Client's Lack of Knowledge

For the second theme, participants highlighted how many people lack a fundamental understanding of mental health, ranging from the roles of different mental health professionals to the significance of psychological terms. According to Antonio and Rivera (2017), there is a lack of mental health awareness from the public, specifically in the Philippines. This lack of knowledge is observed in people's inability to exercise sensitivity and regard to the references for people with mental illnesses and other psychological terms. In contrast, one study showed that its respondents refused to disclose their mental health concerns due to societal and self-stigma (Flett et al., 2013). Although the lack of awareness may be unintentional as shown from the participants' perspectives, or intentional based on the mentioned study, there is still a clear and existing ignorance and lack of objective analysis from today's generation which can contribute to misguided self-diagnosis.

Theme 3: Unreliable Sources of Diagnosis

The third theme delves into the experiences of mental health professionals regarding self-diagnosis, highlighting the issue of unreliable sources for diagnosing mental health conditions. According to the participants, as they observed today, people are into self-diagnosing themselves with no credible basis of diagnosis and basing diagnosis on the internet. As per Sharma (2019), the inclination of this generation to rely on internet-guided self-diagnosis underscores the importance of exercising caution when utilizing platforms like Google or other online resources for self-diagnosis. On the other hand, even though there may be several reliable sources of mental health information provided by official government websites, it still takes responsible checking and research to ensure the accuracy of the information that they provide (The Jed Foundation, 2023). Unfortunately, most people who self-diagnose are not one to cross-check the sources that they are using for their diagnoses. Such practices can lead to harm and strain the doctor-patient relationship.

Theme 4: Irresponsible Information Dissemination

The fourth theme showcases how irresponsible mental health advocates, inaccurate programs, and social media influencers who are spreading misinformation due to lack of proper regulations can erode trust in mental health professionals and drive people toward self-diagnosis. Studies show that many self-proclaimed professionals, experts, and influencers in TikTok, Facebook, and other internet fora are often painted as trustworthy by people who seek mental health assistance online despite a lack of credibility (Brady et al., 2016; Farrell, 2018; Farnood, 2019). Indeed, there may be credible organizations or government agencies that can provide accurate mental health information which proves that there are responsible mental health advocates (The Jed Foundation, 2023), these can easily be wielded in an irresponsible manner by others who lack accountability. Unfortunately, many people pioneering the dissemination of information online are often not evidence-based; hence, this results in discrepancies in mental health information and reduces the opportunities for potential clients to relate to authorized and credible professionals.

Theme 5: Social Media Influence

The fifth theme sheds light on how the constant exposure to self-harm and mental health issues on social media platforms can trigger individuals to engage in self-diagnosis. Studies show that there is a significant amount of social media content that unintentionally or intentionally glamorizes mental illnesses (Clark, 2023; Jadayel et al., 2017; Schipper, 2022). According to Shrestha (2018), many Tumblr users are also actively posting disturbing depictions of depression and self-harm-related content aesthetically as if they are being promoted. On a positive note, Farnood (2017) stated that due to the accessibility of the internet, most healthcare and mental health professionals have adapted to utilize this medium, especially through social media. However, social media is often misused. Hence, the alarmingly high number of posts that contain the type of content on social media, as mentioned by Shrestha (2018), makes it more likely that people who encounter them will be triggered to self-diagnose.

Theme 6: Internalizing Diagnoses

This theme describes how some individuals who self-diagnose may exaggerate or mimic symptoms, insisting on their diagnoses even if they lack validity. In one study conducted on high school students, its results showed that the students who have mental illnesses have high levels of self-stigma (Flett et al., 2013). Self-stigma can be compared to the individuals described in this theme, wherein both are rooted in an ingrained set of negative beliefs about oneself. Another study conducted by Hughes (2019) determined several attitudes that young adults

have toward mental illnesses. One of the prevalent attitudes found was that the respondents were lying about their mental illnesses - a mirror to those who also exaggerate and mimic symptoms. It can be concluded that these acts of internalizing diagnoses are attempts to make sense of the negative emotions that these people are experiencing.

Theme 7: Ineffective Self-Help Methods

The seventh theme depicts one aftermath of self-diagnosis, which is how individuals often turn to unreliable self-help methods and materials that may be ineffective. Zoppi (2020) points out that due to the stigma of self-diagnosis, unreliable self-help resources on social media, including mental health groups, often label individuals with mental health issues as "crazy." This discourages people from seeking professional help, which is why they are relying on Google or any other sources that can help them. In contrast, there are some mental health professionals who prefer to have patients access the internet for information since this can equip them with the information needed to make wise decisions or other safe self-help methods that are easily available (Hamzehgardeshi et al., 2014). However, the bottom line is that these self-help alternatives underscore the challenges posed by the stigma around mental health and the questionable role of self-help resources in the absence of professional guidance.

Theme 8: Harmful Impacts of Self-Diagnosis

Concernedly, the eighth theme magnifies how self-diagnosis can lead to serious negative consequences, including vulnerability, self-harm, medication dependence, and worsened mental health. Mishra (2020) voiced concerns with the rising number of cases of self-harm posts online, all for the sake of painting a tragically beautiful picture of mental illness. In contrast, several studies have also stated that online platforms are beneficial for spreading positive mental health awareness as these can serve as a safe space, provide a sense of community, or safe interventions for those who are suffering from mental illnesses (Aschbrenner et al., 2016; Aschbrenner et al., 2020; Belousov et al., 2017). Nevertheless, the benefits outweigh the harmful impacts that online self-diagnosis brings. Trends like self-diagnosis damage the perception of people towards mental illnesses as they transition from a state of being stigmatized to becoming sensationalized. This can result in a more susceptible emotional and mental state, especially for the younger generation of the present day (Yang, 2022).

Theme 9: Preventive Measures

The ninth theme enumerates different methods to help prevent self-diagnosis of mental health issues, especially in the Philippines. In today's global society, the emphasis on prevention and promoting mental health awareness is crucial, not just in the Philippines but worldwide. The participants of this study and Brady et al (2016) share a common idea which states that online modalities could be used to prevent the trend of self-diagnosis. These methods, however, can also be easily utilized inaccurately as seen in the example of online symptom checkers or tests for mental illnesses (Gass, 2016). All the same, with the pervasive accessibility of social media, this focus is increasingly relevant. The approach to mental health has evolved to prioritize prevention, with the goal of early intervention in mental health issues (Gupta et al., 2022). The adage "prevention is better than cure" underscores the significance of proactive measures in addressing mental health concerns.

3.2 Perspectives of Mental Health Professionals on Romanticization of Mental Illnesses

The second topic that will be discussed is the experiences of mental health professionals on the romanticization of mental illnesses. There are six themes under this topic: misinformation as a factor, reasons for trend engagement, characteristics of trend followers, professionals' positive insights, professionals' negative insights, and suggested mitigation strategies.

Theme 1: Misinformation as a Factor

The first theme describes the experiences of mental health professionals on the romanticization of mental illnesses as misinformation as a factor. According to the participants, most people lack awareness about the terminologies, are misinformed about mental health groups, and are misconstruing mental health. Recent research highlights the pressing need to address and reduce young people's stigmatizing and romanticizing issues towards mental illness, and misinformation has a significant impact on how people perceive mental health, especially those who are ignorant about mental health concerns. This emphasizes the importance of

considering individual and online community factors when addressing this concern (Tate, 2020). Additionally, because of the growing world of social media platforms, there are a lot of negative mental health issues and concerns because of social media, and it is also the vehicle of misinformation (Dizikes, 2020). In contrast, one study says it challenges the common notion of social networks such as social media and the internet saturated with misinformation by providing a more nuanced perspective to individuals (Cai et al., 2021). It goes beyond emphasizing negative consequences, conducting a comprehensive analysis that contributes valuable insights to enrich people's understanding and guide the world of misinformation for better network order. In summary, it highlights the impact on mental health perceptions, urging action to combat stigmatization. Different views emphasize the importance of addressing misinformation's impact on mental health perceptions comprehensively.

Theme 2: Reasons for Trend Engagement

The second theme that describes the experiences of mental health professionals on the romanticization of mental illnesses is the reason for trend engagement. According to the participants, most individuals are engaged in bandwagon effect, peer influence, and contagious relatability about mental health issues. Constantinides and Herrando (2021) assert that emotional contagion or the idea that those around them can impact an individual's emotions may cause many mental health conditions to continue to spread among peers. The observation made by Inquirer (2023) aligns social media's portrayal of mental illness as a "beautiful tragedy" with the emotional contagion concept. This connection emphasizes the potential impact of emotional expressions and narratives on shaping online discourse. This contrast underscores the interplay between conscious engagement motivations and the unintentional emotional influence that unfolds within social media trends. The experiences of mental health professionals on their clients regarding the romanticization of mental illnesses are thought-provoking and highlight a critical issue today the concept of "emotional contagion," as stated above, resonates with the concerns raised by the participants.

Theme 3: Characteristics of Trend Followers

The third theme describes the experiences of mental health professionals on the romanticization of mental illnesses and the characteristics of trend followers. According to the participants, most people's characteristics are self-mutilation, group suicide promotion for social media fame, attention-seeking, validation-seeking, self-fulfillment, and a sense of euphoria are examples of complex human characteristics related to the trend. During the pandemic, as per Ruhl (2023), most people who are engaged in this trend have a characteristic of self-serving bias, which means that people are claiming and seeking validation, and the nature of communication underwent significant changes and limitations due to the lockdowns necessitated by the ongoing outbreaks. As a result, there has been a notable shift in the help-seeking behavior of individuals for mental health services. In contrast to self-serving bias, this cognitive bias shields self-esteem by attributing positive events to personal traits and blaming external factors for failures. While it boosts confidence, seeking professional help is crucial before attributing experiences to mental illnesses (MSEd, 2023). It is crucial to note that although this bias boosts confidence and self-esteem, seeking professional help is essential before attributing various experiences to different mental illnesses. These findings raise crucial questions about motivations for behaviors, particularly those related to social media, and how physical, social, and emotional isolation have affected individuals' approach to seeking attention and mental health services.

Theme 4: Professionals' Positive Insights

The fourth theme describes the experiences of mental health professionals on the romanticization of mental illnesses and the professionals' positive insights. According to the participants, they discussed the need to raise awareness and grounds for discussion to reduce the tendency to romanticize mental health issues. Mental health awareness is crucial for everyone. Islam and Rakib (2020) stated that mental health awareness is essential to implement and discuss in every university and that it is important to seek help from mental health providers such as guidance counselors, psychologists, and psychiatrists to lessen the impact of romanticizing mental illnesses for them to get help. In contrast to the positive impact of mental health awareness, a significant challenge arises as people often prioritize raising awareness without translating it into meaningful action (Carrier, 2023). While awareness initiatives highlight mental health issues, the statement underscores the necessity of moving beyond awareness to concrete plans and actionable steps for a more effective impact. In

summary, it highlights the urgency of promoting mental health awareness and seeking professional help, both of which are vital in addressing the challenges posed by the romanticization of mental illnesses.

Theme 5: Professionals' Negative Insights

The fifth theme describes the experiences of mental health professionals on the romanticization of mental illnesses and the negative insights from the professionals. According to the participants, they discussed that romanticizing is unhealthy. Because of modern culture, people are into romanticizing mental illnesses, and their effects can cause harm to people, especially to those who are genuinely suffering and struggling with mental illnesses (Becker, 2017). Additionally, romanticizing can be harmful because it cannot add beauty to our personality (Mishra, 2020). In contrast to the idea that romanticizing mental illnesses is unhealthy, there are instances like the Netflix series "Thirteen Reasons Why" that faced criticism for glamorizing suicide and sexual assault. Similarly, some TikTok creators portray the HBO Max show "Euphoria" aesthetically (Writer & Writer, 2021b). This contrasts with the perspective that romanticizing such serious topics may harm individuals and society. In summary, it emphasizes the significance of realizing the harmful effects of romanticization and stresses how dangerous these tendencies can be to people who are experiencing mental health problems.

Theme 6: Suggested Mitigation Strategies

The final theme delves into the perspectives of mental health professionals regarding the romanticization of mental illnesses. It highlights the mitigation strategies suggested by them in response to the rising trend of romanticizing mental diseases. The strategies discussed by the participants are to avoid romanticizing and to psychoeducate the public. According to Arora et al. (2020), psychoeducation has gained significance today as a means to educate the public about mental health. According to Burnett (2018), it does not guarantee a significant impact on the actual problems and concerns surrounding mental health. Many individuals are aware of the pros and cons of the issues of mental health, but they are not aware of the actions that they are showing concerning mental health. Raising awareness and psychoeducating the public is good, yet they often take little or no action to address these concerns. In summary, it emphasizes the need to avoid romanticizing and promoting psychoeducation regarding the concern about mental health, and this underscores the importance of translating awareness into tangible actions, as individuals often fall short of taking meaningful steps despite being informed about mental health issues.

4.0 Conclusion

This study has determined several critical themes and insights related to the phenomenon of self-diagnosis of mental health issues in the Philippines. The key findings include possible factors that lead to self-diagnosis, such as difficulty accessing mental health services, the client's lack of knowledge, unreliable sources of diagnosis, irresponsible information dissemination, and social media triggers. A few effects have also been identified, such as people internalizing diagnoses, ineffective self-help methods, and the physically, emotionally, and mentally harmful impacts of self-diagnosis. Furthermore, participants suggested implementing strict regulations for mental health events and professionals, careful information dissemination, school-based mental health programs, improving online educational modalities, and providing accurate mental health information in social media as a few preventive measures for the trend of self-diagnosis. These strategies and methods can be used to improve the quality of mental health information which can help develop a more well-informed community on the seriousness of mental health issues, so that people will become more involved in mental health programs.

Additionally, this study has also revealed intricate dynamics surrounding the trend of romanticizing mental illnesses. The key findings include having misinformation as a factor for causing the romanticization of mental illness and the reasons for trend engagement that are generally fueled by emotional contagion. Characteristics of trend followers were also identified, with the need for validation and attention-seeking behaviors being the ones frequently mentioned. As for professional insights, the participants have expressed both positive and negative sides. On a positive note, a few participants believe that this trend creates an opportunity for more discussion. However, most of them see romanticizing mental illnesses as delusional and unhealthy. To help combat the trend, the participants suggested mitigation strategies such as psycho educating, revising policies, and producing more counselors.

These findings provide valuable insights into the factors contributing to the trends of self-diagnosis and romanticization of mental illnesses in the Philippines and the potential harms associated with these trends. In

addition, Heider's (1960) Self-Serving Bias Theory was present in the trends of self-diagnosis and romanticization of mental illnesses as it was the primary effect of the rising trend of social media that most individuals are claiming different symptoms, behaviors, and mental health conditions. In addition, self-serving bias theory is subjected to ambiguous situations, people tend to use external factors to justify their flaws.

5.0 Contributions of Authors

The authors confirm the equal contribution in each part of this work. All authors reviewed and approved the final version of this work.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

All authors declare that they have no conflicts of interest.

8.0 Acknowledgment

The author would like to give an appreciation to the significant people and colleagues for their helpful guidance in the development of this research.

9.0 References

- Allison, S., Bastiampillai, T., Looi, J., & Maguire, P. (2020). Clinical update on managing media exposure and misinformation during COVID-19: recommendations for governments and healthcare professionals. *Australasian Psychiatry*, 29(1), 22-25. <https://doi.org/10.1177/1039856220963947>
- Antonio, C. A. T., & Rivera, A. L. (2017). Mental Health Stigma Among Filipinos: Time For A Paradigm Shift. *Journal of Health Research*, 21(2), 20-24. <https://pjhhd.upm.edu.ph/index.php/main/article/view/172>
- Arora, M., Sarkhel, S., & Singh, O. P. (2020). Clinical Practice Guidelines for Psychoeducation in Psychiatric Disorders General Principles of Psychoeducation. *Indian Journal of Psychiatry*, 62(8), 319. https://doi.org/10.4103/psychiatry.indianjpsychiatry_780_19
- Aschbrenner, K. A., Bartels, S. J., Marsch, L. A., & Naslund, J. A. (2016). The future of mental health care: peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, 25(2), 113-122. <https://doi.org/10.1017/s2045796015001067>
- Aschbrenner, K. A., Bondre, A., Naslund, J., & Torous, J. (2020). Social media and mental Health: benefits, risks, and opportunities for research and practice. *Journal of Technology in Behavioral Science*, 5(3), 245-257. <https://doi.org/10.1007/s41347-020-00134-x>
- Asian Journal News. (2021). Report: Filipinos remain the most active internet, social media users globally. Asian Journal Press. <https://www.asianjournal.com/philippines/across-the-islands/report-filipinos-remain-the-most-active-internet-social-media-users-globally/>
- Becker, A. (2017). Youth and Popular Culture: It's All About Influence and Interaction. youthESource. <https://www.youthesource.com/2015/08/20/youth-and-popular-culture-its-all-about-influence-and-interaction/>
- Belousov, M., Berry, N., Bucci, S., Emsley, R., Lobban, F., & Nenadic, G. (2017). #WhyWeTweetMH: Understanding why people use Twitter to discuss mental health problems. *Journal of Medical Internet Research*, 19(4), e107. <https://doi.org/10.2196/jmir.6173>
- Berler, M., & Magaldi, D. (2020). Semi-structured Interviews. In Springer eBooks (pp. 4825-4830). Springer Nature. https://doi.org/10.1007/978-3-319-24612-3_857
- Brady, E., Sanders, C., & Segar, J. (2016). "You get to know the people and whether they're talking sense or not": Negotiating trust on health-related forums. *Social Science & Medicine*, 162, 151-157. <https://doi.org/10.1016/j.socscimed.2016.06.029>
- Brannan, G., Brannan, J., & Tenny, S. (2022). Qualitative Study. StatPearls - NCBI Bookshelf. <https://www.ncbi.nlm.nih.gov/books/NBK470395/>

- Burnett, D. (2018). Mental health: awareness is great, but action is essential. *The Guardian*.
<https://www.theguardian.com/science/brain-flapping/2018/may/15/mental-health-awareness-is-great-but-action-is-essential>
- Cai, M., Cui, Y., & Luo, H., (2021). Spread of misinformation in social networks: Analysis based on Weibo tweets. *Security and Communication Networks*, 2021, 1–23. <https://doi.org/10.1155/2021/7999760>
- Carrier, S. (2023). The Problem with Mental Health Awareness. *Painted Brain*. <https://rb.gy/r8cuy8>
- Clark, A. (2023). Social Media and Mental Illness Identity Formation: The Role of Community Culture and Misinformation. ProQuest. <https://rb.gy/69awuq>
- Constantinides, E., & Herrando, C. (2021). Emotional Contagion: A Brief Overview and Future Directions. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.712606>
- Cuason, S. (2022). The dangers of romanticizing mental illnesses. *Lifestyle Inquirer*.
<https://lifestyle.inquirer.net/409480/the-dangers-of-romanticizing-mental-illness/>
- Department of Health, & Lea, W. (2014). Achieving Better Access to Mental Health Services by 2020. *NHS England*, 3.
- Dizikes, P. (2020). Why social media has changed the world – and how to fix it. MIT News | Massachusetts Institute of Technology. <https://news.mit.edu/2020/hype-machine-book-aral-0924>
- Dunn, E. R. (2017). Blue is the new black: How popular culture is romanticizing mental illness. <https://digital.library.txstate.edu/handle/10877/6985>
- Farnood, A. (2019). The effects of online self-diagnosis and health information seeking on the patient-healthcare professional relationship - Enlighten Theses. <https://theses.gla.ac.uk/82637/>
- Farrell, A. (2018). Accuracy of online discussion forums on common childhood ailments. *Journal of the Medical Library Association*, 106(4). <https://doi.org/10.5195/jmla.2018.355>
- Flett, G. L., Goldberg, J. E., Hartman, L. I., Michel, N. M., Winter, A., & Young, R. R. (2013). Self-Stigma of Mental Illness in High School Youth. *Canadian Journal of School Psychology*, 28(1), 28–42.
<https://doi.org/10.1177/0829573512468846>
- Ganancial, R. (2020). Mental health self-diagnosis dangerous. *Palawan News*. <https://palawan-news.com/mental-health-self-diagnosis-dangerous/>
- Gass, M. A. (2016). Risks and Benefits of Self-Diagnosis Using the Internet.
<https://hdl.handle.net/20.500.13013/897>
- George, T. (2022). Semi-Structured Interview | Definition, Guide & Examples. Scribbr.
<https://www.scribbr.co.uk/research-methods/semi-structured-interviews/>
- Gupta, S., Kumar, A., & Singh, V. (2022). Mental Health Prevention and Promotion – A Narrative Review. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsyg.2022.898009>
- Hamzehgardeshi, L., Hamzehgardeshi, Z., Hessam, S., & Vahdat, S. (2014). Patient Involvement in Health Care Decision Making: A Review. *Iranian Red Crescent Medical Journal*, 16(1).
<https://doi.org/10.5812/ircmj.12454>
- Hughes, R. (2019). Time to change? A qualitative thematic analysis exploring younger people’s attitudes and awareness of mental illness. <https://e-space.mmu.ac.uk/623940/>
- Ignacio, D. (2023). Exploring the Psychosocial Experiences and Mental Health Support of First-Generation Working College Students. *World Education Connect Multidisciplinary E-publication*, III(XII), 30.
<https://doi.org/10.5281/zenodo.10499798>
- Ignacio, D. F. (2023). Virtual Care: Counseling Experiences of Guidance Counselors and Clients in the New Normal. *International Journal of Applied Guidance and Counseling*, 4(1).
- Inquirer, P. D. (2023). How social media glorifies and romanticizes mental illness | Inquirer Opinion. INQUIRER.net. <https://opinion.inquirer.net/160554/how-social-media-glorifies-and-romanticizes-mental-illness>
- Islam, M., & Rakib, M. M. I. (2020). Awareness of Students about Mental Health: A study on the students of Universities. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3777216>
- Jadayel, J. J., Jadayel, R., & Medlej, K. (2015). Mental disorders: A glamorous attraction on social media? *Journal of Teaching and Education*. <https://rb.gy/2fjihy>
- Jutel, A., & Lupton, D. (2015). ‘It’s like having a physician in your pocket!’ A critical analysis of self-diagnosis smartphone apps. *Social Science & Medicine*, 133, 128–135.
<https://doi.org/10.1016/j.socscimed.2015.04.004>

- Lally, J., Samaniego, R. M., & Tully, J. (2019). Mental health services in the Philippines. *BJPsych International*, 16(03), 62–64. <https://doi.org/10.1192/bji.2018.34>
- Lee, S. L., & Vidamaly, S. (2021). Young Adults' Mental Illness Aesthetics on Social Media. *International Journal of Cyber Behavior, Psychology, and Learning*, 11(2), 13–32. <https://doi.org/10.4018/ijcbpl.2021040102>
- Mishra, A. (2020). Why There Is Romanticizing of Mental Disorders? <https://psychologs.com/article/why-there-is-romanticizing-of-mental-disorders>
- MSEd, K. C. (2023, July 7). Self-Serving Bias: What it is, examples, negative and positive effects. *Verywell Mind*. <https://t.ly/5LjP5>
- Nabors, N. A., Seacat, J. D., & Sickel, A. (2014). Mental health stigma update: A review of consequences. *Advances in Mental Health*, 12(3), 202–215. <https://doi.org/10.1080/18374905.2014.11081898>
- Neubauer, B., Varpio, L., & Witkop, C. (2019). How phenomenology can help us learn from the experiences of others. *Perspectives on Medical Education*, 8(2), 90–97. <https://doi.org/10.1007/s40037-019-0509-2>
- Nikolopoulou, K. (2022). What Is Purposive Sampling? | Definition & Examples. *Scribbr*. <https://www.scribbr.co.uk/research-methods/purposive-sampling-method/>
- Oumeddour Chiraz, D. G. (2021). Romanticizing Mental Illness in Jennifer Niven's *All the Bright Places*. <http://dspace.univ-guelma.dz/jspui/handle/123456789/12740>
- Ruhl, C. (2023). Self-Serving Bias in Psychology Definition and Examples. *Simply Psychology*. <https://simplypsychology.org/self-serving-bias.html>
- Salerno, J. P. (2016). Effectiveness of universal school-based mental health awareness programs among youth in the United States: A systematic review. *Journal of School Health*, 86(12), 922–931. <https://doi.org/10.1111/josh.12461>
- Schipper, H. (2022). Beautiful suffering? An analysis on young people's narratives of their experiences with mental illness on TikTok. <https://repositori.upf.edu/handle/10230/54871>
- Sharma, N. (2019). Impact Of Internet Guided Self Diagnosis On Doctor Patient Relationship- A Qualitative Study. <https://jamsa.amsa-international.org/index.php/main/article/view/164>
- Shrestha, A. (2018). Echo: The romanticization of mental illness on Tumblr. <https://rb.gy/z1gxvy>
- Tate, A. (2022). The Problem with the Media Glamorizing Mental Illness. *The Prospector*. <https://binghamprospector.org/arts-and-entertainment/2022/05/24/the-problem-with-the-media-glamorizing-mental-illness/>
- Thatcher, T. (2022). Dangers of Self Diagnoses | Guidance | Highland Springs. Highland Springs. <https://tinyurl.com/bdhbd9tj>
- The Jed Foundation. (2023). Tips for finding reliable mental health Websites I JED. <https://jedfoundation.org/resource/tips-for-finding-reliable-mental-health-websites/>
- Tuliao, A. P. (n.d.). Culture and Mental Health in the Philippines. *Archium Ateneo*. <https://archium.ateneo.edu/psychology-faculty-pubs/371/>
- Understanding Confidentiality and Anonymity. (n.d.). The Evergreen State College. <https://www.evergreen.edu/humansubjectsreview/confidentiality>
- World Health Organization. (2013). Investing in Mental health: Evidence for action. *WHO Library Cataloguing-in-Publication Data*, 9–13. https://apps.who.int/iris/bitstream/handle/10665/87232/9789241564618_eng.pdf
- Writer, B. M. R. A., & Writer, B. M. R. A. (2021b). Mental Illness in Media is Not a Trend - The Daily Utah Chronicle. *The Daily Utah Chronicle - The University of Utah's Independent Student Voice*. <https://dailyutahchronicle.com/2021/09/28/mental-illness-media-trend/>
- Yang, Q. (2022). Suicide from Media Portrayals and Reality: Analysis of Netflix's Serial 13 Reasons Why. *Advances in Social Science, Education and Humanities Research*. <https://doi.org/10.2991/assehr.k.220504.063>
- Zhang, A. (2019). The illness of sickly beautification: romanticizing mental health. *El Estoque*. <https://elestoque.org/2019/04/27/opinion/the-illness-of-sickly-beautification-romanticizing-mental-health/#photo>
- Zoppi, L. (2020). What is mental health stigma? <https://www.medicalnewstoday.com/articles/mental-health-stigma>

Public Elementary Teachers' Motivation and Pedagogical Competence In Teaching Non-Readers: A Correlational Study

Wilson G. Ortega, Jr., Gideon S. Sumayo*

University of Southern Mindanao – PALMA Cluster Campuses, Libungan, Cotabato, Philippines

*Corresponding author email: gideonsumayo@usm.edu.ph

Dated received: March 2, 2024

Date revised: March 11, 2024

Date accepted: March 14, 2024

Originality: 90%

Grammarly Score: 99%

Similarity: 10%

Recommended citation:

Ortega, W., & Sumayo, G. (2024). Public elementary teachers' motivation and pedagogical competence in teaching non-readers: A correlational study. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 60-67. <https://doi.org/10.5281/zenodo.10813985>

Abstract. This quantitative study employs a descriptive-correlation research design to determine the motivation and pedagogical competence level of public elementary teachers teaching non-readers in a school district in Alamada, Cotabato, Philippines. It further examined the influence of their motivation on their pedagogical competence. Thirty-five teachers from Grades 1-3 participated in the study. More so, the study utilized content-validated and pilot-tested survey questionnaires to extract the data from the respondents. Descriptive statistics, such as frequency count, mean, and percentage, were utilized, and multiple linear regression was employed for the correlation test. Based on the result, the teachers' overall level of motivation to teach non-readers was very high. More so, the responses indicated a high level of identified regulation, reflecting strong intrinsic motivation. Both introjected regulation and extrinsic motivation were also reported as high, while amotivation was notably low. Moreover, the data revealed that the teachers in Grades 1-3 from one school district in said town were considered very competent. However, this present study found that there is no significant influence between teachers' motivation and their pedagogical competence in teaching non-readers. The current study recommends that school administrators consider possible actions directed towards sustaining and enhancing high motivation because it can still impact teaching effectiveness and student outcomes while teaching non-readers.

Keywords: Motivation; Pedagogical competence; Philippines; Public elementary teachers; Quantitative.

1.0 Introduction

In the ever-evolving landscape of education, the quest for effective strategies to teach non-readers has been a perennial challenge for educators and researchers alike. Syahrizal (2019) reveals that non-readers are individuals who have not yet acquired the fundamental reading skills, are a diverse group encompassing young children learning to read for the first time, English language learners, and individuals with learning disabilities.

Effective instruction of non-readers necessitates a high level of pedagogical competence, including knowledge of instructional strategies, curriculum content, and assessment procedures. In a study conducted by Lachance and Traore (2021), teachers who demonstrated a high level of pedagogical competence in teaching reading were more effective at fostering students' reading growth. Moreover, according to Papastergiou (2015), instructors who have a comprehensive grasp of the subject matter they teach are more likely to provide effective instruction and improve student learning.

Pedagogical competence refers to the knowledge, skills, and abilities required for planning and delivering effective instruction. It is a crucial aspect of teaching effectiveness and has been found to be positively associated with student learning outcomes (Hattie, 2015). Research showed that teachers who possess strong pedagogical

competencies are more likely to create engaging and effective learning environments for their students (Chong & Low, 2019).

On the other hand, teachers' motivation is crucial to the successful instruction of non-readers. In addition, Wang and Eccles (2017) discovered that teacher motivation is associated with student academic achievement, as motivated teachers are more likely to foster a positive learning environment and engage students in learning activities.

There is limited research on the local context of the relationship between pedagogical competence and motivation among non-readers' teachers, specifically in the municipality of Alamada. Therefore, this research paper aims to examine how motivation affects the pedagogical competence of public elementary teachers who teach in one school district in Alamada. This study can be added to the existing knowledge on the importance of motivation in improving the pedagogical competence of non-reader teachers. Moreover, the study's findings can be useful to policymakers, school administrators, teachers, and other stakeholders in implementing effective motivation programs to uplift the pedagogical competence of teachers. In addition, it would be submitted to a reputable, peer-reviewed journal for publication to reach a wider audience and add to the existing body of knowledge in motivation and pedagogical competence in curriculum development.

This present study aimed to determine the significant influence of public elementary non-reader teachers' motivation and pedagogical competence in a school district in Alamada. In addition, it determined the level of motivation of the respondents, the pedagogical competence of the respondents, and the significant influence of motivation on the pedagogical competence of the respondents.

2.0 Methodology

2.1 Research Design

This study employed a quantitative method, specifically a descriptive-correlation research design. A descriptive correlational research design is a method that investigates the relationship between two or more variables without manipulating them (Rothenberg, 2016). In this study, a descriptive research design was used to determine the respondents' level of motivation. Additionally, the correlational research design evaluated the significant relationship between motivation and pedagogical competence of public elementary teachers in teaching non-readers.

2.2 Research Respondents

The respondents of the study were the Grades 1 to 3 teachers teaching in one school district in Alamada. The thirty-five respondents were chosen carefully. A set of inclusion criteria was followed to identify the respondents. The respondents included if they are teaching non-readers. More so, this study utilized a complete enumeration method as a sampling procedure. Due to the limited number of teachers in the chosen district, it is more appropriate to utilize this type of sampling method to get a good generalizability for the study.

2.3 Research Instrument

The study utilized an adopted survey questionnaire for motivation from Fernet et al. (2008) and for pedagogical competence from Vecaldo, Andres, Carag, and Caraguian (2017). The research questionnaires were divided into three major parts. Part 1 is the socio-demographic profile of the respondents. The second part was the level of motivation of teachers. Respondents were expected to indicate how they strongly agree or disagree with each statement, using a scale of one to five, where 5 indicates strongly agree, 4 indicates agree, 3 Neutral, 2 disagree, and 1 strongly disagree. The last part is the pedagogical competence of the respondents. Questions were taken from Vecaldo, Andres, Carag, and Caraguian (2017), containing the performance indicators of the NCBTS. The questionnaire was composed of statements that the PSTs answered on the four-point rating scale, which was coded using the following scale: where 4 indicates always, 3 indicates often, 2 indicates sometimes, and 1 indicates never. Experts in the field of education validated the questionnaires utilized in this study, making the items appropriate for the study respondents.

2.4 Statistical Analysis

In terms of the statistical analysis, the researchers used descriptive statistics such as frequency count, mean, and percentage to describe the level of motivation of the respondents as well as their pedagogical competence. The correlation statistics, particularly Multiple linear regression, were used to describe the influence of public elementary teachers' motivation to pedagogical competence in teaching non-readers.

2.5 Ethical Considerations

This research study followed ethical guidelines. Before commencing the study, the researcher obtained ethical approval from the University Research Ethical Committee. Subsequently, during the study, respondents were provided with an Informed Consent Form (ICF) to read and fill out. This form allowed them to choose to participate or decline involvement voluntarily. The respondents were assured that the data gathered would be treated with utmost confidentiality and would be used for research purposes only.

3.0 Results and Discussion

3.1 Levels of Motivation

Table 1. Level of motivation of respondents

Indicators	Mean	Descriptor
Intrinsic motivation		
I am very interested in teaching.	4.71	Strongly Agree
I think teaching is a pleasant activity	4.71	Strongly Agree
Teaching is fun.	4.66	Strongly Agree
I find teaching fun.	4.66	Strongly Agree
Mean	4.69	
Identified Regulation		
Teaching helps me learn new things.	4.83	Strongly Agree
I think it is very valuable for me as a person.	4.71	Strongly Agree
This is an important personal choice for me.	4.71	Strongly Agree
I believe that it is an important objective in my life.	4.54	Strongly Agree
Mean	4.7	
Introjected Regulation		
I want others to think that I am a good teacher.	4.17	Agree
I want to give others the impression that I am a good teacher	3.97	Agree
On the contrary, I would feel guilty.	3.37	Neutral
On the contrary, I would be disappointed with myself.	3.34	Neutral
Mean	3.71	
Extrinsic Regulation		
It is assumed that I should do this.	4.11	Agree
I am expected to do it.	3.74	Agree
Others (colleagues, headmaster/mistress, etc.) place pressure on me to do this.	3.40	Neutral
I feel forced to do so by others (colleagues, headmaster/mistress, etc.).	3.03	Neutral
Mean	3.57	
Amotivation		
I do not know; I feel that I am wasting time when I give the class.	1.66	Strongly Disagree
I do not do much because I do not think that trying to teach is worthwhile.	1.60	Strongly Disagree
I do not know why I am a teacher; it is useless work.	1.40	Strongly Disagree
Mean	1.55	

Intrinsic Motivation

Table 1 presents the mean, interpretation, and level of the respondents in teaching non-readers. The survey results indicate a remarkably very high level of intrinsic motivation among teachers, particularly those instructing non-readers. The consistently strong agreement with statements expressing interest, pleasure, and fun in teaching underscores a positive and enthusiastic outlook on their roles. The overall mean of 4.69 solidifies the idea that these teachers are not only dedicated but genuinely enjoy the process of teaching.

High intrinsic motivation suggests that these educators are likely to invest extra effort in lesson planning, student engagement, and overall teaching quality. The findings of the study align with Ryan and Deci's (2020) research, which suggests that when teachers have more control over decisions like curriculum creation and instructional strategies, their intrinsic motivation increases, which boosts their work satisfaction and performance. Similarly, a study by Ma (2021) discovered that giving teachers more control over decisions and including them in the decision-making process had a favorable impact on their intrinsic motivation and dedication to teaching. This positive attitude can contribute to a vibrant and conducive learning environment for non-readers, potentially enhancing the effectiveness of educational interventions. Understanding and nurturing this intrinsic motivation is crucial for sustaining teachers' enthusiasm, fostering a positive atmosphere, and ultimately benefiting the educational experience for non-reader students at the surveyed school.

Identified Regulation

Moreover, Table 1 shows a very high level of identified regulation, which clearly describes a strong agreement among teachers, especially those instructing non-readers, with a mean of 4.7. This implies that teaching provides an opportunity to see concepts from different angles, fostering a broader understanding. Incorporating teaching methodologies into learning strategies could be beneficial for individuals seeking to grasp new concepts effectively. Another factor is that the act of teaching can solidify and enhance one's understanding of a subject matter. This factor suggests that teaching others reinforces the teacher's knowledge. The results of the study are supported by Lauermaun (2017); teachers who take part in pertinent and focused professional development activities are more likely to identify with their job as instructors and recognize the significance of continued development.

Introjected Regulation

Table 1 shows that the level of introjected regulation of respondents, especially those who are teaching non-readers, was high, resulting in an overall mean of 3.71. The agreement with the statements about wanting others to think highly of your teaching underscores the importance placed on external validation. It is natural to seek recognition and validation for efforts, especially in a role as crucial as teaching.

The finding implies that recognizing the desire for positive perceptions can be a catalyst for continuous professional development. Embracing feedback, seeking mentorship, and refining teaching skills based on personal growth objectives rather than external validation can lead to more sustainable and fulfilling progress. As a matter of truth, according to a study by Laight (2020), instructors who feel that their work environment has strict standards and norms may develop introjected regulation as they try to live up to those expectations. Based on the investigation conducted by Yu, Zhang, and Nunes (2020), teachers who have a significant need for approval from others may demonstrate introjected regulation, engaging in activities out of personal interest or intrinsic motivation rather than avoiding criticism.

Extrinsic Motivation

Based on Table 1, the level of extrinsic motivation of teachers' teaching non-readers was high, with an overall mean of 3.57, which indicated agreement. Respondents generally agree that completing the task is assumed or expected, likely due to societal norms or job descriptions, while also feeling a personal responsibility to do so. They recognize some influence from colleagues or superiors but do not strongly perceive direct pressure or coercion, resulting in a neutral feeling of being forced to complete the task.

This finding implies that the teachers demonstrate a healthy sense of autonomy, enabling personal initiative and responsibility in decision-making. Monitoring external pressure is crucial, as it may impact motivation negatively over time. Strong internal motivation and understanding of task importance bode well for

maintaining commitment and ensuring quality work. Similarly, Richardson (2020) stated that motivation has several factors that influence teacher job satisfaction and engagement, including autonomy, recognition, support, and the opportunity for professional development.

Amotivation

Table 1 shows that the respondents strongly disagree with the idea that teaching is a waste of time. They also strongly disagree with the notion that efforts in teaching lack worth. Furthermore, there's a strong disagreement with the idea that being a teacher is useless work, demonstrating a clear understanding of the purpose and value inherent in the role of a teacher, with an overall mean of 1.55, which indicated strongly disagree. It clearly described that the public elementary teachers had very low amotivation when teaching non-readers.

The data strongly suggests a positive perspective on teaching, showcasing a deep sense of purpose and value in the role. This positive attitude reflects high levels of motivation and engagement, potentially enhancing teaching quality and student involvement. The result of this study was supported by Banerjee and Halder (2021), who considered instructors to be unmotivated when they feel restricted and unable to make choices regarding their profession. Furthermore, the results were supported by Deci and Ryan's theory on motivation (1985), which states that motivation is a force that drives individuals to engage in activities that align with their interests and goals.

3.2 Pedagogical Competence of the Respondents,

Table 2. Pedagogical competence of the respondents

Indicators	Mean	Descriptor
Social Regard for Learning		
While teaching, I act as a positive role model for my pupils.	3.97	Always
While teaching, I implement school policies and procedures.	3.94	Always
While teaching, I demonstrate punctuality.	3.94	Always
While teaching, I am careful about the effect of my behavior on pupils.	3.94	Always
While teaching, I maintain an appropriate appearance.	3.91	Always
While teaching, I am careful about the effect of my behavior on pupils.	3.94	Always
Learning Environment		
While teaching, I create an environment that promotes fairness.	4.00	Always
While teaching, I make the physical environment safe and conducive to learning.	4.00	Always
While teaching, I handle behavior problems quickly and with due respect to children’s rights.	3.91	Always
While teaching, I give timely feedback to reinforce appropriately to my learners’ behavior.	3.91	Always
While teaching, I use individual and cooperative learning activities to improve the capacities of my learners for higher learning.	3.86	Always
Diversity of Learners		
While teaching, I design or select learning experiences suited to different kinds of learners.	3.86	Always
While teaching, I recognize the multicultural background of my learners when providing learning opportunities.	3.86	Always
While teaching, I demonstrate concern for the holistic development of my learners.	3.83	Always
While teaching, I am familiar with my learners’ background knowledge and experiences.	3.77	Always
While teaching, I obtain information on the learning styles, multiple intelligences, and needs of my learners.	3.74	Always
Curriculum		
While teaching, I demonstrate mastery of the subject.	4.00	Always
While teaching, I link the current content with past and future lessons.	3.94	Always
While teaching, I align with the lesson objectives, the teaching methods, learning activities, and instructional materials or resources appropriate to my learners.	3.91	Always
While teaching, I create situations that encourage my learners to use high order thinking skills.	3.89	Always
While teaching, I engage and sustain my learners’ interest in the subject by making content meaningful and relevant to them.	3.86	Always
Planning, Assessing, & Reporting		
While teaching, I prepare formative and summative tests in line with the curriculum.	3.97	Always

While teaching, I interpret and use assessment results to improve my teaching and learning of my pupils.	3.91	Always
While teaching, I develop and use a variety of appropriate assessment strategies to monitor and evaluate learning.	3.89	Always
While teaching, I communicate promptly and clearly to the learners' parents and superiors about the progress of my learners.	3.83	Always
While teaching, I monitor regularly and provide feedback on learners' understanding of content.	3.77	Always
Community Linkages		
While teaching, I participate in community activities that promote learning.	3.91	Always
While teaching, I use community resources (human, and material) to support students' learning.	3.83	Always
While teaching, I involve the community in sharing accountability for the learners' achievement.	3.8	Always
While teaching, I encourage students to apply classroom learning to the community.	3.74	Always
While teaching, I use the community as a laboratory for learning.	3.63	Always
Personal Growth & Professional Development		
While teaching, I maintain stature and behavior that upholds the dignity of teaching.	3.94	Always
While teaching, I reflect on the quality of my teaching.	3.91	Always
While teaching, I improve teaching performance based on feedback from students, peers, superiors, and cooperating teachers.	3.91	Always
While teaching, I build professional links with colleagues to enrich teaching practice.	3.91	Always
While teaching, I use self-evaluation to recognize and enhance one's strengths and weaknesses.	3.86	Always
Mean	3.88	

Table 2 shows the mean and interpretation of the pedagogical competence of public elementary teachers in teaching non-readers. As shown from the table, the teachers are very competent pedagogically in all domains of National Competency-Based Teachers Standards. The respondents agree with the statement, "While teaching, I create an environment that promotes fairness," with the highest mean of 4 and is described as always. This finding implies that teachers ensure that all learners are given equal opportunities to participate, contribute, and succeed in the learning process and that they are treated equally and respected regardless of their backgrounds, abilities, and beliefs. Based on the premises of Lu and Ding (2020), when a classroom comprises students with varying backgrounds, abilities, learning styles, and cultural differences, educators need to employ a more flexible and inclusive teaching approach to address the needs of their students. Similarly, Pont (2022) stated that learners are diverse when it comes to grasping learning. If educators are skilled and competent, they should know that learning collaboratively could be effective in retaining information deep in learners' cognitive drive.

The result of this study was confirmed by the framework of the national competency-based teachers standards as effective teaching are being able to help all types of students, regardless of their backgrounds, to learn the different learning goals in the curriculum, provides a single framework that shall define effective teaching in all aspects of a teacher's professional life and all phases of teacher development.

3.3 Influence of Motivation on the Pedagogical Competence of the Respondents

Table 3. Influence of motivation on the pedagogical competence of public elementary teachers

Variable	R square	B	Std. Error	t	p-value	Interpretation
Motivation	0.221					
Constant		3.326	0.425	7.829	0.000	Significant
Intrinsic Motivation		0.089	0.135	0.663	0.512	Not significant
Identified Regulation		-0.057	0.134	-0.431	0.670	Not significant
Introjected Regulation		0.082	0.055	1.501	0.144	Not significant
External Regulation		0.059	0.050	1.184	0.246	Not significant
Amotivation		-0.069	0.042	-1.649	0.110	Not significant

Table 3 shows the influence of motivation on pedagogical competence. The result shows a constant of 3.326, which indicates that the estimated value of pedagogical competence is 3.326 if the value of motivation is zero. The slope implies that for every unit increase in the level of intrinsic motivation, there is also an increase of 0.089 in pedagogical competence. The result shows that in every unit increase in the level of identified regulation, there is a decrease of 0.057 in identified regulation, while in every unit increase in introduced regulation, there is

an increase of 0.082 in pedagogical competence, and in every unit increase in external regulation there is an increase of 0.059 in pedagogical competence. However, 0.221, or only 22.1 % of the variation of motivation predicts pedagogical competence, the remaining 77.9% are other factors that can predict pedagogical competence. The result reveals that the influence of motivation on pedagogical competence was found to be statistically not significant since the p-value is greater than 0.05, it indicates that respondents were found to be motivated, and it directly affects their pedagogical competence, but it does not apply to all because the result was not significant. Therefore, there is enough evidence to accept the hypothesis of this study. It implies that motivation might not directly enhance someone's teaching abilities or pedagogical competence. It suggests that being motivated does not necessarily equate to being skilled or effective in teaching. This could mean that while motivation is essential for success, it might not directly affect one's ability to teach or one's knowledge of pedagogy.

The result of this study contradicts the findings in the study of Noveri et al. (2018); the study found that there is a higher correlation between teachers' motivation and their pedagogical competence, suggesting that motivated teachers are more effective at teaching reading to non-readers. This finding is the same as Wulandari (2022), wherein the findings revealed that teachers' work motivation influences teachers' pedagogical competence. They stated that teachers increase work motivation by maximizing their pedagogic competencies, mainly as face-to-face learning prevails, as before the pandemic. Students' enthusiasm for learning also rises, resulting in a linear increase in student achievement. Moreover, Suhaimi, Akbar, and Sjamsir's (2019) findings reveal that pedagogical competence, attitude toward the profession, and motivation directly affect teachers' performance. They stated that teachers must improve pedagogical competence, have attitudes toward the profession, and be motivated to achieve good teaching performance.

4.0 Conclusion

Based on the result of this study, it can be concluded that when teachers demonstrate high motivation, the impact on education is multifaceted and profound. Their commitment leads to elevated teaching standards through innovative methodologies and meticulous lesson planning, enriching the quality of education they deliver. This motivation breeds an environment that encourages active student involvement and fosters deep engagement and participation in learning endeavors. Simultaneously, motivated educators prioritize personal growth, seeking feedback, and continuously refining their teaching methods, fostering a culture of ongoing progress and development. Their unwavering dedication creates a nurturing classroom atmosphere, cultivating a supportive and encouraging environment conducive to learning. It is empirical to say that the Self Determination Theory is prevalent among these teachers, and they have demonstrated it while teaching non-reader pupils.

Furthermore, it can also be concluded that their strength in instructional skills equips them to adeptly explain complex concepts, tailor teaching methods to diverse learning styles, and craft engaging learning experiences. This competence extends to fostering active student participation, ensuring a deeper understanding and enthusiasm for the subject matter. Moreover, these educators curate optimized learning environments by designing structured lessons, integrating varied resources, and customizing teaching strategies to meet individual student needs, fostering an ideal atmosphere for learning. Moreover, teachers with high pedagogical competence exhibit a commitment to continuous professional development, constantly honing their skills, staying updated with educational advancements, and contributing to their growth as educators. In essence, their expertise not only enhances instructional effectiveness and student engagement but also catalyzes improved learning outcomes and their ongoing development within the educational sphere. The NCBTS framework was also translated into their perceived pedagogical competence, which is a manifestation that this framework is prevalent and, therefore, proven to be present in them. Lastly, it can be concluded that motivation might not directly enhance someone's teaching abilities or pedagogical competence. It suggests that being motivated does not necessarily equate to being skilled or effective in teaching. It could mean that while motivation is essential for success, it might directly affect one's ability to teach or knowledge of pedagogy. Therefore, there is enough evidence to accept the hypothesis of this research.

Future researchers may explore incorporating other variables not included in this study. They may also have private schools to widen their scope and get fresh insights from these private teachers. It is also recommended

that the next researchers increase the number of their respondents to get good generalizability, as this aspect was seen to be a limitation of the current study. It would be better if the following researchers developed and validated contextualized questionnaires, making the instrument fit and appropriate for the type of respondents needed. Moreover, the researcher may also integrate other forms of research design, such as phenomenology or multiple case studies, to examine if data can validate the quantitative findings of the current study.

5.0 Contributions of Authors

The authors confirm the equal contribution in each part of this work. All authors reviewed and approved the final version of this work.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

All authors declare that they have no conflicts of interest.

8.0 Acknowledgment

We want to acknowledge and thank the respondents for their time and support during the study. Likewise, we thank the examining committee of the University of Southern Mindanao – PALMA Cluster Campuses for their intelligible comments and suggestions for making the paper worthwhile and well-furnished.

9.0 References

- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer. <https://doi.org/10.1007/978-1-4899-2271-7>
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology / Psychologie Canadienne*, 49(3), 182-185. <https://doi.org/10.1037/a0012801>
- Fernet, C., Senécal, C., Guay, F., Marsh, H., & Dowson, M. (2008). The work tasks motivation scale for teachers (WTMST). *Journal of Career Assessment*, 16(2), 256-279. <https://doi.org/10.1177/1069072707305764>
- Lachance, J., & Traore, M. (2021). Teacher pedagogical competence and student reading achievement: Evidence from PIRLS 2016. *International Journal of Educational Development*, 81, 102335.
- Laight, J. (2020). Teacher identity and the emotional work of teaching. *Exploring Narratives of Women Teacher Trade Union Activists*, 34-52. https://doi.org/10.1163/9789004437012_004
- Lauermann, F. (2017). Teacher motivation, responsibility, pedagogical knowledge and professionalism: A new era for research. *Pedagogical Knowledge and the Changing Nature of the Teaching Profession*, 171-191. <https://doi.org/10.1787/9789264270695-10-en>
- Papastergiou, M. (2015). Investigating the factor structure of the TPACK framework. *Computers & Education*, 56(2), 913-922.
- Rothenberg, S. E., Hussong, A. M., Lang, A. R., & Zamboanga, B. L. (2016). Exploring the relationship between social support, stress, and alcohol use among college students. *Journal of College Counseling*, 19(2), 167-179. <https://doi.org/10.1002/jocc.12023>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and Future Directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Suhaimi, S., Akbar, M., & Sjamsir, H. (2019). The effect of pedagogical competence, attitude towards profession and motivation on teacher's performance. *Proceedings of the First International Conference on Technology and Educational Science*.
- Wang, M. T., & Eccles, J. S. (2017). Teacher motivation and student achievement. *Educational Psychologist*, 47(1), 3-14.
- Wulandari, D., Nugroho, E., Alifa, M. N., Aulia, P. K., & Aryani, V. (2022). The influence of work motivation on teacher's pedagogical competence. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 8(02), 264-270. <https://dx.doi.org/10.32678/tarbawi.v8i02.6694>
- Yang, H., Cai, J., Yang, H. H., & Wang, X. (2022). Examining key factors of beginner's continuance intention in blended learning in higher education. *Journal of Computing in Higher Education*, 35(1), 126-143. <https://doi.org/10.1007/s12528-022-09322-5>
- Yu, S., Zhang, F., & Nunes, L. D. (2022). On students' metamotivational knowledge of self-determination. *Metacognition and Learning*, 18(1), 81-111. <https://doi.org/10.1007/s11409-022-09318-7>

Curriculum Delivery of English Language Macro-skills vis-à-vis Strategic Approach of Bukidnon Jesuit Mission School Teachers

Kim Peter O. Diez

Surigao del Norte State University, Surigao City, Philippines

Author email: kdiez@ssct.edu.ph

Dated received: March 2, 2024

Date revised: March 12, 2024

Date accepted: March 15, 2024

Originality: 95%

Grammarly Score: 99%

Similarity: 5%

Recommended citation:

Diez, K.P. (2024). Curriculum delivery of english language macro-skills vis-à-vis strategic approach of Bukidnon Jesuit mission school teachers. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 68-79.
<https://doi.org/10.5281/zenodo.10816429>

Abstract. This study explores the curriculum delivery of English language macro-skills in all Senior High Schools of Jesuit Mission Schools of Bukidnon Province. The participants of the study are all English teachers in Bukidnon Mission District teaching the 21st Century Literature from the Philippines and the World, English for Academic and Professional Purposes, Creative Nonfiction, Reading and Writing, Oral Communication, and Creative Writing. The study employed data triangulation to confirm research findings, reduce deficiencies, and provide credible and valid insights into the phenomenon. The quantitative result shows a high congruency of intended and observed curriculum in antecedent, transaction, and outcome; the 21st-century Literature from the Philippines and the World requires in-depth curriculum review and re-alignment in all areas, and Reading and Writing, and Creative nonfiction subjects suggest improvement in the Transaction. Three significant essences are produced in Moustaka Phenomenology as to how the curriculum is delivered: potentials in the developmental stage, pedagogical appropriation in the implementation stage, and actual results in the assessment stage. Twelve (12) syntheses derived from the data triangulation became the rationale for the contextualized development plan.

Keywords: Macro-skills; Curriculum; Strategies; Triangulation; Contextualized development plan.

1.0 Introduction

In this post-pandemic situation, the K-12 curriculum in Philippine education is shaken by unprecedented demands between curriculum per se and strategies. The radical shift in learning the English language macro-skills from online or blended learning to face-to-face classes suggests educators' challenging effort between "what to teach" and "how to teach" (Nasution et al., 2021). Today, educators develop an awareness and application of diverse considerations of techniques from different sciences of education. However, deference to the curriculum depends on teachers' strategic approach and teaching context. Thus, the researcher focuses on curriculum delivery in English language macro-skills vis-à-vis strategic approaches.

The curriculum, unarguably, is the backbone of learning that teachers are bound to follow. Although teachers have autonomy as to what and how to teach (Cirocki & Anam, 2024), the simultaneous pandemic shift allows teachers to alter or adapt the curriculum, further integrating strategies like technological innovation (Daragmeh et al., 2021; Al-Shehri, 2020). But Tavoosy and Jelveh (2019) affirm teachers should compile a comprehensive resource library of approaches, concepts, and methods for language instruction to utilize when implementing inquiry-driven courses, not only technology. Hence, optimal language development will support the signs of the times. Moreover, the context of the study – the Jesuit Mission Schools in Bukidnon – is marked by the diverse cultural background of seven tribes: Bukidnon, Manobo, Talaandig, Umayamnon, Higaonun, Matigsalug, and Tigwahanon, notwithstanding participants' profile regarding sex, school affiliation, and educational attainment

which proposes another challenge. Each Catholic schools have different pedagogics using multilinguistic instructional delivery. Thus, teachers' strategies in teaching English macro-skills with diverse social, cultural, linguistic, and pedagogical backgrounds need a collective effort of every teacher (Mishra & Singh, 2021).

Meanwhile, English subjects in the Senior High School Curriculum (2016) are fundamental in this study to explore radical changes, particularly the curriculum delivery vis-a-vis strategic approaches of Bukidnon Mission School teachers. Delivery of curriculum and strategies creates a gap in a diverse context such as the intercultural locus of Bukidnon thus challenging educators with strategic approaches. Nonetheless, problems and situations are also identical in the studies of Krishnapatria (2021), Ruman (2021), Alvarez (2020), Khalil et al. (2020), and Baticulon (2021) which affect the continuous disparity of teaching strategies and curriculum amenability. Additionally, this study centers on the five macro-skills; hence, it differs from Kwee (2021), which focuses only on three macro-skills: reading, writing, and speaking. Other studies focus on one domain of macro-skill only: listening (Intan et al., 2022); on speaking (Dağtan & Cabaroğlu, 2021; Marzuki & Kuliahana, 2021; Zaitun et al., 2021; Saed et al., 2021; Bawanti & Arifani, 2021; and Khan et al., 2021); on reading (Isagjon, 2022; Mawlood & Abbas, 2022), on writing (Zahari, 2022; Nourazar, 2022; Rodgers et al., 2022; Zeleke, 2022; Galang, 2021; & Zhang & Cheng, 2020); and on viewing (Faloye et al., 2021).

Concurrently, this study determined the level of congruency of English macro-skills in terms of the variables anchored in the theory of Robert Stake (1988) on the congruence-contingency model. Stake's model helps to evaluate the alignment of what to teach (curriculum) and how to teach (strategies) in the realms of "antecedents, transactions, and outcome." This prompted the researcher to operate Stake's congruence-contingency model to determine the significant differences between the intended curriculum and to observed curriculum of English macro-skills (listening, speaking, reading, writing, and viewing). However, in terms of how the curriculum is delivered, strategies vary in multiculturalism classrooms and deviate from the curriculum to accommodate the learning context. Besides, pedagogy in the global landscape experienced intense volatility, uncertainty, compatibility, and ambiguity, referring to the "VUCA world" that denominates contextualization.

Despite the VUCA environment, schools are responding to the demand for continuing education, "more efforts to increase and develop inclusive cultures, policies, and practices in education" are emerging (Molster & Nes, 2018). With this, the researcher explored curriculum delivery in English language macro-skills concerning Senior High School teachers' strategic approaches in Bukidnon Jesuit Mission Schools. After data analysis, the researcher crafted a contextualized enhancement program contributing to the Catholic schools in Bukidnon province.

2.0 Methodology

This study utilized a mixed method - triangulation - in exploring the curriculum delivery in the English language macro-skills vis-à-vis the strategy of teachers in Jesuit Mission Schools of Bukidnon Province. The focus of the study rounds in English subjects of Senior High School: 21st Century Literature from the Philippines and the World, English for Academic and Professional Purposes, Creative Nonfiction, Reading and Writing, Oral Communication, and Creative Writing. The participants of the study are all Senior High School English teachers in Bukidnon Mission District in the academic year 2022-2023. Meanwhile, the study employed a descriptive approach using a validated researcher-made questionnaire. The questionnaire was pilot-tested and passed the reliability test. The first part comprises the descriptive approach with mean and standard deviation and the t-test. The second part employed Moustaka Phenomenology (Figure 1) to extract "essences" where synthesis of the texture and structure into an expression derived. The third part of the analysis triangulated the data (Bans-Akutey & Tiimub, 2021) to form a synthesis as a rationale for the contextualized development plan. Their result will be compared, integrated, and interpreted through triangulation. Data triangulation is appropriate when presented with data in different times, spaces, and people. Hence, it increased the credibility and validity of the data.

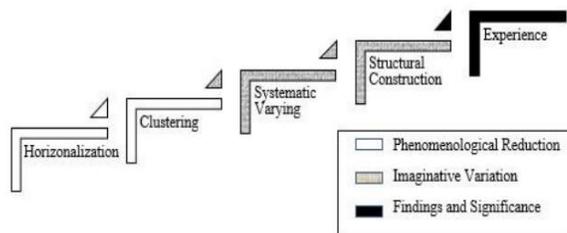


Figure 1. Moustaka phenomenology

2.1 Ethical Considerations

The researcher ensured the informed consent of the School Presidents, School Principal, and participants. The researcher asked permission by sending request letters: first, a request letter addressed to the President of the Bukidnon Mission District of the Society of Jesus for approval; second, a letter addressed to the School President or Principal of each school under Jesuit mission areas asking permission to administer the research instrument to the target participants. The questionnaires underwent the process of validity by experts and reliability tests through Cronbach Alpha. The participants' information and responses will be kept confidential (Republic Act No. 10173, Data Privacy Act). After retrieval of the questionnaires, the data gathered were tallied, tabulated, analyzed, and interpreted. However, the confirmability of the data was communicated and modified, and the experts validated the credibility of the interpretation to avoid conflict of interest and prejudices.

3.0 Results and Discussion

3.1 Quantitative Findings

This part presents the quantitative, qualitative, and triangulation results and analysis of data gathered from the participants. For quantitative results, Tables 1, 2, and 3 present the significant difference in curriculum delivery regarding antecedent, transaction, and outcome.

Table 1. Test of difference between the level of congruency of English macro-skills in Jesuit mission school teachers on the intended curriculum and observed curriculum of English subjects in terms of antecedent

English Subjects	t	p-value	Decision on Ho
a) Oral communication	2.676	0.116	Not Rejected
b) English for Academic and Professional Purposes	0.664	0.554	Not Rejected
c) 21st Century Literature from the Philippines and the World	3.991	0.028	Rejected
d) Creative Writing	1.312	0.281	Not Rejected
e) Reading and Writing Skills	1.615	0.182	Not Rejected
f) Creative Nonfiction	2.311	0.147	Not Rejected

The intended and observed curricula for the five (5) English subjects—Oral Communication, English for Academic and Professional Purposes, Creative Writing, Reading and Writing Skills, and Creative Nonfiction—do not significantly differ in terms of Antecedent. Only 21st-century literature from the Philippines and the world, nevertheless, makes a meaningful distinction; the planned and actual curricula concerning Antecedent present significant differences. It is conceivable that teachers find it difficult to plan how different aspects, genres, structures, contexts, and traditions will be taught. Furthermore, the competencies found in the literature on the 21st century point to endless unspecified prerequisites that provide a multifaceted learning outcome that should be taken into account. The literature covers a wide range of topics, but it is necessary to approach both national and international literature equally (Alerta, 2021) and with specificity.

Table 2. Test of difference between the level of congruency of English macro-skills in Jesuit mission school teachers on the intended curriculum and observed curriculum of English subjects in terms of transaction

English Subjects	t	p-value	Decision on Ho
a) Oral communication	3.625	0.068	Not Rejected
b) English for Academic and Professional Purposes	1.603	0.207	Not Rejected
c) 21st Century Literature from the Philippines and	6.015	0.009	Rejected
d) the World			
e) Creative Writing	5.725	0.011	Rejected
f) Reading and Writing Skills	2.160	0.097	Not Rejected
g) Creative Nonfiction	5.412	0.032	Rejected

The learning approach or activity takes center stage in the curriculum delivery transaction shown in Table 2. Of the six (6) English courses, three (3)—Oral Communication, English for Academic and Professional Purposes, and Reading and Writing Skills—show no discernible variation or congruency in the teachers' approach between the intended and observed curriculum.

Nevertheless, there are notable distinctions between 21st Century Literature from the Philippines and the World, Creative Writing, and Creative Nonfiction; the planned and observed curricula concerning the Transaction. However, 21st Century Literature from the Philippines and the World is the same as Creative Nonfiction and Creative Writing; it repeats reading and writing issues and weaves writing approaches with reading skills. Hence, simplifying the conundrum by horizontal alignment between planning the approach and carrying out the reading and writing exercises in class is a must. A curricular challenge offers suggestions on how to close the gap between the methods instructors utilize and the competencies expected to satisfy the diverse needs of students. Educational reformists must address the issue of standard-based curriculum implementation. Failure to do so will result in persistent adaptive issues, such as low academic performance or poor comprehension (Pak et al., 2020; Nation, 2019).

Table 3. Test of difference between the level of congruency of English macro-skills in Jesuit Mission school teachers on the intended curriculum and observed curriculum of English subjects in terms of outcome

English Subjects		t	p-value	Decision on Ho
a)	Oral communication	2.125	0.168	Not Rejected
b)	English for Academic and Professional Purposes	0.751	0.507	Not Rejected
c)	21st Century Literature from the Philippines and the World	3.814	0.032	Rejected
d)	Creative Writing	2.054	0.132	Not Rejected
e)	Reading and Writing Skills	2.282	0.085	Not Rejected
f)	Creative Nonfiction	3.469	0.074	Not Rejected

Table 3 illustrates the noteworthy disparity in Outcome between the intended and observed curricula. Oral communication, English for Academic and Professional Purposes, Creative Writing, Reading and Writing Skills, and Creative Nonfiction are all quite similar to one another. The Outcome, peculiarly, the assessment, is carefully designed and given to the students. It explains how competencies, strategies, and assessments are related to one another.

The 21st century literature has a significance level of 0.03. This is interpreted as no congruency between the intended and observed curriculum; the assessment that is planned fails to match the conducted assessment. This means that the performance standard for written analysis is intricate, and its content standard on the elements and context of Philippine literature is difficult. It also taps into a seemingly incomprehensible variety of genres throughout national literature and culture. This gives an idea of a volatile and time-constrained curriculum. To have a high-quality assessment of learning, literature of the region and the world should be taught and evaluated separately – literature of the Philippines vs literature of the world – using different literary lenses, or inseparably, that is with an eye of parity.

Yet only this subject has the consistent result of no congruency in antecedent, transaction, and outcome. Indeed, a problem with aligning competencies, strategies, and assessments is at stake. Loughlin et al. (2021) compare this to Halloran, the transition from theory to practice has led to a false sense of systemic academic integrity that is not in line with reality. According to the study, restoring "constructive alignment" ought to be given top priority to support high-quality instruction.

3.2 Qualitative Findings

For qualitative results, figures 2, 3 & 4 show the “essences” derived from the textural (left) and structural (right) descriptions using Moustaka Phenomenology.

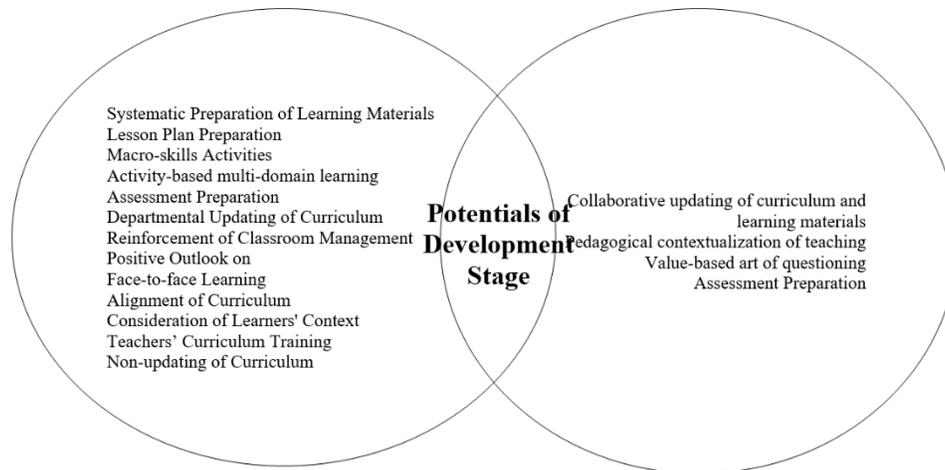


Figure 2. Significant essence of antecedent

Moreover, Figure 2 presents the textural and structural descriptions of antecedents direct to the "potentials in development stage" (Darrin, 2022). In Stake's congruency-contingency model, "potential prerequisites, potential curriculum, and potential results" are emphasized in the developmental stage. Both textural and structural generated from participants confirmed the so-called "potentials" of the development stage. The potential prerequisites allow teachers to foresee student's motivation and attitude; thus, "pedagogical contextualization" in teaching is applied as a tailor-fit approach to every learner's engagement. The raw experiences of teachers, such as unmotivated students, learning deficiencies, and class misbehavior, serve as guiding principles in potential pre-requisites. However, teachers maintain a 'positive outlook' regarding the untoward experiences in the pre-requisite stage, such as considering the context of learners in terms of sociocultural, economic, and behavioral responses to English learning. Yet teachers provide opportunities to achieve expected learning and behavioral outcomes or potential results with consistent implementation of policies, reinforcement of classroom management, expectation setting, and assessment preparation.

A1: "I make sure that I prepare all the needed materials before go to the classroom."

C3: "Like for example, first, we will meet with my co-english teachers and then we plan and we align our sa objectives kay somehow we have same learning competencies and whatnot."

C8: "That's why I implemented a classroom discipline plan during my subject."

I4: "Before my class, I prepare my learning materials the week before."

F12: "So if there's changes in the curriculum ... ay and also sir, we've connected our curriculum based from the BUACS if there's something new over there."

Indubitably, teachers develop a potential curriculum through systematic preparation of learning materials and lesson plans by updating the curriculum or aligning the competencies based on the PVMGO of the institution. This process of departmental updating posits tedious yet collaborative and inclusive modifications. Although some schools are practicing curriculum updating including pre-service and in-service training, several reports on non-updating of curriculum are conceivable to some schools. Such problems lead to poor teachers' performance, unable to meet even the bare minimum standards of teaching, and low students' academic behavior and performance. In effect, the potential curriculum and observational curriculum is impossible to meet. Nonetheless, whatever English competency or activity-based multi-domain learning or macro-skills activities are planned, implemented, and aligned with the assessment, none will be achieved in the intertwined ill-fated struggles of teachers and students.

B25: "So, dira ko nag-lisod, kung unsaon ko pag-pasabot sa ilaha nga naa pa jud na siya'y lahi nga meaning."

C7: "There are learning gaps, there are something with their behaviours."

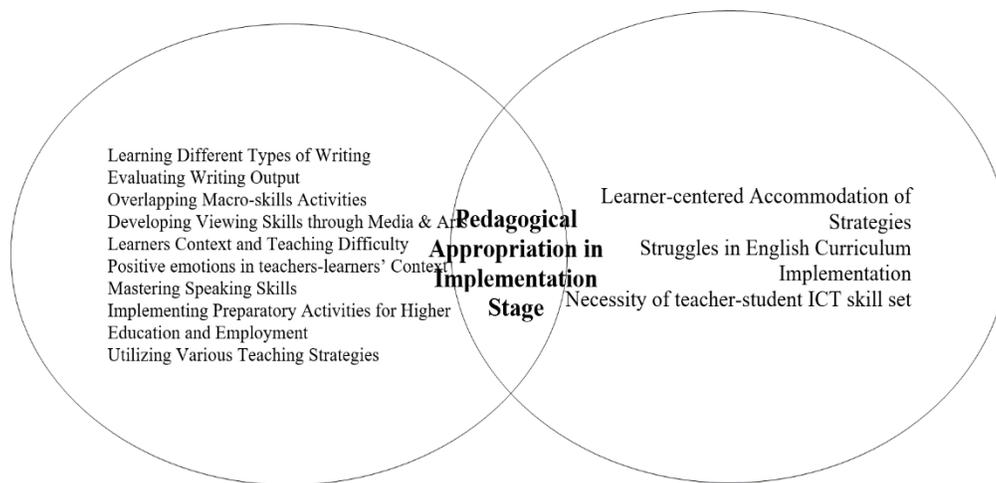


Figure 3. Significant essence of transaction

Robert Stake's (1988) description of transactions displays the teaching-learning process between the intended and observed curriculum. All the potentials in the development stage are implemented in Figure 2. Transactions are called the how in teaching employing multifaceted learner-centered teaching strategies in catering to different types of learners and to achieve macro-skills competence in reading, writing, listening, speaking, and viewing. Activities such as film-showing, script writing, reflection writing, role-playing, speech delivery, reporting, laboratory surveys, research writing, reading printed materials, business writing, storytelling, graphic organizers, and mock job interviews enable learners to participate. These are activity-based multi-domain learning where immersion in one activity incorporates other macro-skills.

B10: "In terms of their performance task, if they perform or act in the class, like storytelling or drama/dramatization, it includes all the macro-skills."

However, not all potential curriculum is observed in the operational curriculum of transaction due to poor writing ability, low comprehension, and weak communication skills, as well as a lackluster ICT skill set, which directly affect academic performance in 21st-century literature from the region and the world, English for Academic Professional Purposes, Creative Nonfiction, and Creative Writing. As a result, not all potential curriculum is observed in the operational curriculum. The lack of technological pedagogical integration in classroom procedures in the twenty-first century continues to be problematic, particularly in rural areas (Sumardi, Rohamn & Wahyudiati, 2020; Alda, Boholano, & Dayagbil, 2020). Yet a call to both teacher and student to be equipped with ICT skills is decisive.

C17: "So the most, maybe difficult, not that kind pero somehow is that 21st-century literature from the Philippines and the world."

F20: "Among the subjects that I teach in the senior high school, one of those is English for academic purposes, which finds me difficult due to time constraints."

Nevertheless, transaction displays various teaching strategies accommodated by teachers, none solve a singular method and even collective pedagogies. All of the recurring problems have yet to be solved but settled to a mere introduction of further novel methods without uprooting the main cause. Accommodation of strategies had been accumulated that cover the authentic purpose of learning – alleviation from ignorance to arrive in truth – without finding the solution until serious repercussions in higher education, employment, and even problems in the politics and economy endure. As a result, a spiral, unending, interconnected dilemma of teaching-learning haunts the Philippine education system.

E17: "We could prepare themselves, set their mood before they could watch the movie or any videos, or presentation so that, they can be more attentive base on my preparation of lesson."

J6: "Whereas the students do their own tasks, and the teacher is only a facilitator of learning."
 K10: "In addition pa diay, aside from the ICT. Naa pu'y mga group, mga collaborative activities, mga like discussions – group discussions, naa usahay dyad ug mga ingon ana."
 L7: "Actually, mostly, some of the topics before we start our discussions, we are doing a brainstorming."

Evaluating that no single top-down strategy is the solution, and no bottom-up approach is an undisputable key method, a pedagogical appropriation which is teaching in the context or understanding how to learn in a specific context pave to deeper learning, i.e., meta-learning. With our multi-faceted background, teachers who immerse in and through the learners' context through pedagogical appropriation relate to students' depth and breadth, resulting in a positive and harmonious learning experience. Pedagogical appropriation describes the operational needs of Bukidnon Jesuit Mission Schools.

K5: "Then, integrated mga moral values, and also so mga customs and traditions sa mga IP or mga lumads."
 F1: "At first, I want to know the context of my students because most of the population are lumad."

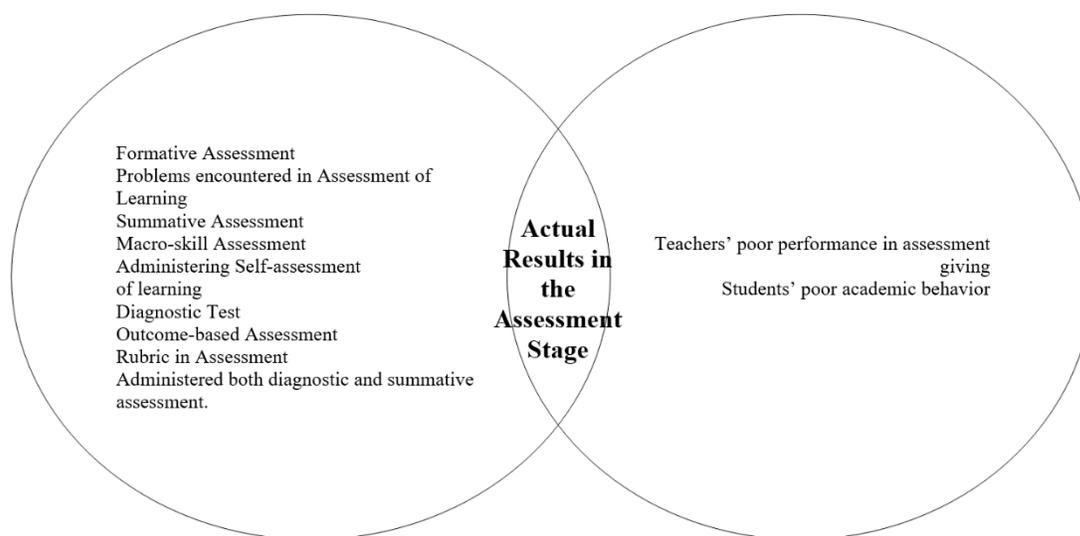


Figure 4. Significant essence of outcome

Figure 4 presents the actual results in the assessment stage. It includes measuring the potentials in the developmental stage and the pedagogical appropriation in the implementation stage. Actual results are outcomes that refer to judgments from external standards and show the effectiveness of strategies. The Outcome was made operational by administering the assessments to students. These assessments are diagnostic assessment (Huang et al., 2020), formative assessment (Schildkamp, 2020), and summative assessment (Bacquet, 2022). Assessment of learning is grade-based, which includes exams, portfolios, performance tasks, and standardized tests. Some teachers also reinforce assessment as and for learning, allowing students to take an active or ongoing learning process.

In diagnostic assessment, teachers use pre-tests (short quizzes) and inquiry-based activities such as student interviews and reflection sharing to connect the prior knowledge with the current lesson. Teachers expose the cognitive ability of students to discover possible English macro-skill strategies to enrich learners through formative assessment. Teachers then utilize portfolios, individual or collaborative tasks, and further discussion. Summative assessments are administered to measure students' progress and provide a data-driven decision for the implementation and improvement of the curriculum.

C23: "After each lesson, I gave them different tests."
 D20: "So I make sure that I gave my summative assessment or the graded assessment so I have an idea on how to give them grades or how they perform in my class."

F27: "Let's say, for example, I also give the diagnostic test in which I would know that particular students learned from the past nga ilahang na learn na when they are in grade 10 or when they are in grade 7 or 8, 9, and so on."

F26: "As I've mentioned, I gave many activities, especially formative and summative. "

Teachers employ outcome-based education, expecting the learners to achieve learning and behavioral competencies. Yielding that rubrics and instructions are given properly to meet the curriculum standards, reality still presents fragments of teachers' poor work performance and students' poor academic behavior. Thus, it contributes to the worsening problems in education, such as PISA results in the Philippines, whose performance lags behind other countries (Chi, 2023). Indeed, either positive or negative, actual outcomes should be treated with integrity as a proposal for the desired contextualized curriculum and achieve the desired Outcome.

3.3 Synthesis

Concurrently, the syntheses below result from triangulation of data derived from quantitative and qualitative results with related literature.

Synthesis 1: Congruent and Standard-Based English Curricula Involve the Alignment of Standards and Appropriation of Activities and Materials in Context

A congruent and standard English curriculum involves streamlining, unpacking, and aligning – horizontal alignment of standards, competencies, activities, materials, and assessment, and vertical alignment to form the head, heart, and hands competencies. Despite the Department of Education's mandate to achieve the curriculum standards, different academic upheaval persists, and schools posit different contexts. To unravel this, the contextualization of curriculum becomes an adaptive response to align each competency to institutional philosophy, vision, mission, goal, and objectives. A separate portion of the column in the curriculum map must be included to guide teaching contextualization.

Synthesis 2: Inception of Digital Literacy and Sustainable Development In English Macro-Skills Teaching

English macro-skills teaching should consider the inception of digital literacy and sustainable development. This synthesis should consider the “P21 framework for 21st-century learning such as life and career skills, learning and innovation skills, and information, media, and technology skills” to keep track of progress and development by anchoring to sustainable development goals. Situating English macro-skills teaching in this global context framework and goals will not limit the curriculum within a certain context but will become globally sound. This adaptive framework is necessary today where learners are in-depth yet vulnerable to technological advancement and especially ensure the 4-exits in Senior High School (higher education, employment, mid-level skills, and entrepreneurship). However, teachers and administrators must balance cultural values and modernization ideologies through a collective decision-making process to produce not an ethnocentric but contextualized curriculum where transactional activities are all-encompassing.

Synthesis 3: Crafting Quality Standard Assessment in English Teaching

Assessment results from learning progress, competency mastery, and academic readiness. The alignment of assessment is part of the horizontal alignment in the process of curriculum updating. If the competencies are properly unpacked and streamlined, followed by the appropriation of activities, horizontal aligning of assessment is expected to be standard, too. Teachers must not consider assessment inseparable from the learning process or dichotomous with activities. Assessment preparation, may it be diagnostic, formative, or summative, shall exist within the process of horizontal alignment to avoid poor consequences in the learning process. Further, plotting questions in a table of specifications is pivotal in crafting a standard and aligned assessment.

Synthesis 4: Adaptive Curriculum Toward Pedagogical Contextualization in English Teaching

While academic behavior is the nearest non-cognitive factor in achieving meaningful transactions facilitated by the teachers, a curriculum-making disposition is crucial to crafting a standard contextualized curriculum during the Antecedent. Teachers, by nature, are curriculum designers, implementers, and evaluators; without proper disposition including seminar training will be unable to unpack, streamline, and align standards vertically and horizontally. The problem mentioned, such as "non-updating of the curriculum," is the result of non-disposition, lack of training, and further study. Only a disposed and equipped teacher will participate in departmental

curriculum updating with systematic preparation of lesson plans and materials. A well-prepared, congruent, contextualized curriculum with aligned competencies and appropriate activities will result in effective class engagement, e.g., a contextualized curriculum.

Synthesis 5: Emergence of Accommodated Strategies in English Macro-Skills Transaction

The emergence of accommodated strategies in English macro-skills teaching refers to accommodating holistic strategies not confined to a singular method. Teachers' response to a contextualized curriculum necessitates accommodation in a world classified as VUCA (volatile, uncertain, complex, and ambiguous). Indeed, teaching one English macro-skill touches the grounds of other macro-skills, such as role-playing consists of reading the scripts, speaking the lines, and listening to actors; film showing consists of viewing the moving pictures, listening to the conversation, and reading the subtitles; and mock job interview consists of writing the professional correspondence, responding orally to the interviewer, and reading the result of an interview. With this, various transactional strategies must be accommodated to accomplish the macro-skills curriculum standards.

Synthesis 6: Strategic Assessment as Basis for English Subject Judgment Matrix Improvement

As the Philippines is left behind according to PISA 2022 results in math, science, and reading, factors such as teachers' poor performance and students' poor academic behavior contribute to the worsening education system. The non-strategic and linear assessment, where the test is administered only without interpreting the result, communicating intervention activity, and providing another test, had been the re-occurring dilemma. On the other hand, plotting the result in a judgment matrix for improvement allows teachers to monitor the progress, apply intervention activity, and administer another test. This then describes a strategic, cyclical assessment to enrich learners yet should be treated with scrupulous planning in the curriculum, especially in outcome.

Synthesis 7: Translanguaging Reinforcement as Critical socio-cultural Approach in Oral Communication

Translanguaging in multilingual English language teaching is deemed to be significant and effective in any English subject. Translanguaging allows teachers to employ words and phrases from another dialect to communicate learning competency and activities. Translanguaging supports students' communicative competence, increases comprehension, and encourages learning engagement. Displaying the home languages of lumad or non-lumad affirms socio-cultural background and empowers learning prowess inside and outside the classroom. Yet Oral Communication presents significant differences in the transaction, effective communication through "translanguaging" advances communicative competence efficiently in various situations or contexts.

Synthesis 8: Relevance of teaching Information, Media, & Technology Skills in English for Academic and Professional Purposes

Nowadays, learning is characterized by tremendous technological advancement and quick access to an array of information. Through information, media, and ICT literacy, effective learners exhibit a wide range of functional and critical-thinking skills in English for both professional and academic use. As a means to develop the communication abilities stated in the course description, students will need to master techniques like reading academic texts, writing reaction papers, reviews, and critiques, concept papers, position papers, report surveys, field reports, laboratory reports, and scientific reports but integrated with information, media and technology skills. These techniques encompass managing information, obtaining and evaluating information, creating media products, and integrating technology into the course.

Synthesis 9: Treating with an "eye of parity": Reclaiming Constructive Alignment in 21st Century Literature from the Philippines and the World

In the 21st Century Literature from the Philippines and the World, treating with an eye of parity unravels the complexity and universality of the curriculum towards simplicity and specificity. Yet the quantitative result shows a significant difference between the intended and observed curriculum and confirms by qualitative data the struggles in teaching 21st-century literature, such as poor learners' comprehension, dissecting the standards and competencies yields to objectivity. Immersion in a variety of dimensions, genres, materials, structures, situations, and literary traditions raises questions about how best to understand literature. Thus whatever adjustments the teachers made, the observed curriculum deviates from the intended curriculum. Loughlin et al. (2021) proposed reclaiming a "constructive alignment" to treat literature with an eye to parity. Chunking

complex topics into smaller specified and comprehensible lessons through constructive unpacking and aligning will reclaim the beauty of studying literature.

Synthesis 10: A Comparative and Corrective Writing Strategies in Teaching Creative Writing

Writing enables learners to communicate effectively but through comparative and corrective approaches. Corrective writing includes enhancing spelling, grammar, syntax, and techniques such as outlining, paraphrasing, summarizing, note-taking, interpreting, and researching. Creative writing stands on the ground of writing principles and processes to create stories, fiction, poetry, drama, and any genre. Thus, it consists of elements, devices, and characters. The reinforcement of comparative approaches will address problems in class transactions by examining imagery, diction, figures of speech, and variations in language, presenting sample works of well-known local or foreign authors, and comparing indigenous written literature with other literature.

Synthesis 11: Examining Reading and Writing Relations Towards an Effective Activity-based Learning in Reading and Writing Course

Although a 0.85 p-value is described as no significant difference, the struggles mentioned in qualitative data advise improvement, such as examining reading and writing relation strategies. From the input of data by reading, and less likely from listening, towards the output of data by writing, teachers discover learners' difficulty in selecting and organizing information, distinguishing patterns of development across disciplines, identifying well-written text, evaluating assessments, and composing academic text. These problems are rooted in the early stage of learning considering the multi-faceted reasons across the aspects of life. Additionally, the cognitive skills of "attention, verbal working memory, executive functioning, and processing speed" are covered by the intertwined nature of reading and writing (Rania, 2021) yet the approach to a more teacher-directed approach, but a more student-directed, i.e., from the exposition stage of lecture-telling to the generation stage of outcome-based.

Synthesis 12: Metacognition in Reflection Writing as Strategy in Teaching Creative Nonfiction

Creative Nonfiction is a literary form focusing on formal elements and writing techniques such as autobiography or blogging. Applying metacognition in Creative nonfiction permits learners to "think beyond thinking"; hence in the aspect of reflection, writing transcends the students' writing: from the openness of personal experiences without restricting to disciplinary discourse or formal structures towards open-ended reflective questions such as "How is the text responding to you and others?". Metacognition in Creative Nonfiction becomes a holistic approach encompassing psychological, social, cultural, & spiritual spheres. Even Creative Nonfiction at 0.074 level of significance is described as having no significance of congruency, nearest to 0.05 decision significance value, it prompts modifications to learn the best Creative Nonfiction such as metacognition in reflection writing.

4.0 Conclusion

The quantitative result shows a high congruency of intended and observed curriculum in antecedent, transaction, and outcome; the 21st-century Literature from the Philippines and the World requires in-depth curriculum review and re-alignment in all areas, and Reading and Writing, and Creative nonfiction subjects suggest improvement in the Transaction. Three significant essences are produced in Moustaka Phenomenology as to how the curriculum is delivered: potentials in the developmental stage, pedagogical appropriation in the implementation stage, and actual results in the assessment stage. Twelve (12) syntheses derived from the data triangulation became the rationale for the contextualized development plan.

5.0 Contributions of Authors

The authors confirm the equal contribution in each part of this work. All authors reviewed and approved the final version of this work.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

All authors declare that they have no conflicts of interest.

8.0 Acknowledgment

The researcher is grateful for the approval and assistance of Fr. Ambrosio Flores, SJ, to connect with the school supervisors Fr. Marlon Fabros, SJ, and Fr. Lloyd Sabio, SJ. The researcher expressed his deepest appreciation to all the English Senior High School teachers in Bukidnon Mission District for their availability and effort. The researcher is also thankful for the encouragement and guidance of the experts, Dr. Alicia Maghuyop, and Dr. Merlyn Estoque, most especially for the unwavering support of Ms. Fatima Redido. Above all, profound praise and gratitude to God – *unum necessarium*.

9.0 References

- Aksoy, E. (2020). Evaluation of the 2017 updated secondary school English curriculum of Turkey by means of theory-link. *Turkish Journal of Education* 9 (1), 1-21. doi: 10.19128/turje.575392
- Al-Shehri, S. (2020). Transforming English language education in Saudi Arabia: Why does technology matter? *International Journal of Emerging Technologies in Learning*, 15 (2), 108 - 123. doi: 10.3991/ijet.v15i06.12655
- Alda, R., Boholano, H., Dayagbil, F. (2020). Teacher education institutions in the Philippines towards Education 4.0. *International Journal of Learning, Teaching and Educational Research*, 19 (8), 137-154. doi: 10.26803/ijlter.19.8.8
- Alerta, H. (2021). Breaking the Boundaries: Reimagining the Comparative Literary Method and Pedagogy in the Philippine Literature Classrooms. *International Journal of English and Comparative Literary Studies*, 2(6), 14-31. doi: 10.47631/ijecls.v2i6.353
- Alvarez, A. (2020). The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education*, 15 (1), 144-153. doi: 10.5281/zenodo.3881529
- Bacquet, J. N. (2020). Implications of summative and formative assessment in Japan – a review of the current literature. *International Journal of Education & Literacy Studies*, 8 (2), 28-35. doi: 10.7575/aiac.ijels.v8n.2p.28
- Bans-Akutey, A., Tiimub, B.M. (2021). Triangulation in Research. *Academia Letters*, Article 3392, 1-6. doi: 10.20935/AL3392.
- Baticulon, R.E., Sy, J.J., & Alberto, N.R.I. (2021). Barriers to Online Learning in the Time of COVID-19: A National Survey of Medical Students in the Philippines. *Med.Sci.Educ.* 31, 615–626. doi: 10.1007/s40670-021-01231-z
- Bawanti, P. K. D. & Arifani, Y. (2021). Students' Perceptions of Using Zoom Application on Mobile Phone in Improving Speaking Skills During Online learning at Ban Loeiwangsai School, Loei Province, Thailand. *Journal of English Teaching, Literature and Applied Linguistics* 5 (1), 54-61. doi: 10.30587/jetlal.v5i1.2212
- Brodie, V., & Fraizer, L. (2018). Vuca leadership in a complex global environment. *International Organization of Social Sciences and Behavioral Research Conference*. New Orleans, LA. <https://victoriakbrodie.com/2018/03/19/vuca-leadership-competencies/>
- Cirocki, A., & Anam, S. (2024). 'How much freedom do we have?' The perceived autonomy of secondary school EFL teachers in Indonesia. *Language Teaching Research*, 28(2), 440-465. doi: 10.1177/13621688211007472
- Chi, C. (2023, December 9). Philippines still lags behind world in math, reading and science – PISA 2022. *Philstar.com*. <https://www.philstar.com/headlines/2023/12/06/2316732/philippines-still-lags-behind-world-math-reading-and-science-pisa-2022>
- Dağtan, E. & Cabaroğlu, N. (2021). Status of English speaking skills in Turkish ELT departments: A nationwide survey. *Eurasian Journal of Applied Linguistics* 7 (1), 359-382. doi: 10.32601/ejal.911454
- Daragmeh, A., Mead, H. & Copeland, K. (2021). English K-12 Teacher Experiences in Saudi Arabia in the Pandemic Era: A Follow-up Study of One Khbrat University Program. *Arab World English Journal*, 3-20. doi: 10.24093/awej/covid.1
- Darrin, T. (2022, November 13). Evaluation Models Part I: Stake's Congruence-Contingency Model. *Educational Research Techniques*. <https://educationalresearchtechniques.com/2015/06/02/evaluation-models-part-i-stakes-congruence-contingency-model/>
- Faloye, B. O., Obateru, O. T., & Alonge, S. G. (2021). Language teachers and digital literacy: assessing viewing and representing as language skills. *International Journal of Education, Learning and Development*, 9(3), 1-10. doi: 10.2139/ssrn.3814763
- Galang, A. D. (2021). Teachers' Critical Reflections on the New Normal Philippine Education Issues: Inputs on Curriculum and Instruction Development. *International Journal of Social Learning (IJSL)*, 1(3), 236-249. doi: 10.47134/ijsl.v1i3.43
- Huang, Z., Liu, Q., Chen, Y., Wu, L., Xiao, K., Chen, E., Ma, H., & Hu, G. (2020). Learning or Forgetting? A dynamic approach for tracking the knowledge proficiency of students. *ACM Transactions on Information Systems*, 38(2), 1-33. doi: 10.1145/3379507
- Intan, S., Yusuf, S. B., & Sari, D. F. (2022). A review on the use of audiovisual as media in improving listening skills among junior high school students. *English Education Journal*, 13 (2), 1-14. doi: 10.24815/eej.v13i2.25932
- Isaqjon, T. (2022). Strategies and techniques for improving EFL learners' reading skills. *Involta Scientific Journal*, 1(11), 94-99. doi: 10.5281/zenodo.7277768
- Khan, R. M., Radzuan, N. R., Farooqi, S., Shabaz, M. & Khan, M. (2021). Learners' Perceptions on WhatsApp Integration as a Learning Tool to Develop EFL Vocabulary for Speaking Skill. *International Journal of Language Education* 5 (2), 1-14. doi: 10.26858/ijole.v5i2.15787
- Krishnapatria, K. (2021). Merdeka Belajar-Kampus Merdeka Curriculum In English Studies Program: Challenges and Opportunities. *ELT in Focus* 4 (1), 12-19. doi: 10.35706/eltinf.v4i1.5276
- Kwee, C. (2021) I Want to Teach Sustainable Development in My English Classroom: A Case Study of Incorporating Sustainable Development Goals in English Teaching. *Sustainability*, 1-24. doi: 10.3390/su130841
- Loughlin, C., Lygo-Baker, S. & Lindber-Sand, A. (2021). Reclaiming constructive alignment. *European Journal of Higher Education*, 11:2, 119-136. doi: 10.1080/21568235.2020.1816197
- Marzuki, A. G., & Kuliahana, A. (2021). Using language Games to Enhance EFL Students' Speaking Skill in Indonesia. *Al-ta'lim Journal* 28 (3), 213-222. doi: 10.15548/jt.v28i3.700

- Mawlood, A. A. & Abbas, N. J. (2022). Teachers' attitudes towards reciprocal teaching strategies for improving high school students' reading skills. *Journal of Language Studies* 5 (4), 117-135. doi: 10.25130/jls.5.4.2.10
- Molster, T. & Nes, K. (2018). To what extent does information and communication technology support inclusion in education of students with learning difficulties. *Universal Journal of Educational Research*, 6 (4), 598-612. doi: 10.13189/ujer.2018.060403
- Nasution, A. K., Surbakti, A. H.m Zakaria, R., Wahyuningsih, S. K., & Daulay, L. A. (2021). Face to face learning vs blended learning vs online learning (student perception of learning). *Journal of Physics: Conference Series*, 1-6. doi: 10.1088/1742-6596/1783/1/012112
- Nation, K. (2019). Children's reading difficulties, language, and reflections on the simple view of reading. *Australian Journal of Learning Difficulties*, 24:1, 47-73. doi: 10.1080/19404158.2019.1609272
- Nourazar, S., Kakvand, R., & Aliasin, S. H. (2022). The Impact of Scaffolded Metacognitive Writing Strategy Instruction on Iranian Intermediate EFL Learners' IELTS Writing Task 2. *Education Research International*, 1-8. doi: 10.1155/2022/6297895
- Pak, K., Polikoff, M. S., Desimone, L. M., & Saldívar García, E. (2020). The Adaptive Challenges of Curriculum Implementation: Insights for Educational Leaders Driving Standards-Based Reform. *AERA Open*, 6(2). doi: 10.1177/2332858420932828.
- Rodgers, Derek B.; Datchuk, Shawn M.; and Wang, Lanqi (2022). A Paragraph Text-Writing Intervention for Adolescents with Intellectual and Developmental Disabilities. *The Journal of Special Education Apprenticeship* 11 (2). doi: 10.58729/2167-3454.1146
- Ruman, M. (2021). Challenges of Teaching English Listening, Speaking, Reading and Writing Skills at Qawmi Madrasas under BEFAQ in Bangladesh. *International Journal of Linguistics, Literature and Translation*, 125-138. doi: 10.32996/ijllt.2021.4.7.14
- Saed, H. A., Haider, A. S., Al-Salman, S. & Hussein, R. (2021). The use of YouTube in developing the speaking skills of Jordanian EFL university students. *Heliyon* 7, 1-6. doi: 10.1016/j.heliyon.2021.e07543
- Schildkamp, K., Van Der Kleij, F., Heitink, M. C., Kippers, W. B., & Veldkamp, B. P. (2020). Formative assessment: A systematic review of critical teacher prerequisites for classroom practice. *International Journal of Educational Research*, 103, 101602. doi: 10.1016/j.ijer.2020.101602
- Sumardi, L., Rohman, A., & Wahyudiati, D. (2020). Does the Teaching and Learning Process in Primary Schools Correspond to the Characteristics of the 21st Century Learning? *International Journal of Instruction*, 13(3), 357-370. doi: 10.29333/iji.2020.13325a
- Tavoosy, Y., & Jelveh, R. (2019). Language teaching strategies and techniques used to support students learning in a language other than their mother tongue. *International Journal of Learning and Teaching*, 11(2), 77-88. doi: 10.18844/ijlt.v11i2.3831
- Zaitun, Z., Hadi, M. S., & Emma Dwi Indriani. (2021). TikTok as a Media to Enhancing the Speaking Skills of EFL Student's. *Jurnal Studi Guru Dan Pembelajaran*, 4(1), 89-94. doi: 10.305605/jsgp.4.1.2021.525
- Zhang, J. & Cheng, X. (2020). Examining the effects of comprehensive written corrective feedback on L2 EAP students' linguistic performance: A mixed-methods study. *Journal of English for Academic Purposes* 54. doi: 10.1016/j.jeap.2021.101043.
- Zelege, Y. D. (2022). Investigating teachers and students perception of writing skills: Ethiopian University in focus. *Journal of English Language and Literature* 9 (3), 11-24. doi: 10.54513/JOELL.2022.9302

Nurses' Compliance Towards Infection Control Practices at Sulu Sanitarium and General Hospital

Sahid I. Sangkula

Sulu State College, Jolo, Sulu, Philippines

Author email: ed.sangkula@gmail.com

Dated received: March 4, 2024

Date revised: March 12, 2024

Date accepted: March 17, 2024

Originality: 91%

Grammarly Score: 99%

Similarity: 9%

Recommended citation:

Sangkula, S. (2024). Nurses' compliance towards infection control practices at Sulu Sanitarium and General Hospital. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 80-91.
<https://doi.org/10.5281/zenodo.10824066>

Abstract. This descriptive-correlational study assessed nurses' compliance towards infection control practices at Sulu Sanitarium and General Hospital with a sample size of 100, selected through non-probability sampling using purposive sampling. The study utilized statistical measures such as weighted mean, standard deviation, t-test for independent samples, One-way ANOVA, and Pearson's r. The findings of the study indicate that, on average, nursing personnel demonstrate compliance towards infection control practices. Additionally, variables such as gender, age, educational attainment, length of service, and appointment status were found not to significantly influence compliance towards infection control practices. Furthermore, it was observed that individuals who strongly agreed with the compliance towards infection control practices regarding awareness of knowledge and adherence to protocol were likely the same group who agreed with aspects such as training and communication, attitude and practices, and self-evaluation. These findings support the Health Belief Model (HBM), which suggests that cognitive processes influence nurses' behaviors in the context of infection control. In the framework of HBM, nurses' compliance is analyzed in terms of perceived susceptibility to infections, recognizing the risks faced in healthcare settings, and perceived severity, highlighting the consequences of non-compliance on both personal and patient health.

Keywords: Compliance; Infection control practices; Nursing personnel; Philippines.

1.0 Introduction

Healthcare-associated infections (HAIs), also referred to as nosocomial infections, are diseases that people contract while receiving medical care in a hospital or other healthcare facility. Numerous healthcare environments, such as clinics, long-term care homes, hospitals, and outpatient surgery centers, can experience these infections. HAIs may manifest during medical therapy and may be linked to operations, therapies, or exposure in a healthcare setting. HAIs are frequently diagnosed as bloodstream infections, lung infections, urinary tract infections, and surgical site infections. Pathogens such as bacteria, viruses, fungi, or others may be the cause. The use of invasive medical devices (such as ventilators or catheters), patients weakened immune systems, inadequate infection control procedures, and the existence of drug-resistant microbes are some of the factors that raise the risk of HAIs (Suleyman et al., 2018).

Ahmed et al. (2021) discussed that healthcare professionals generally comply with preventive measures to control healthcare-associated infections (HAIs) at a high rate, although additional education is needed, especially regarding hand cleanliness and personal protective equipment. Between 5 and 15% of hospitalized patients and 9–37% of patients admitted to Intensive Care Units (ICUs) are at risk for HAIs (Alhumaid et al., 2021). For instance, after receiving a needlestick injury from a patient who was infected with the source, the probability of contracting HAIs was 0.3% for HIV, 3% for hepatitis C, and 6-30% for hepatitis B (Al-Omari et al.,

2020). Meanwhile, Al Subaje (2020) stressed that 3 million of the 35 million Health Care Workers (HCWs) globally are exposed percutaneously to bloodborne pathogens (BBPs) annually, with about 2 million HCWs exposed to HBV, 0.9 million to HCV, and 0.17 million to HIV.

Regular healthcare services may also be hampered by the operational and capacity limitations imposed by hospital HAI management. In addition to its systemic effects, HAIs lower patients' and healthcare workers' quality of life. Severe infections can be lethal, emphasizing the importance of following strict infection control practices (Habboush, 2023). There is a substantial opportunity to reduce the financial strain on the healthcare system, improve patient outcomes, and enhance the general effectiveness of healthcare delivery by highlighting the preventability of HAIs through appropriate healthcare worker behavior and strict adherence to evidence-based infection control practices. Implementing stringent infection control practices, promoting hand hygiene, employing sterile techniques during medical operations, and closely monitoring the use of antimicrobial drugs are all part of the effort to prevent and control HAIs. Following infection control practices helps prevent HAIs. Measures like standard precautions (hand hygiene, wearing gloves and gowns, protecting one's eyes, cough etiquette, and safely disposing of sharp objects) and isolation precautions (contact, droplet, and airborne precautions) that prevent the risk of pathogen transmission are recommended and frequently used to prevent HAIs (Suleyman et al., 2018).

According to the World Health Organization (WHO), healthcare-associated infections (HAIs) affect millions of patients worldwide and contribute to increased morbidity, mortality, and healthcare costs (WHO, 2019). Effective infection control practices, including hand hygiene, proper use of personal protective equipment (PPE), and adherence to standard precautions, are essential in reducing the risk of HAIs.

Recent studies have emphasized the importance of nurses' compliance with infection control practices in preventing HAIs. A study by Squires et al. (2018) examined the compliance of nurses with infection prevention and control practices in acute care settings. The findings highlighted the need for ongoing education and training to enhance nurses' knowledge and understanding of infection control measures.

At a Philippine government hospital, where the researcher is currently employed as a nurse, the status of infection control practices necessitates a comprehensive review to ensure the highest standards of healthcare delivery. Though there are established infection control policies and guidelines, there may be variations in compliance among nursing staff that require further examination. Understanding the nuances of nurses' adherence to infection control protocols is essential, as it directly impacts patient outcomes and the overall standard of healthcare.

The research problem addressed in this study is the suboptimal compliance of nurses towards infection control practices. Despite the existence of guidelines and protocols, studies have shown that nurses' adherence to these practices can be inconsistent, leading to an increased risk of healthcare-associated infections (HAIs). HAIs not only pose a significant threat to patient safety but also contribute to increased healthcare costs and prolonged hospital stays.

The context of this research is the healthcare setting, specifically focusing on the role of nurses in infection control practices. Nurses are at the forefront of patient care and have direct contact with patients, making their compliance with infection control protocols crucial in preventing the transmission of infections. Understanding the factors that influence nurses' compliance and identifying potential interventions to improve adherence is vital in enhancing patient safety and reducing the incidence of HAIs.

To address the research problem, it is crucial to clarify the factors that contribute to nurses' non-compliance and understand the underlying reasons behind their behavior. By identifying these factors, interventions can be developed to enhance nurses' compliance with infection control practices. These interventions may include targeted education and training programs, improving the availability and accessibility of necessary resources, and fostering a supportive organizational culture that prioritizes infection control.

Furthermore, despite previous studies, there is still a lack of knowledge on the unique challenges that nurses encounter in various healthcare settings, particularly those with limited resources. This study fills that knowledge gap by shedding light on the specific conditions affecting nurses' compliance and emphasizing the urgent need for tailored interventions. Thus, the study aims to assess nurses' compliance with infection control practices in terms of awareness of knowledge, adherence to protocol, training and communication, attitude and practices, and self-evaluation.

2.0 Methodology

2.1 Research Design

This study employed a descriptive correlational design. A correlational study aims to determine whether variables are correlated with each other (Thakur, 2021). On the other hand, Cometa (2023) defines descriptive research as a study designed to illustrate or describe the participants of the study in a more precise way. In general, a descriptive correlational design is research that explains how variables affect each other.

2.2 Research Participants

The respondents for this study comprised nurses ranging from 23 to 50 years old and above, actively employed in a Philippine government hospital. A total of 100 participants were selected for this study within Sulu Sanitarium and General Hospital, utilizing the purposive sampling technique. This method was employed to target a specific group of individuals possessing qualities essential to the research objectives. Purposive sampling allows for the selection of participants based on specific criteria and is often used by researchers aiming for in-depth insights from cases or scenarios. This approach enabled the researcher to concentrate on nurses from diverse departments, including surgery, emergency, and general wards, ensuring a comprehensive understanding of compliance across various healthcare contexts within the specific setting of Sulu.

2.3 Research Instrument

The research study employed a questionnaire as a method of gathering data, utilizing an adapted questionnaire developed by Hammoud et al. (2021). To ensure its relevance to the current study and its local settings, the questionnaire underwent review by at least two experts from the faculty members of the graduate studies at Sulu State College – Graduate School.

2.4 Data Gathering Procedure

To initiate the data-gathering process, the researcher submitted a permission letter to the Chief of the Hospital, as well as to the respondents. Ensuring that the participants had a comprehensive understanding of their involvement, the researcher assured them that data collection would exclusively occur through a questionnaire. The study provided a detailed explanation of how the data would be used and safeguarded throughout the entire duration. Additionally, the researcher's contact information was provided to address any inquiries or additional concerns.

After obtaining consent from the Chief of the Hospital and participants in the specified area, the researchers proceeded with the study. The collected data was treated with the utmost confidentiality and used solely for educational and research purposes. Respondents remained anonymous to safeguard their worth and integrity. To gather information from the respondents, the researcher distributed the questionnaire form. The survey questions typically took 5 to 10 minutes to complete, allowing respondents ample time to answer. Guidance was provided to ensure participants fully and precisely understood the questions, and methods and instructions were read and clarified to eliminate any potential for misunderstanding in the questionnaire. Furthermore, the researcher addressed any queries that participants may have had. Respondent involvement was ensured through completing the survey and providing informed consent.

2.5 Data Analysis Procedure

The study utilized statistical tools, specifically SPSS, to analyze data generated by the survey questionnaire. Descriptive statistics, such as frequency counts and percentages, were employed to measure the demographic profile of respondents. Mean percentage scores were obtained to assess respondents' compliance with infection control practices. T-tests and Analysis of Variance (ANOVA) were used to determine significant differences in compliance based on demographic profiles. Pearson's r correlation was employed to assess the significance of

correlations between respondents' compliance and factors like awareness, adherence, training, attitude, and self-evaluation.

3.0 Results and Discussion

3.1 Demographic Profile of the Respondents

Table 1 presents the demographic profile of the nurse respondents. Among the 100 participants, 23 (23.0%) are male, and 77 (77.0%) are female. The age distribution indicates that 34 (34.0%) fall within the 30 years old and below bracket, 57 (57.0%) are aged 31-40, 8 (8.0%) are in the 41-50 range, and only 1 (1.0%) is 51 years old and above. In terms of education, 88 (88.0%) hold a BS Nursing degree, 11 (11.0%) have a master's degree, and only 1 (1.0%) has a doctorate. Regarding length of service, 45 (45.0%) have 3 years and below, 22 (22.0%) have 4-6 years, 21 (21.9%) have 7-9 years, and 12 (12.0%) have 10 years and above. In terms of employment status, 59 (59.0%) are job order, while 41 (41.0%) are permanent, indicating a higher proportion of nurses with job order status.

Table 1. Demographic profile of the respondents

	Frequency	Percentage
Gender		
Male	23	23.0%
Female	77	77.0%
Age		
30 years old & below	34	34.0%
31-40 years old	57	57.0%
41-50 years old	8	8.0%
51 years old & above	1	1.0%
Educational Attainment		
BS Nursing	88	88.0%
Master's degree	11	11.0%
Doctorate	1	1.0%
Length of Service		
3 years & below	45	45.0%
4-6 years	22	22.0%
7-9 years	21	21.0%
10 years & above	12	12.0%
Status of Appointment		
Job order	59	59.0%
Regular employees	41	41.0%

3.2 Compliance Towards Infection Control Practices

Awareness of Knowledge

Table 2. The extent of respondent's compliance towards infection control practices in terms of awareness of knowledge

	Statements	Mean	SD	Interpretation
1	I am aware of the infection control protocols at our hospital.	4.62	0.65	Strongly Agree
2	I am knowledgeable about the types of infections commonly encountered here.	4.59	0.59	Strongly Agree
3	I understand the importance of infection control in patient care.	4.79	0.43	Strongly Agree
4	I know the correct hand hygiene techniques recommended by our hospital.	4.84	0.40	Strongly Agree
5	I am familiar with the proper use of personal protective equipment (PPE).	4.84	0.39	Strongly Agree
Mean		4.74	0.42	Strongly Agree

Note: 4.50 - 5.0 (Strongly Agree), 3.50 - 4.49 (Agree), 2.50 - 3.49 (Neutral), 1.50 - 2.49 (Disagree), 1.00 - 1.49 (Strongly Disagree)

Table 2 outlines the extent of respondents' compliance towards infection control practices concerning awareness of knowledge. In this category, the respondents' assessment yields a total weighted mean score of 4.74 with a standard deviation of 0.42, indicating a rating of "Strongly Agree." This result suggests that the nurse respondents strongly believe they possess a conscious understanding and acknowledgment of infection control policies and procedures in their healthcare environment. They demonstrate knowledge gained through formal education, professional training, or experiences, reflecting a comprehensive understanding of infection control measures.

In line with these findings, Princeton et al. (2020) reported that only a few participants were familiar with PPE, emphasizing the crucial role of healthcare providers in ensuring public access to high-quality healthcare. The study underscores the importance of safeguarding healthcare professionals, including dentistry students who, as

frontline workers, need to take necessary precautions due to their susceptibility to infections while treating patients.

Adherence to Protocol

Table 3. The extent of respondent’s compliance towards infection control practices in terms of adherence to protocol

	Statements	Mean	SD	Interpretation
1	I consistently follow hand hygiene protocols.	4.79	0.43	Strongly Agree
2	I use PPE when required.	4.81	0.42	Strongly Agree
3	I adhere to isolation precautions for infectious patients.	4.80	0.43	Strongly Agree
4	I dispose of hazardous materials following hospital guidelines.	4.78	0.44	Strongly Agree
5	I report potential infection control breaches promptly.	4.65	0.58	Strongly Agree
	Mean	4.77	0.40	Strongly Agree

Table 3 illustrates the extent of respondents' compliance towards infection control practices concerning adherence to protocol. In this category, the respondents' assessment yields a total weighted mean score of 4.77 with a standard deviation of 0.40, indicating a rating of "Strongly Agree." This result suggests that nurse respondents strongly emphasize their adherence to established protocols and criteria for infection control in their daily clinical work.

Webster et al. (2020) highlight that factors influencing individuals' choices about adherence include their understanding of the illness and the isolation process, cultural customs, perceptions of the benefits and risks of quarantine, and practical issues such as running out of supplies and the financial consequences of unemployment. Variability in individuals' compliance with isolation during outbreaks underscores the importance of emphasizing cultural standards, promoting the perceived benefits of isolation for public health, and ensuring an adequate supply of essentials. Clear and prompt communication about isolation procedures is also crucial.

Training and Communication

Table 4. The extent of respondent’s compliance towards infection control practices in terms of training and communication

	Statements	Mean	SD	Interpretation
1	I have received adequate training in infection control.	3.24	1.01	Neutral
2	I feel comfortable seeking clarification on infection control procedures.	3.99	0.76	Agree
3	I communicate effectively with colleagues regarding infection control.	4.21	0.62	Agree
4	I believe that ongoing education on infection control is essential.	4.67	0.59	Strongly Agree
5	I received regular updates and modifications to the infection control recommendations via efficient channel communication.	3.80	0.80	Agree
	Mean	3.98	0.56	Agree

Table 4 depicts the extent of respondents' compliance towards infection control practices in the context of training and communication among nurses. In this category, the respondents' assessment yields a total weighted mean score of 3.98 with a standard deviation of 0.56, indicating a rating of "Agree." This result suggests that nurse respondents agree that they have undergone organized and methodical training sessions, workshops, or programs focused on infection control procedures. Additionally, they adhere to the principle of knowledge sharing through informal and formal interactions about infection control procedures in a medical setting.

In alignment with these findings, Alqahtani et al. (2020) affirm that a successful management training program can enhance healthcare quality by reducing healthcare-associated infections, improving patient experiences, and lowering medical expenses. Hand hygiene instruction, as emphasized by Schuchard et al. (2020), is crucial for better infection prevention, requiring targeted and highly applicable measures such as improved compliance with hand hygiene. McAlearney et al. (2022) highlight the strategic communication of knowledge about healthcare-associated infections (HAIs) and HAI prevention, underscoring the importance of using various strategic communication methods, including narrative, to enhance infection prevention efforts among healthcare professionals.

Attitude and Practices

Table 5. The extent of respondent's compliance towards infection control practices in terms of attitude and practices

	Statements	Mean	SD	Interpretation
1	I believe infection control practices enhance patient safety.	4.83	0.40	Strongly Agree
2	I actively participate in infection control audits.	3.58	1.22	Agree
3	I feel supported by hospital management in my infection control efforts.	4.06	0.66	Agree
4	I take responsibility for maintaining a clean and hygienic workspace.	4.59	0.55	Strongly Agree
5	I am proactive in identifying infection risks in the hospital.	4.42	0.65	Agree
	Mean	4.30	0.47	Agree

Table 5 illustrates the extent of respondents' compliance towards infection control practices concerning attitudes and practices among nurses. In this category, the respondents' assessment yields a total weighted mean score of 4.30 with a standard deviation of 0.47, indicating a rating of "Agree." This result suggests that nurse respondents agree that they hold personal opinions, judgments, and feelings regarding infection control procedures used in their medical environment, indicating strong opinions, inclinations, and feelings about following infection control protocols.

This finding aligns with the results of AlJohani et al. (2021), who reported that staff attitudes were above average, and there was a high degree of awareness regarding security measures and adherence to surgical security procedures. Positive attitudes were found to be associated with greater conformity to needle safety precautions. Additionally, Huang et al. (2023) noted positive attitudes, unfavorable procedures, and uneven understanding regarding the prevention and management of urinary tract infections related to catheter use among healthcare personnel. Overcoming obstacles such as heavy workloads and understaffing, improving collaboration, and training, and utilizing information technological advances were identified as potential moderators to enhance healthcare workers' understanding and practices in infection prevention.

Self-evaluation

Table 6. The extent of respondent's compliance towards infection control practices in terms of self-evaluation

	Statements	Mean	SD	Interpretation
1	I believe my knowledge of infection control is up to date.	3.54	1.10	Agree
2	I am confident in my ability to prevent infections in the hospital.	4.34	0.62	Agree
3	I promptly address any breaches in infection control.	4.29	0.69	Agree
4	I believe infection control measures contribute to better patient outcomes	4.70	0.56	Strongly Agree
5	I believe in overall commitment to infection control practices.	4.67	0.57	Strongly Agree
	Mean	4.31	0.52	Agree

Table 6 outlines the extent of respondents' compliance towards infection control practices concerning self-evaluation among nurses. In this category, the respondents' assessment yields a total weighted mean score of 4.31 with a standard deviation of 0.52, indicating a rating of "Agree." This result suggests that nurse respondents agree that they actively evaluate their performance and compliance with infection control guidelines in the medical environment.

These findings align with the assertion of Satria et al. (2022) that self-evaluation capacity (e-SPAR) serves as a valuable tool for nations to track their progress in meeting the core capacity requirements of the International Health Regulation (IHR), particularly in controlling infectious diseases to be prepared for potential epidemics. Furthermore, Wałaszek et al. (2018) highlighted that most of the Infection Control Nurse expert job description is dedicated to infection monitoring, emphasizing the importance of internal oversight in their role. Clarity in defining the professional duties and rights of Infection Control Nurses is crucial for them to effectively carry out their functions as nurses and midwives.

3.3 Difference in the Respondent's Compliance Towards Infection Control Practices When Grouped According to Demographic Profile By Gender

Table 7. Differences in the respondent's compliance towards infection control practices in terms of gender

Sources of Variation		Mean	SD	Mean Difference	t	p-value	Interpretation
Awareness of Knowledge	Male	4.71	0.51	-0.02981	-0.300	0.765	Not Significant
	Female	4.74	0.39				
Adherence to Protocol	Male	4.68	0.50	-0.11395	-1.189	0.237	Not Significant
	Female	4.79	0.37				
Training and Communication	Male	4.20	0.49	0.28312*	2.158	0.033	Significant
	Female	3.92	0.57				
Attitude and Practices	Male	4.46	0.50	0.21412	1.925	0.057	Not Significant
	Female	4.25	0.46				
Self-Evaluation	Male	4.43	0.51	0.16465	1.351	0.180	Not Significant
	Female	4.27	0.51				

*Significant at alpha 0.05

Table 7 outlines the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically gender. The table indicates that, except for "Training and Communication," the mean differences in the categories under respondents' compliance towards infection control practices are not significant at the alpha level of 0.05. This implies that male and female nurse respondents do not differ significantly in their perceptions of compliance towards infection control practices.

These findings are in line with the affirmation of Desta et al. (2018), who noted that the prevention of infections, understanding, and implementation were correlated with sociodemographic characteristics and hospital characteristics. To enhance infection control practices, healthcare facilities and relevant parties should ensure the availability of policies, provide proper training for healthcare professionals, elevate educational standards for experts, implement preventive standards, and offer ongoing mentoring.

By Age

Table 8. Differences in the respondent's compliance towards infection control practices in terms of age

Sources of Variation		Sum of Squares	Df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.865	3	0.288	1.696	0.173	Not Significant
	Within Groups	16.325	96	0.170			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.670	3	0.223	1.385	0.252	Not Significant
	Within Groups	15.494	96	0.161			
	Total	16.164	99				
Training and communication	Between Groups	1.158	3	0.386	1.229	0.303	Not Significant
	Within Groups	30.130	96	0.314			
	Total	31.288	99				
Attitude and practices	Between Groups	0.749	3	0.250	1.114	0.348	Not Significant
	Within Groups	21.529	96	0.224			
	Total	22.278	99				
Self-evaluation	Between Groups	0.140	3	0.047	.172	0.915	Not Significant
	Within Groups	26.133	96	0.272			
	Total	26.274	99				

*Significant at alpha 0.05

Table 8 presents the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically age. The table indicates that the values of F-ratios and P-

values for all sub-categories under compliance towards infection control practices are not significant at the alpha level of 0.05. This suggests that, despite variations in age among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other words, age, whether younger or older (51 years and above), does not necessarily influence a nurse's perspective on compliance towards infection control practices compared to those in other age brackets.

These findings resonate with the research of Carlucci et al. (2020), which identified substantial variations in the propensity of various demographic categories to follow isolation orders. The study revealed that factors such as gender, education level, geographical location, middle age, and healthcare profession did influence adherence to isolation recommendations. Understanding these demographic trends can aid health policymakers in targeting specific groups for infection prevention and medical education, guiding communication strategies to mitigate the impact of illness, and facilitating effective dissemination of information.

By Educational Attainment

Table 9. Differences in the respondent's compliance towards infection control practices in terms of educational attainment

Sources of Variation		Sum of Squares	df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.202	2	0.101	0.576	0.564	Not Significant
	Within Groups	16.989	97	0.175			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.059	2	0.030	0.179	0.836	Not Significant
	Within Groups	16.105	97	0.166			
	Total	16.164	99				
Training and communication	Between Groups	0.388	2	0.194	0.608	0.546	Not Significant
	Within Groups	30.900	97	0.319			
	Total	31.288	99				
Attitude and practices	Between Groups	0.501	2	0.250	1.115	0.332	Not Significant
	Within Groups	21.778	97	0.225			
	Total	22.278	99				
Self-evaluation	Between Groups	0.009	2	0.004	0.016	0.984	Not Significant
	Within Groups	26.265	97	0.271			
	Total	26.274	99				

*Significant alpha .05

Table 9 outlines the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically educational attainment. The table indicates that the values of F-ratios and P-values for all sub-categories under compliance towards infection control practices are insignificant at the alpha level of 0.05. This implies that, despite variations in educational attainment among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other words, holding a doctorate may not necessarily give a nurse a more advantageous perspective on compliance towards infection control practices compared to those with a BS Nursing or master's degree, and vice versa.

These findings are consistent with the evaluation by Bekele et al. (2018), who identified certain shortcomings in nurses' adherence to infection control procedures despite their knowledge of the fundamentals of infection prevention. Factors such as lack of expertise, carelessness, and inadequate resources contributed to suboptimal adherence to preventative procedures.

By Length of Service

Table 10 delineates the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically in terms of length of service. The table indicates that the values of F-ratios and P-values for all sub-categories under compliance towards infection control practices are insignificant at the alpha level of 0.05. This implies that, despite variations in the length of service among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other

words, having 10 years of work experience may not necessarily provide a nurse with a more advantageous perspective on compliance towards infection control practices compared to those with fewer years of service (3 years & below, 4-6 years, and 7-9 years), and vice versa.

Table 10. Differences in the respondent’s compliance towards infection control practices in terms of length of service

Sources of Variation		Sum of Squares	df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.885	3	0.295	1.736	0.165	Not Significant
	Within Groups	16.306	96	0.170			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.359	3	0.120	0.727	0.538	Not Significant
	Within Groups	15.805	96	0.165			
	Total	16.164	99				
Training and communication	Between Groups	0.909	3	0.303	0.957	0.416	Not Significant
	Within Groups	30.379	96	0.316			
	Total	31.288	99				
Attitude and practices	Between Groups	0.075	3	0.025	0.107	0.956	Not Significant
	Within Groups	22.204	96	0.231			
	Total	22.278	99				
Self-evaluation	Between Groups	0.199	3	0.066	0.245	0.865	Not Significant
	Within Groups	26.074	96	0.272			
	Total	26.274	99				

*Significant alpha .05

This finding aligns with the emphasis by Singh et al. (2023) on the importance of ongoing training for healthcare workers to retain an understanding of hospital infection management procedures and healthcare-associated infection (HAI) prevention. Annual training and educational components contribute to the continuous improvement of healthcare workers' knowledge and practices in infection control.

By Status of Appointment

Table 11 illustrates the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically in terms of the status of appointment. The table indicates that the values of mean differences for all categories under respondents' compliance towards infection control practices are not significant at the alpha level of 0.05. This implies that job orders and regular employees among nurse respondents do not differ significantly in their perceptions of compliance towards infection control practices. In other words, nurses with regular work status may not necessarily have a more advantageous perspective on compliance towards infection control practices compared to those with job order status, and vice versa.

Table 11. Differences in the respondent’s compliance towards infection control practices in terms of the status of appointment

Source of Variation		Mean	SD	Mean Difference	t	p-value	Interpretation
Awareness of knowledge	Job order	4.77	0.43	0.08995	1.062	0.291	Not Significant
	Regular	4.68	0.40				
Adherence to protocol	Job order	4.81	0.39	0.09946	1.214	0.228	Not Significant
	Regular	4.71	0.42				
Training and communication	Job order	4.04	0.54	0.14312	1.256	0.212	Not Significant
	Regular	3.90	0.59				
Attitude and practices	Job order	4.34	0.45	0.11310	1.175	0.243	Not Significant
	Regular	4.23	0.51				
Self-evaluation	Job order	4.37	0.54	0.14998	1.440	0.153	Not Significant
	Regular	4.22	0.46				

*Significant at alpha 0.05

This finding is in line with the assessment by Thazha et al. (2022), who found high levels of understanding, favorable views, and sound infection control practices among healthcare professionals. The study highlighted various factors, including age, education, and nursing background, linked to more optimistic outlooks and better infection control practices. Similarly, Barratt and Gilbert (2021) emphasized the need for national standards and programs for personal protective equipment (PPE) use, which could contribute to improved performance and awareness of infection control practices on a broader scale.

3.4 Correlation Among the Subcategories Subsumed Under Compliance Towards Infection Control Practice

Table 12. Correlation among the sub-categories subsumed under the compliance towards infection control practice

Variables		Pearson r	P-value	N	Interpretation
Dependent	Independent				
Awareness of knowledge	Adherence to protocol	0.844**	.000	100	Very High
	Training and communication	0.364**	.000	100	Moderate
	Attitude and practices	0.438**	.000	100	Moderate
	Self-evaluation	0.416**	.000	100	Moderate

*The Correlation Coefficient is significant at alpha .05

Correlation Coefficient Scales Adopted from Hopkins, Will (2002):

0.0-0.1=Nearly Zero; 0.1-0.30=Low; .3-0.5 0=Moderate; .5-0.7-0=High; .7-0.9= Very High; 0.9-1=Nearly Perfect

Table 4 depicts the correlation among the sub-categories within the compliance towards infection control practices. The computed Pearson Correlation Coefficients (Pearson r) between these variables are found to be significant at the alpha level of 0.05. These results indicate that nurses who perceive strong compliance towards infection control practices in terms of Awareness of Knowledge and Adherence to Protocol are likely the same group of nurses who perceive compliance as Agreeing in terms of Training and Communication, Attitude and Practices, and Self-Evaluation. In general, the extent of sub-categories under the compliance towards infection control practices—Awareness of Knowledge, Adherence to Protocol, Training and Communication, Attitude and Practices, and Self-Evaluation—is moderately correlated.

4.0 Conclusion

The following are the conclusions drawn from the findings of this study:

- Nurses involved in this study are adequately represented in terms of gender, age, educational attainment, length of service, and appointment status.
- On average, nurses are compliant with infection control practices.
- Generally, variables such as gender, age, educational attainment, length of service, and appointment status do not mediate how nurses assess compliance with infection control practices among their peers.
- Generally, nurses who perceive strong compliance with infection control practices in terms of awareness, knowledge, and adherence to protocols are likely the same group of nurses who perceive agreement in compliance regarding training and communication, attitude and practices, and self-evaluation, respectively.
- This study appears to support Edward C. Green and Elaine Murphy's (2020) Health Belief Model (HBM), which elucidates those cognitive processes that influence nurses' behaviors in the context of infection control. In the HBM, nurses' compliance is examined through the lenses of perceived susceptibility to infections, acknowledging the risks they face in healthcare settings, and perceived severity, emphasizing the consequences of non-compliance on both personal and patient health.
- The results show that although most nurses follow established infection control procedures, there are still certain areas that need to be improved. Individual knowledge and attitudes as well as structural problems like resource availability and workload impact are among the factors that affect compliance.
- The study emphasizes the significance of continuing education and training for nurses in infection control procedures. It also emphasizes the necessity for hospital administration to provide enough resources and supportive work conditions that promote compliance.
- The importance of nurses in preventing hospital-acquired illnesses is highlighted by these findings, which also add to our understanding of infection control in healthcare settings. They also recommend areas for more study, like examining how particular treatments affect improving compliance rates.

- While the study is context-specific, the findings could potentially be transferred to other healthcare settings, benefiting a larger population. The fight against hospital-acquired infections is a collaborative effort, and this study reinforces the critical role that nurses play in this attempt.

Based on the above findings and conclusions, the following recommendations are forwarded in this study:

- Male and female nurses should be provided with equal opportunities to exercise their nursing knowledge and skills, as this study indicates that nurses, regardless of gender, have the same level of perceptions regarding compliance towards infection control practices.
- Nurses' demographic profiles, including gender, age, educational attainment, length of service, and appointment status, should not hinder their practices towards infection control in the hospital.
- Nurses should receive additional training on compliance with infection control practices. Continuous Education and Training: It is recommended that infection control practitioners receive regular and up-to-date training sessions. This ensures that all nurses have up-to-date knowledge and abilities for preventing hospital-acquired infections.
- Adequate Resources: The hospital management should guarantee that there are enough resources available for infection control, such as personal protective equipment and sanitizing materials.
- Supportive Work Environment: Efforts should be made to reduce nursing workload and stress levels, as these might affect compliance. A supportive work environment that prioritizes employee health and well-being will have an indirect positive impact on patient care.
- Frequent Audits: To spot non-compliance and take immediate action, regular audits of infection control procedures should be carried out.
- Feedback Mechanism: A system for nurses to submit feedback on infection control procedures should be implemented. This could assist discover practical compliance issues and viable solutions.
- Researchers in the field of healthcare and nursing are encouraged to conduct studies parallel to this one, but with the inclusion of other individual variables such as nurses' work environment, leadership styles, communication proficiency, work engagement, and work anxiety in different settings. To better understand the long-term patterns in compliance and investigate the effects of particular interventions on raising compliance rates, more study is advised.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The researcher extends heartfelt gratitude to everyone who supported this endeavor.

9.0 References

- Ahmed, N. J., Haseeb, A., Elazab, E. M., Kheir, H. M., Hassali, A. A., & Khan, A. H. (2021). Incidence of Healthcare-Associated Infections (HAIs) and the adherence to the HAIs' prevention strategies in a military hospital in Alkharj. *Saudi Pharmaceutical Journal*, 29(10), 1112-1119.
- Al-Omari, A., Al Mutair, A., Alhumaid, S., Salih, S., Alanazi, A., Albarsan, H., & Al Subaie, M. (2020). The impact of antimicrobial stewardship program implementation at four tertiary private hospitals: results of a five-years pre-post analysis. *Antimicrobial Resistance & Infection Control*, 9(1), 1-9.
- Alhumaid, S., Al Mutair, A., Al Alawi, Z., Alsuliman, M., Ahmed, G. Y., Rabaan, A. A. & Al-Omari, A. (2021). Knowledge of infection prevention and control among healthcare workers and factors influencing compliance: a systematic review. *Antimicrobial Resistance & Infection Control*, 10(1), 1-32.
- Habboush, Y., Yarrarapu, S. N. S., & Guzman, N. (2024). Infection control. In *StatPearls*. StatPearls Publishing. <http://www.ncbi.nlm.nih.gov/books/NBK519017/>
- Suleyman, G., Alangaden, G., & Bardossy, A. C. (2018). The role of environmental contamination in the transmission of nosocomial pathogens and healthcare-associated infections. *Current infectious disease reports*, 20, 1-11.

- Alhumaid, S., Al Mutair, A., Al Alawi, Z., Alsuliman, M., Ahmed, G. Y., Rabaan, A. A., ... & Al-Omari, A. (2021). Knowledge of infection prevention and control among healthcare workers and factors influencing compliance: a systematic review. *Antimicrobial Resistance & Infection Control*, 10(1), 1-32.
- AlJohani, A., Karuppiah, K., Al Mutairi, A., & Al Mutair, A. (2021). Narrative Review of Infection Control Knowledge and Attitude among Healthcare Workers. *Journal of epidemiology and global health*, 11(1), 20-25. <https://doi.org/10.2991/jegh.k.201101.001>
- Alqahtani, A. N., Almaghribi, R. H., Albaadani, M. M., & Almossa, K. (2020). Impact of infection control training program in improving the quality of healthcare. *European Journal of Medical and Health Sciences*, 2(5).
- Barratt, R., & Gilbert, G. L. (2021). Education and training in infection prevention and control: Exploring support for national standards. *Infection, disease & health*, 26(2), 139-144. <https://doi.org/10.1016/j.idh.2020.12.002>
- Bekele, I., Yimam, I., & Akele, G. J. I. R. (2018). Adherence to Infection prevention and factors among nurses in jimma university medical center. *Immunome Res*, 14(2), 1-7.
- Carlucci, L., D'ambrosio, I., & Balsamo, M. (2020). Demographic and attitudinal factors of adherence to quarantine guidelines during COVID-19: the Italian model. *Frontiers in psychology*, 11, 559288.
- Desta, M., Ayenew, T., Sitotaw, N., Tegegne, N., Dires, M., & Getie, M. (2018). Knowledge, practice and associated factors of infection prevention among healthcare workers in Debre Markos referral hospital, Northwest Ethiopia. *BMC health services research*, 18(1), 1-10.
- Elkholy, A. A., Grant, R., Assiri, A., Elhakim, M., Malik, M. R., & Van Kerkhove, M. D. (2020). MERS-CoV infection among healthcare workers and risk factors for death: retrospective analysis of all laboratory-confirmed cases reported to WHO from 2012 to 2 June 2018. *Journal of infection and public health*, 13(3), 418-422.
- Huang, A., Hong, W., Zhao, B., Lin, J., Xi, R., & Wang, Y. (2023). Knowledge, attitudes and practices concerning catheter-associated urinary tract infection amongst healthcare workers: a mixed methods systematic review. *Nursing open*, 10(3), 1281-1304. <https://doi.org/10.1002/nop.2.1384>
- McAlearney, A. S., MacEwan, S. R., Gregory, M. E., Sova, L. N., Hebert, C., & Gaughan, A. A. (2022). Identifying management practices for promoting infection prevention: Perspectives on strategic communication. *American journal of infection control*, 50(6), 593-597. <https://doi.org/10.1016/j.ajic.2021.11.025>
- Princeton, B., Santhakumar, P., & Prathap, L. (2020). Awareness on preventive measures taken by health care professionals attending COVID-19 patients among dental students. *European journal of dentistry*, 14, S105-S109.
- Satria, F. B., Tsai, F. J., & Turbat, B. (2022). Analyzing self-evaluation capacity scores related to infectious disease control in International Health Regulations during the first year of COVID-19 pandemic. *Scientific Reports*, 12(1), 15025.
- Singh, S., Kaur, K., Saini, R. S., Singh, S., Aggarwal, H. K., & Chandra, H. (2023). Impact of structured training program about Hospital Infection Control practices on Knowledge and Perception of nursing students at public and private nursing teaching institute of Northern India- An interventional study. *Journal of education and health promotion*, 12, 168. https://doi.org/10.4103/jehp.jehp_1471_22
- Thazha, S. K., Cruz, J. P., Alquwez, N., Scaria, B., Rengan, S. S., & Almazan, J. U. (2022). Infection prevention and control awareness, attitudes, and practices among healthcare professionals in South India. *Journal of infection in developing countries*, 16(4), 659-667. <https://doi.org/10.3855/jidc.14746>
- Wałaszek, M., Różańska, A., Szczypta, A., Bulanda, M., & Wójkowska-Mach, J. (2018). Polish infection control nurses - Self-assessment of their duties and professional autonomy in different types of hospitals. *Polish infection control nurses - Self-assessment of their duties and professional autonomy in different types of hospitals. Medycyna pracy*, 69(6), 605-612. <https://doi.org/10.13075/mp.5893.00719>
- Webster, R. K., Brooks, S. K., Smith, L. E., Woodland, L., Wessely, S., & Rubin, G. J. (2020). How to improve adherence with quarantine: rapid review of the evidence. *Public health*, 182, 163-169.
- Squires, J. E., Linklater, S., Grimshaw, J. M., Graham, I. D., Sullivan, K., Bruce, N., ... & Brehaut, J. C. (2018). Understanding practice: factors that influence physician hand hygiene compliance. *Infection Control & Hospital Epidemiology*, 39(02), 144-151.
- World Health Organization. (2019). Health care-associated infections fact sheet. Retrieved from https://doi.org/www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf

Application of Herzberg's Two-Factor Theory: Motivational Factors and Hygiene Factors in the Financial Industry

Romario P. Ybañez

Foundation University, Dumaguete, Negros Oriental, Philippines

Author email: romario.ybanez@foundationu.com

Dated received: February 27, 2024

Date revised: March 13, 2024

Date accepted: March 16, 2024

Originality: 91%

Grammarly Score: 99%

Similarity: 9%

Recommended citation:

Ybañez, R. (2024). Application of Herzberg's Two-Factor Theory: Motivational Factors and Hygiene Factors in the Financial Industry. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 92-101.
<https://doi.org/10.5281/zenodo.10825260>

Abstract. This study aimed to investigate the applicability of Herzberg's Two-Factor Theory of Motivation within the financial sector, focusing on banking institutions through a quantitative approach. Through meticulous statistical analysis using the weighted mean formula, data from 100 bank employees, spanning ages 20 to 54, with a gender distribution of 35 males and 65 females, was methodically processed. Each respondent was presented with thoughtfully crafted questionnaires, aimed at pinpointing instances where they experienced notable satisfaction or dissatisfaction in their work or office atmosphere. The findings uncovered pivotal motivational factors within the bank's environment, highlighting recognition, responsibility, and opportunities for growth as key drivers of motivation among employees. Interestingly, the study also shed light on hygiene factors, such as company policies, relationships with superiors, and salary, revealing a strikingly low level of dissatisfaction among employees. These results suggest that the working conditions and support systems within these banking institutions are largely meeting or exceeding employee expectations, contributing positively to their overall motivation and satisfaction. In conclusion, this research validates Herzberg's theory within the context of banking but also offers valuable insights for institutions aiming to enhance employee motivation and engagement.

Keywords: Herzberg's Two-Factor Theory; Motivational factor; Hygiene factor; Financial industry; Banking; Philippines.

1.0 Introduction

In an era marked by global competition, the corporate sector faces new challenges and the imperative to craft strategies that cultivate a sustainable competitive advantage through its workforce. This intensified competition has underscored the pivotal role of human resource management, acknowledged as the linchpin behind the survival and triumph of any organization. Yet, amidst these demands, organizations grapple with the realities of uncertainty, complexity, and constant change. The workplace environment has thus ascended as a critical focal point for employees, employers, and customers alike. The consequences of employee dissatisfaction have ripened into a pressing organizational concern, bearing costly outcomes.

The constructs of workplace dissatisfaction and job discontent are intricate psychological phenomena that individuals may confront daily, presenting formidable obstacles to circumvent. In 1959, Frederick Herzberg embarked on groundbreaking studies aimed at discerning the factors within an employee's work milieu that contribute to either satisfaction or dissatisfaction, culminating in his seminal work, "The Motivation to Work." Herzberg discerned between the factors that spur job satisfaction (motivators) and those that breed job discontent (hygiene factors). Hygiene factors, aptly named for their role in preserving workplace satisfaction, are essential for averting dissatisfaction but do not independently evoke satisfaction.

Herzberg postulated the existence of two distinct human needs: physiological and psychological. While physiological needs, such as securing food and shelter, can be met through monetary means, psychological needs, such as the yearning for career advancement, find fulfillment in activities that nurture personal development, such as seminars and training. He contended that factors leading to dissatisfaction, or its absence, are external to the work itself, whereas factors determining satisfaction, or its absence, are intrinsic to the job and not solely swayed by external incentives.

This study endeavors to answer the following objectives: To explore the direct and indirect relationships between sex, age, marital status, educational attainment, designation, employment status, years in service, promotions, and Herzberg's Two-Factor Theory of Motivation; To investigate the applicability of Herzberg's Two-Factor Theory of Motivation among Dumaguete bank employees; To determine the primary factor from Herzberg's Two-Factor Theory of Motivation that contributes to the satisfaction of Dumaguete bank employees; To identify the principal factor from Herzberg's Two-Factor Theory of Motivation that leads to dissatisfaction among Dumaguete bank employees. The ensuing findings hold the promise of illuminating the multifaceted challenges of managing human resources amidst global competition and the dynamic landscapes of organizational environments.

2.0 Methodology

2.1 Research Design

This is a mixed method, quantitative and qualitative. It employs a descriptive research design and utilizes a survey research strategy to gather primary data. The survey questions are structured to capture quantitative data. Additionally, qualitative insights are gathered through key informant interviews and Focus Group Discussions (FGD). Given the study's academic nature and its focus within a specific timeframe, it adopts a cross-sectional design in terms of the time dimension.

2.2 Research Participants

The study enlisted the participation of one hundred bank employees from 20 commercial banks located in Dumaguete City. These individuals were selected through purposive sampling, ensuring a diverse representation of roles within the banking sector. The sample encompassed employees from various levels, ranging from branch officers to entry-level banking tellers, all of whom met the predefined inclusion criteria for the study.

2.3 Research Instrument

The researcher utilized a one-shot survey questionnaire alongside a checklist for data collection purposes. A self-designed questionnaire was employed to delve into the demographic profiles of the respondents. Following this, the questionnaire included inquiries regarding the respondents' perceptions of Herzberg's Two-Factor Theory and its application in their daily work within the banks. This structured approach ensured a systematic gathering of data relevant to the study's objectives.

2.4 Data Gathering Procedure

The questionnaires were distributed and collected through both manual and digital means, including methods such as email for data collection. Given the study's specific focus on Herzberg's Two-Factor Theory within the banking sector of Dumaguete City and the constraints of limited time and resources, a more suitable sampling technique was employed. This technique aimed to explore the intricate relationship between Herzberg's Two-Factor Theory and the well-being of bank employees in Dumaguete City.

2.5 Data Analysis Procedure

The researcher utilized both descriptive and inferential statistics, presenting the findings in the form of tables and diagrams. Frequency and Percentage Distribution were employed. The Mann-Whitney U test was used to determine the results of the perception of Herzberg's Motivation-Hygiene Theory, specifically in terms of factors leading to dissatisfaction and factors leading to satisfaction as perceived by the respondents.

2.6 Ethical Considerations

The researcher carefully considered ethical considerations in conducting the research, ensuring transparency, informed consent, voluntary participation, confidentiality, and the well-being of the participants. All necessary ethical considerations and protocols for the entire duration of the study were stringently followed. The researcher also maintained the confidentiality of all data obtained, including the support personnel's identity as well as their ratings. Moreover, the researcher secured ethical approval from the Ethical Committee of the University Research Office.

3.0 Results and Discussion

3.1 Demographic Profile of the Respondents

The profile of respondents includes sex, marital status, educational attainment, designation, employment status, years in service, and number of promotions received.

Table 1. Demographic profile of the respondents

Profile	Frequency	Percent
Sex		
Male	35	35%
Female	65	65%
Age		
20 - 25	23	23%
26 - 30	29	29%
31 - 35	21	21%
36 - 40	11	11%
41 - Above	16	16%
Marital Status		
Married	46	46%
Single	54	54%
Educational Attainment		
Bachelor's Degree	87	87%
Master's degree or above	13	13%
Office Designation		
Staff Level	58	58%
Management Level	42	42%
Employment Status		
Regular	95	95%
Probation	5	5%
Length of Service		
1-5 years	65	65%
6-10 years	20	20%
11-15 years	8	8%
16-20 years	2	2%
20 years and above	5	5%
No. of Promotions Received		
More than two	12	12%
Two	10	10%
One	33	33%
None	45	45%

As indicated in Table 1, the survey encompassed 100 respondents from 20 banks in Dumaguete City, with a notable gender distribution of 65% female and 35% male. Examining the age demographics, 29% of respondents fell within the 26 to 30 years old bracket, closely followed by 23% in the 20 to 25 years old category. Moreover, 21% were aged 31 to 35 years, while 11% and 16% belonged to the 36 to 40 years old and 41 years old and above categories, respectively. These figures highlight a predominantly youthful workforce, with a significant 52% (29% + 23%) within the 20 to 30 years old range. In terms of marital status, 54% of respondents were married individuals, contrasting with 46% who were single, revealing a notable portion of the sample being single. In examining their educational attainment, the data revealed that only 13% had pursued post-graduate studies, while the majority, 87%, held bachelor's degrees. This suggests that a significant portion of respondents had not pursued advanced studies in their respective fields.

Delving into job roles, 58% of respondents held staff-level or rank-and-file positions, while 42% were officers or in management roles, indicating a prevalence of rank-and-file positions within the sampled population.

Furthermore, a substantial 95% of respondents were regular employees, with only 5% on probation, indicating a high level of job security among the surveyed individuals. Regarding tenure within the industry, the data indicated that 65% of respondents had 1 to 5 years of service, with 20% having 6 to 10 years, 8% with 11 to 15 years, 2% having 16 to 20 years, and 5% with more than 20 years. This distribution suggests that most employees had relatively fewer years of service within the banking sector. When considering promotions, 45% of respondents reported not receiving any promotions, while 33% had received one promotion, 10% received two promotions, and only 12% had received more than two promotions. These figures highlight that a significant portion of respondents did not experience career advancement to higher positions.

3.2 Motivation and Satisfaction of Bank Employees

Table 2. Motivation/Satisfaction factor as to “recognition”

Indicators		Satisfied	Dissatisfied
1.	I am recognized and praised by management whenever I complete my assigned tasks ahead of schedule.	78	22
2.	I am allowed to contribute my ideas for the good of the company.	80	20
3.	I received a verbal commendation for work well done.	83	17
4.	I received a written commendation for a job well done.	50	50
5.	I am given higher responsibilities to maximize my capabilities.	75	25
Mean		73	27

In Table 2, it is evident that a substantial number of respondents, a mean of 73 individuals, expressed satisfaction with Recognition, particularly the 83 respondents who received verbal commendation for their outstanding work. This verbal acknowledgment seemed to resonate strongly with the majority, serving as a significant source of motivation. However, there was a contrasting sentiment among 50 respondents who expressed dissatisfaction with the aspect related to receiving written commendation for their achievements. This indicates a noteworthy finding: most respondents derived motivation primarily from verbal recognition of their accomplishments.

In Herzberg's Two-Factor Theory of motivation, Recognition mirrors what McClelland termed as the motivator of affiliation. McClelland's Human Motivation Theory asserts that individuals are motivated not just by personal achievements but also by a sense of belonging and accomplishment within a group. They derive satisfaction from contributing to the collective success rather than solely seeking personal praise. This form of motivation is particularly advantageous in organizations that thrive on teamwork and collaboration.

When we delve into the psychological underpinnings, Recognition, as outlined in Herzberg's theory, aligns closely with Maslow's concept of esteem needs. Maslow's Hierarchy of Needs Theory posits that esteem needs to encompass both external recognition from others and internal self-esteem. It is an innate human desire to feel valued by peers and acknowledged for one's contributions to society. Individuals who fulfill their esteem needs by gaining recognition and cultivating self-esteem tend to exhibit confidence in their abilities. Conversely, those deprived of such acknowledgment may struggle with feelings of inadequacy.

Within an organizational context, recognizing employees as indispensable members of the team and appreciating their contributions goes beyond mere acknowledgment – it fosters a profound sense of motivation and belonging. By acknowledging individuals' efforts, organizations not only boost morale but also create an environment where each member feels valued and integral to the collective success. This, in turn, can lead to increased productivity, job satisfaction, and a stronger sense of camaraderie among team members.

In conclusion, the data from Table 2 underscores the significance of recognition as a potent motivator. By understanding the psychological principles behind it, organizations can leverage recognition effectively to nurture a motivated workforce that thrives on collective success and mutual appreciation.

Table 3. Motivation/Satisfaction factor as to “responsibility”

	Indicators	Satisfied	Dissatisfied
1.	I am challenged to do other responsibilities aside from my assigned tasks.	94	6
2.	I am delegated as Officer-In-Charge in our department whenever my boss is on leave.	35	65
3.	I am given higher responsibilities from time to time.	67	33
4.	I am designated to assume other responsibilities whenever the assigned staff is not available.	77	23
5.	I performed my assigned tasks with minimal supervision.	97	3
	Mean	74	26

Table 3 provides valuable insights into employee satisfaction with their Responsibilities. On average, 74 respondents expressed contentment with their assigned tasks, with a notable 97 individuals mentioning their preference for working with minimal supervision. This suggests that a significant portion of respondents found motivation in their roles when granted autonomy and independence in their work. However, a contrasting sentiment emerged among 65 respondents who expressed dissatisfaction when tasked with the role of Officer-In-Charge during the boss's absence. This sheds light on an intriguing finding: while employees are motivated by responsibilities, there seems to be hesitation or dissatisfaction when delegated higher positions without adequate support or guidance.

McClelland's Human Motivation Theory offers a lens through which we can understand this phenomenon further. In this theory, the concept of recognition aligns closely with the motivator of power. McClelland posits that employees driven by power are inclined to seek control within the group, thriving in competitive environments where they can lead successful teams and be acknowledged for their efforts. Job titles and positions of authority serve as potent motivators for this group. Therefore, it can be inferred that employees are motivated when entrusted with responsibilities and allowed to lead within the organization.

This perspective also resonates with Maslow's esteem needs, which emphasize the importance of feeling valued by others and making meaningful contributions. Employees who fulfill their esteem needs by gaining recognition and self-esteem tend to exhibit confidence in their abilities. To cultivate motivation among employees, it is recommended to assign them responsibilities within the organization, thereby instilling confidence in their capability to complete tasks autonomously. By promoting a sense of empowerment rather than inferiority, organizations can tap into this intrinsic motivation and foster a workplace environment where employees feel valued and capable.

Table 4. Motivation/Satisfaction factor as to “growth”

	Indicators	Satisfied	Dissatisfied
1.	I am allowed to attend company-sponsored seminars and trainings for my career development.	89	11
2.	I am encouraged to attend seminars and training for my personal career development.	81	19
3.	I am exposed to higher responsibilities as part of my training for promotion.	62	38
4.	The company conducts an in-house seminar for employee career development.	77	23
5.	I am exposed to managerial positions as part of my training for promotion.	48	52
	Mean	71	29

Table 4 provides an insightful glimpse into employee satisfaction with their Growth opportunities within the organization. On average, 71 respondents expressed contentment with their growth experiences, particularly when given the chance to attend company-sponsored seminars and training sessions for career development. This sentiment was echoed strongly by 89 respondents, indicating a clear preference for competency improvement through learning opportunities. However, a different perspective emerged among 52 respondents who voiced dissatisfaction when exposed to managerial positions as part of their training for promotion. This intriguing finding suggests that while employees are motivated by opportunities for growth and skill development, there may be reservations or discomfort when it comes to assuming higher-level positions.

McClelland's Human Motivation Theory provides a lens through which we can understand this dynamic further. In this theory, the concept of growth aligns closely with the motivator of achievement. Employees driven by the need for achievement find fulfillment in setting and attaining challenging goals, taking pride in their workmanship and the process of achieving results. These individuals often thrive on feedback and praise, showcasing their best performance when working independently rather than within a team dynamic. Despite their preference for individual work, employees motivated by achievement can bring immense value to an organization, contributing to innovation and excellence (Wallace, Goldstein, & Nathan, 1987).

Moreover, in Maslow's Theory of Motivation, growth corresponds with the highest level of needs known as self-actualization. This pinnacle of Maslow's hierarchy represents an individual's quest for self-fulfillment and the realization of their full potential. Unlike lower-level needs, self-actualization needs are not born from deficiency but from a desire to grow and evolve personally. They emphasize the importance of personal development, creativity, and the pursuit of meaningful goals. Therefore, organizations can foster motivation and satisfaction among employees by providing avenues for self-actualization, such as encouraging personal growth, creativity, and opportunities for individuals to excel in their unique ways.

Understanding these psychological underpinnings can guide organizations in tailoring their approaches to employee growth and development. By aligning growth opportunities with individual motivations for achievement and self-actualization, organizations can create a workplace environment where employees feel empowered to reach their full potential, contributing meaningfully to organizational success while finding personal fulfillment in their roles.

Table 5. Summary of Herzberg's motivation/satisfaction factors

Factors	Satisfied	Dissatisfied
Recognition	73	27
Responsibility	74	26
Growth	71	29
Composite Mean	73	27

Table 5 shows that most of the workers were Satisfied with the Factors of Motivation such as Recognition, Responsibility, and Growth as cited by the Composite Mean of 73. This proves that sampled banks in Dumaguete City have properly applied the Theory of Motivation to their employees.

3.3 Hygiene and Dissatisfaction of Bank Employees

Table 6. Hygiene/Dissatisfaction factor as to "company policy"

Indicators	Satisfied	Dissatisfied
1. Our company personnel policies are beneficial to me and to my co-employees.	94	6
2. Special awards are given to performing employees.	75	25
3. Our company provides benefits over and above what the law requires.	91	9
4. Our company provides benefits for the employees' welfare.	91	9
5. The company practices corporate social responsibility for society's welfare.	91	9
Mean	88	12

Table 6 sheds light on employee satisfaction with the Company Policy within the organization. On average, 88 respondents expressed contentment with the Company Policy, particularly in the realm of company personnel policies that benefit the workers. This sentiment was strongly echoed by 94 respondents, indicating a favorable view of policies that support and enhance the well-being of employees. However, a contrasting perspective emerged among 25 respondents who expressed dissatisfaction with the special awards given to high-performing employees. This finding suggests that while the overall Company Policy was well-received and effective in preventing widespread worker dissatisfaction, there may be room for improvement in the area of recognizing and rewarding exceptional performance.

Johnson's (2018) article provides valuable insights into the impact of Company Policy on employee satisfaction and performance. The article equates Company Policy with effective management practices, emphasizing that poor management can lead to dissatisfaction and decreased productivity. Ineffective leaders may provide insufficient feedback on employee performance or resort to micromanagement, which stifles motivation and creativity. To counteract this, the article advocates for empowering employees to take ownership of their work, guiding them towards best practices, and enabling them to experience the sense of accomplishment that comes with autonomy. By fostering a culture of trust and empowerment, organizations can enhance employee satisfaction and performance, ensuring that Company Policy aligns with the principles of effective management.

Table 7. Hygiene/Dissatisfaction factor as to “relationship with the boss”

Indicators		Satisfied	Dissatisfied
1.	My boss emphasizes teamwork among employees under his supervision.	84	16
2.	My boss ensures that we have a harmonious relationship with my co-employees.	87	13
3.	My boss recommends promotion objectively based on performance appraisal.	74	26
4.	My boss gives value to subordinates’ suggestions and recommendations for quality service.	87	13
5.	My boss appreciates feedback mechanisms from his subordinates to ensure the attainment of goals.	88	12
Mean		84	16

Table 7 reveals that the mean of 84 respondents were satisfied with their relationship with the Boss, particularly the 88 respondents who were satisfied in situations where the boss appreciates feedback mechanisms from subordinates to ensure the attainment of goals. This suggests that management effectively handled the issue of the Relationship with the Boss.

In Herzberg’s dissatisfaction factor, the relationship with the boss can also be explained as not being heard, as mentioned in Johnson’s (2018) article on key reasons for job dissatisfaction and poor employee performance. According to Johnson (2018), communication is crucial for employee satisfaction, but employees often feel that management doesn't listen to them. Some feel they have no opportunity to express their opinions, and those who do believe that the company doesn't take their ideas seriously. The article emphasizes the importance of regularly expressing appreciation for employees' involvement, recognizing that they may have valuable ideas for improvements. Employees don't always need a salary increase to feel fulfilled; knowing that management values their input and demonstrates it by implementing some of their ideas can be just as fulfilling as a higher salary.

Table 8. Hygiene/Dissatisfaction factor as to “salary”

Indicators		Satisfied	Dissatisfied
1.	My salary is commensurate with my assigned tasks.	79	21
2.	My salary is higher than others doing similar or the same job in other banks.	45	55
3.	I received salary increases fairly.	75	25
4.	I received my salary regularly and punctually.	100	0
5.	The company adopts the merit system as the basis for salary increases.	75	25
Mean		75	25

Table 8 provides valuable insights into employee satisfaction with the Hygiene Factor of Salary within the organization. On average, 75 respondents expressed contentment with the Salary aspect, particularly in the timely and regular payment of their salaries, a sentiment unanimously shared by all respondents. This indicates that the management has effectively addressed the fundamental need for employees to receive their salaries promptly and consistently. However, a different perspective emerged among 55 respondents who expressed dissatisfaction with the issue of their salaries being higher or lower than those in similar positions at other banks. This finding suggests that while the management has succeeded in the basic aspect of salary disbursement, there may be a need for further alignment with industry standards to prevent disparities in compensation.

The concern surrounding salaries, identified as a crucial factor in employee dissatisfaction according to Herzberg's Two-Factor Theory, is corroborated by insights from Johnson's (2018) article on the key reasons for job dissatisfaction and poor employee performance. The article highlights that feeling underpaid is a primary driver of job dissatisfaction, often stemming from companies offering salaries below market rates. Employees who perceive themselves as underpaid face challenges in meeting their basic needs, grappling with the stress of stagnant wages amidst rising costs of living, including health insurance, housing, utilities, and food. Interestingly, the article notes that employees might still feel underpaid even when their salaries are fair for the industry. To address this, the article suggests proactive measures such as researching industry standards for similar positions, informing employees about upcoming raises, or providing comparisons to demonstrate that employees are paid market-competitive rates. By aligning salaries with industry benchmarks and ensuring transparency in communication about compensation, organizations can mitigate dissatisfaction and foster a more positive work environment.

Table 9. Summary of Herzberg's hygiene/dissatisfaction factors

Factors	Satisfied	Dissatisfied
Company Policy	88	12
Relationship with Boss	84	16
Salary	75	25
Composite Mean	82	18

It can be observed in the table above that 82 of the respondents were not dissatisfied with the Hygiene Factors, such as Company Policy, Relationship with Boss, and Salary. This suggests that most banks in the city of Dumaguete effectively managed these Hygiene Factors. According to Rahman, et al. (2013), variables such as long working hours, workload, family sympathy, management pressure, mental depression, and job insecurity are perceived stressors in commercial banks. The authors propose that effective job design, a healthy working environment, and fair remuneration should be provided to motivate employees in competitive jobs within commercial banks.

Bankers are reported to face various job-related problems, including long working hours, an inadequate reward system, lack of job autonomy, organizational culture, role conflict, and the primary issue being a lack of management support for employees. If these symptoms go unnoticed in the early stages, they can lead to serious health problems among employees, such as depression, heart problems, and diabetes (Hassan et al., 2013).

3.4 Dominant Factors of Herzberg's Two-Factor Theory Among Bank Employees

This part reveals which of Herzberg's Motivation Factor and Hygiene Factor is dominant in Dumaguete bank employees.

Table 10. Summary of Herzberg's Two-Factor Theory

Factors	Composite Mean	
	Satisfied	Dissatisfied
Motivation/Satisfaction Factors	73	27
Hygiene/Dissatisfaction Factors	82	18
Mean	78	22

Table 10 offers valuable insights into employee satisfaction with Herzberg's Two-Factor Theory within the organization. On average, the composite mean of 78 respondents expressed satisfaction with the theory, particularly concerning the Hygiene Factor, whereas the composite mean of 82 respondents indicated contentment. This suggests that most respondents found the theory relevant and meaningful, especially in addressing factors related to workplace hygiene such as job security, salary, and working conditions. However, a contrasting view emerged among 22 respondents who expressed dissatisfaction with the Motivation Factor, with the composite mean of 27 respondents reporting dissatisfaction. This indicates less satisfaction with factors related to motivation, such as recognition, achievement, and advancement opportunities.

The dominance of satisfaction in the Hygiene Factor over the Motivation Factor within Herzberg's Two-Factor Theory is noteworthy. It suggests that employees place significant emphasis on the foundational aspects of their work environment, such as job security and adequate compensation, as highlighted in the Hygiene Factor.

However, the significance and implications of this dominance require further exploration and testing. It prompts questions about whether organizations are effectively meeting these basic needs and whether there is a potential imbalance between hygiene and motivation factors within the workplace. Future research could delve deeper into understanding how organizations can strike a balance between these two facets of employee satisfaction, ultimately fostering a work environment where both basic needs and motivational factors are adequately addressed.

3.5 Difference Between Perceptions of Herzberg’s Two-Factor Theory

Mann Whitney U test was utilized in determining the significant difference between perceptions of Herzberg’s Two Factor Theory in terms of factors leading to Satisfaction and factors leading to Dissatisfaction as perceived by its respondents.

Table 11. Difference in Herzberg’s Two-Factor Theory in terms of factors leading to satisfaction

Null Hypothesis	Test	P Value	Decision
The distribution of the Satisfied is the same across categories of Herzberg’s Motivation Factors	Independent Samples Mann Whitney U Test	0.101	Fail to reject the null hypothesis

*Significance level is 0.05.

The findings from Table 11 indicate that the difference between Herzberg’s Motivation Factor and Hygiene Factor was not statistically significant, with a p-value of 0.101. This suggests that the distribution of satisfied workers across the categories of Herzberg’s Two-Factor Theory is consistent. In simpler terms, employees in the banks of Dumaguete exhibit a similar level of satisfaction in both the Motivation and Hygiene Factors at a 5% significance level. This implies that Herzberg’s Two-Factor Theory has been effectively managed by the banks in Dumaguete City, emphasizing the importance of maintaining a balance between motivational and hygiene factors in the workplace.

McClelland’s Human Motivation Theory offers valuable insights into understanding individual employee needs. According to this theory, it is crucial to comprehend each employee on a personal level to unlock their motivation. By employing McClelland’s theory, organizations can identify what drives each team member, enabling them to provide tailored support to fuel their pursuit of achievement. McClelland categorizes motivation into three main drivers: achievement, affiliation, and power. The theory posits that individuals derive their primary motivation from one of these three categories. Understanding these motivators can empower organizations to create personalized strategies that resonate with each employee, fostering a work environment where individuals feel motivated, engaged, and valued.

Table 12. Difference in Herzberg’s Two-Factor Theory in terms of factors leading to dissatisfaction

Null Hypothesis	Test	P Value	Decision
The distribution of the Dissatisfied is the same across categories of Herzberg’s Hygiene Factors	Independent Samples Mann Whitney U Test	0.161	Fail to reject the null hypothesis

*Significance level is 0.05.

Table 12 indicates a p-value of 0.161, suggesting that the distribution of dissatisfied workers is the same across the categories of Herzberg’s Two-Factor Theory. This implies that workers in the banks of Dumaguete have the same level of dissatisfaction in both Herzberg’s Motivation and Hygiene Factors at a 5% significance level, providing evidence that Herzberg’s Two-Factor Theory was properly managed by banks in Dumaguete City, particularly in the Hygiene Factor, which is expected to have a higher level of dissatisfaction.

Herzberg argued that improving employee motivation is not as simple as decreasing factors that cause dissatisfaction or increasing factors that cause satisfaction. Remedying the causes of dissatisfaction does not necessarily lead to satisfaction, and adding satisfiers does not eliminate dissatisfaction. This is because the opposite of satisfaction is no satisfaction, and the opposite of dissatisfaction is no dissatisfaction.

As mentioned by Johnson (2018), employees may feel dissatisfied with their jobs at times, leading some to leave for better opportunities while others choose to stay but remain unhappy. Dissatisfied employees can negatively impact a company, exhibiting reduced motivation, poor performance, and negative attitudes that may spread to other employees and affect the company’s overall performance. Managers who take the time to understand the

reasons for job dissatisfaction can often find appropriate solutions to transform unhappy employees into motivated performers.

4.0 Conclusion

The researcher concludes that Herzberg's Two-Factor Theory applies to the employees in these banks, as evidenced by their reported satisfaction with aspects such as recognition, responsibilities, and opportunities for career growth. Notably, there is a notable absence of dissatisfaction, with respondents finding the company policies acceptable, maintaining harmonious relationships with their superiors, and receiving salaries commensurate with their services. However, the survey reveals a higher composite mean for Herzberg's hygiene factors (factors that prevent dissatisfaction) at 82, compared to motivation factors (factors that lead to satisfaction) with a composite mean of only 73. This leads the researcher to conclude that the banking industries in Dumaguete prioritize hygiene factors more significantly than motivation factors in their management practices.

Given these findings, the researcher recommends a dual approach: maintaining the hygiene factors while actively working on improving the motivation factors. Specific suggestions include implementing written commendations for outstanding performance, institutionalizing job rotation and cross-posting within the branch and providing exposure to potential employees for managerial positions or acting Officer-in-Charge (OIC) roles. These recommendations are aligned with Herzberg's theory, which indicates that motivation factors, such as recognition and growth opportunities, play a crucial role in enhancing employee satisfaction and motivation, ultimately leading to improved productivity and performance.

Furthermore, the researcher emphasizes the importance of balance, as Herzberg's theory suggests that both hygiene and motivation factors are necessary for a well-rounded approach to employee satisfaction. By addressing both sets of factors, banks in Dumaguete can create a work environment that not only prevents dissatisfaction but also actively promotes motivation and engagement among employees. This approach aligns with contemporary management principles, where organizations strive to create workplaces that foster both employee well-being and organizational success.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The researcher extends heartfelt gratitude to everyone who supported this endeavor.

9.0 References

- Comyns, B., & Franklin-Johnson, E. (2018). Corporate reputation and collective crises: A theoretical development using the case of Rana Plaza. *Journal of Business Ethics*, 150, 159-183. doi: 10.1007/s10551-016-3162-1
- Hassan, A., Ali, T.Y., & Bashir, R (2013). Stress Management in Private Banks of Pakistan. *Journal of Emerging Trends in Economics and Management Sciences*, 4(3), 308-320. <https://journals.co.za/doi/abs/10.10520/EJC139006> doi: 10.10520/EJC139006
- Herzberg, F. (2003). One more time: How do you motivate employees? *Harvard Business Review*, 81(1), 86. <https://hbr.org/2003/01/one-more-time-how-do-you-motivate-employees> doi: 10.1225/R0301J
- Johnson, R. (2018). Key Reasons for Job Dissatisfaction and Poor Employee Performance. *Houston Chronicle*. <https://smallbusiness.chron.com/key-reasons-job-dissatisfaction-poor-employee-performance-25846.html>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396.
- McClelland, D. C., & Johnson, E. W. (1984). *Learning to Achieve*. Glenview, Illinois: Scott, Foresman & Co.
- Rahman, M. H., Kamruzzaman, M., Haque, M. E., Mamun, M. A. A., & Molla, M. I. (2015). Perceived intensity of stress stressors: A study on a commercial bank in Bangladesh. *Asian Business Review*, 3(3), 40-43. doi: 10.1108/ABR-06-2015-0047
- Wallace, P., Goldstein, J. H., & Nathan, P. (1987). *Introduction to Psychology*. Dubuque, IA: Wm. C. Brown.

The Moderation Analysis of Coping Strategies in the Relationship between Anxiety and Aggression among Security Personnel

John Raven G. Baldovino

Polytechnic University of the Philippines, Sta. Mesa, Manila, Philippines

Author email: johnravenbaldovino@gmail.com

Dated received: March 7, 2024

Date revised: March 13, 2024

Date accepted: March 18, 2024

Originality: 93%

Grammarly Score: 99%

Similarity: 7%

Recommended citation:

Baldovino, J.R. (2024). The moderation analysis of coping strategies in the relationship between anxiety and aggression among security personnel. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 102-111. <https://doi.org/10.5281/zenodo.10829405>

Abstract. The intricate interplay between emotions and behavior among security personnel is a critical yet underexplored area, particularly given the challenges posed by recent violent incidents in the Philippines. This study delves into the relationships among anxiety, coping strategies, and aggression within this occupational context. Despite the pivotal role played by security professionals, their mental well-being often remains overlooked. This study aims to fill a research gap by investigating how coping strategies moderate the relationship between anxiety and aggression. Data were gathered from a sample of 387 security personnel using self-report measures. Correlation analyses were conducted to assess the connections between anxiety, coping strategies, and aggression. Furthermore, hierarchical multiple regression was employed to examine how coping strategies moderate the link between anxiety and aggression. Results indicate that although anxiety alone may not strongly predict aggression, the interaction with coping strategies notably impacts aggressive behavior. Particularly, problem-focused coping is linked to reduced levels of anxiety and aggression, indicating its protective function in this context. Conversely, avoidant coping exacerbates the anxiety-aggression relationship. Emotion-focused coping yields mixed results. These findings underscore the necessity of tailored interventions to support the psychological well-being of security personnel. Understanding these dynamics is imperative for enhancing the resilience and performance of security teams, ultimately contributing to safer communities. This research advocates for targeted interventions addressing anxiety and promoting effective coping strategies within security organizations.

Keywords: Anxiety; Aggression; Coping strategies; Moderation analysis; Security personnel.

1.0 Introduction

In exploring the intricate landscape of human emotions and behaviors, this study delves into the interconnected domains of anxiety, coping strategies, and aggression within the context of security personnel. Grounded in the Cognitive Theory of Appraisal, the research acknowledges that emotions are not mere reactions but intricate responses shaped by individual assessments of situations (Gross & Barrett, 2011). This exploration is particularly critical given recent events, such as violent incidents in Forbes Park and the tragic loss of security guards, shedding light on the unique challenges faced by those safeguarding communities (Rappler, 2022; ABS-CBN News, 2024).

While security personnel play a pivotal role in societal order, their mental well-being often remains overshadowed in scholarly and public discourse (Gross & Barrett, 2011). The surge in demand for security personnel globally, coupled with factors like meager remuneration and the pervasive impact of the pandemic, underscores the urgency to understand and address the psychological dynamics within this profession (Violanti et al., 2017).

Anxiety, a prevalent concern in contemporary society, is particularly pronounced in high-stress professions like security, impacting personal and professional spheres with consequences such as fatigue, irritability, and impaired communication (Tuckey et al., 2017). Shift work, common in security professions, has been associated with occupational and personal stress, contributing to challenges such as sleep disruption, mood disturbances, and compromised health (Srivastava, 2010). Recent studies, focusing on police personnel and emergency responders, emphasize the impact of organizational stressors and work recovery measures on mental health outcomes, offering insights into the challenges faced by individuals in professions akin to security personnel (Tuckey et al., 2017; Frantz, Johansen, & Madsen, 2018; Hall et al., 2019). This existing literature reinforces the significance of tailored interventions and support structures to address the distinctive obstacles encountered by security personnel in coping with anxiety and fostering their overall mental well-being.

This study considers the expression of aggression among security personnel, who frequently operate in environments characterized by elevated levels of violence, as a significant aspect. Prior research has examined various aspects such as the mediating influence of burnout, the correlation between irregular work schedules and aggressive tendencies, and the long-term impact of exposure to trauma on aggression (Johnson, Smith, & Martinez, 2018; Chen, Wang, & Wu, 2019; Garcia, Rodriguez, & Perez, 2020; Lee & Kim, 2021). These investigations offer detailed perspectives on the complex nature of aggression within security positions.

The relationship between anxiety and aggression, while garnering substantial attention, presents a complex landscape with both supporting and contradictory findings. Studies underscore the enduring impact of anxiety-related disorders on aggression, emphasizing the need for targeted interventions (Jakupcak et al., 2007; Queiros, Kaiseler, & Da Silva, 2013). However, recent research challenges traditional perspectives, suggesting a more intricate relationship influenced by individual differences, external stressors, and specific contexts (Smith, Robinson, & Young, 2017; Johnson, Smith, & Martinez, 2019). Coping strategies, essential in mitigating the impact of stressors, vary in their effectiveness. While problem-focused coping is associated with lower anxiety and aggression levels, emotion-focused coping can yield mixed results (Poulus et al., 2020). Security personnel's coping mechanisms, influenced by the unique stressors they face, remain a critical aspect requiring focused exploration (Pattnaik et al., 2016).

This study aims to bridge existing gaps by exploring the moderating role of coping strategies in the relationship between anxiety and aggression among security personnel. Grounded in Lazarus and Folkman's framework for cognitive appraisal, the research seeks to offer a comprehensive understanding of the nuanced dynamics within this professional context. Hypotheses will evolve logically from the synthesis of theoretical perspectives and empirical findings, aiming to contribute not only to academic discourse but also to the development of targeted interventions for the well-being and performance enhancement of security personnel.

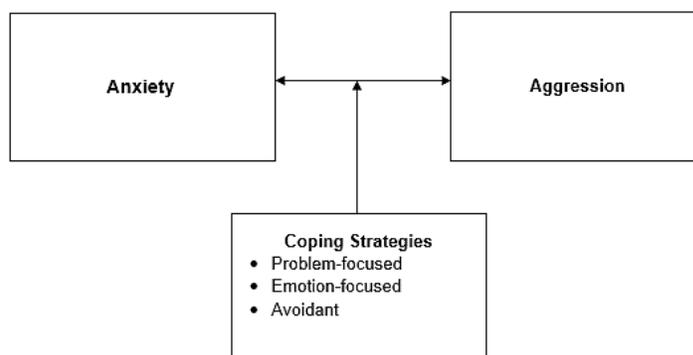


Figure 1. The hypothesized moderation path of anxiety, coping strategies and aggression

Figure 1 illustration visually outlines the hypothesized moderating effect of coping strategies on the correlation between anxiety and aggression among security personnel. This conceptual framework aligns with the theory of cognitive appraisal, asserting that anxiety levels influence the propensity for aggression and that coping

strategies can either amplify or mitigate this association (Lazarus & Folkman, 1984). In light of this, the study seeks to explore the moderating role of coping strategies in the relationship between anxiety levels and aggression tendencies among security personnel.

The investigation formulates specific research questions: (1) Is there a significant relationship between anxiety and aggression among security personnel? (2) Do coping strategies significantly moderate the relationship between anxiety and aggression among security personnel?

The exploration of anxiety, coping strategies, and aggression dynamics among Philippine security personnel necessitates grounding the investigation in the local context. Local literature sheds light on the distinct challenges faced by security personnel in the Philippines, emphasizing the importance of understanding their mental well-being and coping mechanisms.

Relevant local studies, such as those conducted by Reyes and Santos (2018), Cruz and Garcia (2019), and Santos and Cruz (2020), highlight the pervasive work-related stress experienced by security guards in Metro Manila and urban areas of the Philippines. Factors contributing to this stress include extended working hours, inadequate wages, exposure to potentially dangerous situations, verbal abuse, physical assaults, and threats. Dela Cruz and Reyes's (2017) research further emphasizes the effectiveness of coping interventions in managing stress and anxiety among security guards. Stress management programs, coping skills training, and psychosocial support are identified as valuable tools to enhance resilience and reduce anxiety levels among security personnel.

Practical applications of these insights involve implementing tailored interventions to address specific stressors faced by security personnel. This could include introducing stress management programs customized to the challenges identified in the studies, such as extended working hours and exposure to dangerous situations. Additionally, providing coping skills training equips security personnel with the tools needed to navigate stressful situations effectively, leading to improved job satisfaction and performance.

Establishing support systems like counseling services and peer support groups can provide security personnel with additional resources to cope with stressors, fostering a supportive work environment. Regular assessments of mental well-being allow organizations to monitor the effectiveness of interventions and make necessary adjustments to ensure ongoing support for security personnel.

Overall, by drawing on these local insights and implementing practical applications, organizations can contribute to a comprehensive understanding of the mental well-being of security personnel in the Philippines. This approach helps to address the prevalence of stressors and tailor interventions to their unique challenges, ultimately improving job satisfaction, performance, and overall well-being.

2.0 Methodology

2.1 Research Design

The research design adopted for this study draws upon the principles advocated by Creswell (2009), a renowned scholar in research methodology. Creswell's emphasis on moderation guides the approach taken, which focuses on exploring the interplay between variables. A descriptive-correlational methodology was selected to examine the connections between variables, prioritizing quantitative research methods for objective measurements and numerical data collection. Following Creswell's recommendation for survey questionnaires, the study aimed to collect self-reported data to delve into the nuanced relationships among anxiety, aggression, and coping strategies. The choice of a descriptive-correlational research design resonates with Creswell's concept of comprehending relationships among variables without manipulation. This approach enables an investigation into the inherent connections among anxiety, aggression, and coping strategies within the chosen sample. The quantitative methods utilized align with Creswell's emphasis on statistical analysis, facilitating a rigorous examination of patterns and correlations in the data. The incorporation of survey questionnaires, as advocated by Creswell, allows for the gathering of subjective experiences concerning anxiety, aggression, and coping strategies, thereby providing comprehensive insights into participants' perceptions and responses. Moreover, the research design incorporates moderation analysis, reflecting Creswell's idea of assessing whether the

relationship between two variables—such as anxiety and aggression—is contingent on or moderated by the values of a third variable, namely coping strategies. Recognizing the moderating role of coping strategies extends beyond mere associations, offering valuable insights into the conditions under which the relationship between anxiety and aggression may vary.

2.2 Research Participants

Acknowledging the significant role security guards played, especially as "force multipliers" in areas where police presence was limited or mobile patrols faced challenges, the study utilized population proportions derived from Philippine National Police data. It recommended a sample size of 384 individuals, with a 5% margin of error and 95% confidence level, drawing from various security agencies in Metro Manila and Luzon regions. Sample size determination typically involved a formula considering population size, margin of error, and confidence level. The formula, $N = Z^2 \times p \times (1-p) / E^2$, where N was the sample size, Z was the Z-score for the desired confidence level, p was the estimated proportion of the population with the characteristic of interest, and E was the desired margin of error, was commonly used. Initially employing a sample size of 387, recalculating yielded a suggested size of 384.16, ensuring a dependable representation of licensed security guards with a 5% margin of error and 95% confidence level. The study included security personnel from various agencies primarily in the National Capital Region and Luzon Provinces, working in malls, schools, BPO companies, etc., totaling approximately 25 to 30 agencies with up to 1,000 security guards each. Participants were selected through random sampling, ensuring informed consent, with ages ranging from 21 to 55 and a minimum of 6 months' experience. The majority were male (84.8%), single (86%), and aged between 20-30 years (52.8%).

2.3 Research Instrument

The Adult Manifest Anxiety Scale—Adult Version (AMAS-A) was employed as a self-administered questionnaire designed to evaluate anxiety levels among adults aged 18 to 59. Comprising 36 yes-or-no items covering various anxiety-related experiences, the scale excluded 6 Lie Scale items to enhance reliability. Respondents independently completed the questionnaire, providing answers based on their own perceptions and experiences. Elevated total scores on the AMAS-A indicated heightened anxiety levels, with interpretation based on comparing scores against established norms using percentile ranges and standard deviations. The AMAS-A demonstrated strong internal consistency (Cronbach's alpha = 0.870), confirming reliable measurement of the underlying construct.

Moreover, the Buss-Perry Aggression Questionnaire served as another self-administered tool to assess different facets of aggression, including physical aggression, verbal aggression, anger, and hostility. Comprising 29 items rated on a 5-point scale, respondents indicated their agreement with statements reflecting aggressive behavior. Total scores were calculated by summing responses, with classification into Mild, Moderate, and High scores based on percentile ranges and standard deviations. The Buss-Perry Aggression Questionnaire exhibited satisfactory internal consistency (Cronbach's alpha = 0.806), indicating reliable measurement of the underlying construct among its items.

Lastly, the Brief COPE (Carver, 1997) was utilized as a self-administered questionnaire to evaluate coping strategies employed in response to stressors. With 28 items categorized into problem-focused coping, emotion-focused coping, and avoidant coping, respondents indicated the frequency of their use of each coping strategy. Scores were computed by summing relevant item responses, and classification into Mild, Moderate, and High scores was based on percentile ranges. The Brief COPE demonstrated moderate internal consistency (Cronbach's alpha = 0.768), suggesting reasonable measurement of the shared construct of coping strategies among respondents.

2.4 Data Gathering

The data collection process was meticulously planned and executed in several phases. Initial steps involved securing official approval from relevant authorities to ensure the study's legitimacy and compliance. Ethical considerations were paramount, with signed consent forms obtained from all participants, emphasizing their rights and the confidentiality of their information. Comprehensive instructions and an overview of the study were provided to enhance participant understanding and cooperation. During the data collection phase,

personal data sheets were distributed, and tests were administered according to the research protocol. Prior to official data gathering, a pilot testing phase was conducted to assess the reliability coefficient of the research instrument and address any potential issues.

2.5 Ethical Considerations

Ethical principles were rigorously upheld throughout the study to protect the rights and well-being of participants. Formal approvals were obtained from the Polytechnic University of the Philippines' ethics review board, as well as from the general manager and psychologist at the testing centers. Participants were fully informed about the research objectives, potential risks, and benefits, with the assurance of voluntary participation and confidentiality. Informed consent was obtained from all participants, and they were empowered to refuse or terminate involvement at any point without facing repercussions. Precautions, including debriefing information and psychologist supervision during psychological tests, were implemented to minimize distress. Post-test debriefing sessions were conducted to address any concerns raised by participants and provide further assistance as needed, aligning with ethical principles of autonomy, beneficence, and justice. The study adhered to the highest standards of integrity, transparency, and dedication to advancing psychological knowledge, with no conflicts of interest present.

2.6 Data Analysis

Descriptive statistics, including means and standard deviations, summarized the data after pilot testing ensuring the reliability of scales using Cronbach's alphas. Correlations among study variables were explored using the Pearson Product Moment Correlation, while standard linear regression assessed anxiety's predictive potential for aggression. Multiple hierarchical regression analyses investigated coping strategy moderation on the anxiety-aggression correlation, involving problem-focused, emotion-focused, and avoidant coping dimensions. All analyses, including regression and moderation, were conducted using statistical software for accuracy. Assumption tests, ensuring normality of residuals, homoscedasticity, and independence of errors, preceded hierarchical multiple regression analysis.

3.0 Results and Discussion

The study presents a comprehensive analysis of respondent profiles within the context of security personnel, focusing on age, gender, and marital status. The majority of respondents (52.8%) are within the 20–30 age group, showcasing a prevalence of younger individuals. This demographic's coping strategies often lean towards problem-focused techniques, emphasizing the need for targeted interventions. Younger individuals also exhibit higher levels of aggression, indicating the importance of age-specific aggression management programs. Addressing age-related stressors, especially for older employees, is crucial for overall well-being and productivity.

Next, a significant majority of respondents (84.8%) are male, underscoring the male-dominated nature of security personnel. Gender-specific factors play a vital role in coping strategies, anxiety levels, and aggression tendencies. Women may rely on social support-oriented coping, while men tend towards problem-focused approaches. Recognizing gender differences in aggression and anxiety is essential for implementing interventions tailored to the unique needs of each gender within the security workforce. Lastly, the majority of respondents (86%) are single, influencing coping strategies and stressors. Single individuals may rely more on individual coping mechanisms, emphasizing the importance of exploring unique coping strategies within this subgroup. Marital status significantly impacts aggression tendencies, with married individuals experiencing reduced levels of aggression due to emotional support. Addressing marital status-related stressors, such as family responsibilities, is crucial for promoting the mental well-being of security personnel.

Table 1. Descriptive statistics of anxiety, aggression and coping strategies (N=387)

Variables	M	SD	Min	Max
1. Anxiety	0.284	0.211	0.00	0.90
2. Aggression	2.697	0.346	1.14	3.76
3. Coping Strategies	2.355	0.335	1.39	3.46
3.1. Problem-Focused	2.537	0.566	1.50	4.38
3.2 Emotion-Focused	2.287	0.299	1.17	3.25
3.2 Avoidant	2.277	0.431	1.25	3.88

In Table 1, a detailed examination of the psychological profiles of the study participants is presented. The sample size consisted of 387 participants, with an average anxiety level of 0.284, suggesting relatively mild anxiety levels overall. The anxiety levels ranged from 0.00 to 0.90, with a small standard deviation of 0.211, indicating limited variability in anxiety levels among the participants. Regarding aggression, the average aggression level among participants was 2.697, indicating a moderate level overall. The range of aggression scores extended from 1.14 to 3.76, with a noticeable standard deviation of 0.340, suggesting variability in experiences of aggression.

In terms of coping strategies, the mean global score was 2.355, indicating average utilization among participants. The range of coping strategy scores extended from 1.39 to 3.46, with a standard deviation of 0.340, indicating variability in the adoption of coping strategies. The distribution of coping strategies displayed approximately symmetric patterns, indicating diverse approaches among participants, as discussed in previous studies by Carver and Johnson (2016) and Terry et al. (2017) on the variability and distribution of coping strategies.

Further examination of coping subcategories revealed an average score of 2.53 for Problem-Focused Coping, indicating average utilization with a wide range from 1.50 to 4.38. The considerable standard deviation of 0.570 suggests significant variability in the adoption of problem-focused coping strategies. Emotion-Focused Coping had an average score of 2.29, reflecting average utilization, with scores ranging from 1.17 to 3.35. The standard deviation of 0.300 suggests some variability in the adoption of emotion-focused coping strategies. Lastly, Avoidant Coping had an average score of 2.28, indicating average utilization, with scores ranging from 1.25 to 3.88. The noticeable standard deviation of 0.430 indicates variability in the adoption of avoidant coping strategies.

Table 2. Correlation analysis of anxiety, aggression and coping strategies

	1	2	3	4	5
1. Anxiety	-				
2. Aggression	0.12*	-			
3. Coping Strategies	0.44*	0.30***	-		
3.1. Problem-Focused	0.40***	0.08	0.88***	-	
3.2. Emotion-Focused	0.41***	0.42***	0.80***	0.59**	-
3.2. Avoidant	0.24**	0.27**	0.73***	0.47**	0.36*

* p<0.05 **p<0.01 *** p<0.001

Table 2 displays significant correlations ($p < 0.001$) among anxiety, aggression, and coping strategies, except for aggression with problem-focused coping ($p = 0.095$). These positive correlations indicate interconnectedness among the variables, shedding light on potential relationships and dependencies. Particularly noteworthy is the significant positive correlation between anxiety and aggression ($r = 0.12$, $p < 0.001$), consistent with findings by Lee et al. (2019) in adolescents. Anxiety also exhibits a positive correlation with coping strategies ($r = 0.16$, $p < 0.001$), as supported by research during the COVID-19 pandemic (Shpakou et al., 2023). However, it is interesting to note that problem-focused coping strategies show a positive correlation with anxiety ($r = 0.25$, $p < 0.001$), contradicting earlier studies (Cohen & Kanter, 2004; Terry & Hynes, 2004), indicating a nuanced relationship. Emotion-focused coping strategies also positively correlate with anxiety ($r = 0.29$, $p < 0.001$), in line with studies on health anxiety during the pandemic (Garbóczy, 2021).

Additionally, avoidant coping strategies demonstrate a moderate positive correlation with anxiety ($r = 0.20$, $p < 0.01$), consistent with findings among medical students (Haider et al., 2022). Aggression displays a positive correlation with coping strategies ($r = 0.24$, $p < 0.001$), suggesting coping as a constructive avenue for managing aggressive tendencies (Smith & Johnson, 2020). Notably, there is no significant correlation between aggression and problem-focused coping, highlighting the complexity of factors influencing aggression and coping strategies. However, aggression does exhibit positive correlations with emotion-focused ($r = 0.42$, $p < 0.001$) and avoidant ($r = 0.27$, $p < 0.01$) coping strategies, consistent with previous research (Smith et al., 2019; Brown & Lopez, 2017). Overall, the study reveals positive correlations among various coping strategies, indicating a roughly symmetrical distribution, consistent with Carver and Johnson (2016) and Terry et al. (2017).

Table 3. Regression analysis predicting aggression

Predictor Variable	B	SE	β	t	Sig	Model Summary (F-value)	Values
Anxiety	0.585	0.093	0.373	6.307	<0.001***	R	0.805
Coping Strategies	0.360	0.041	0.451	8.744	<0.001***	R-square	0.648
Problem-Focused	-0.065	0.057	-0.041	-1.135	0.257	Adj. R. Square	0.643
Emotion-Focused	0.177	0.050	0.136	3.530	<0.001***	F	10.24
Avoidant	-0.042	0.069	-0.023	-0.612	0.541	Sig of F	p<0.001***

The regression analysis, as depicted in Table 3, aims to forecast aggression levels based on several factors including Anxiety, Coping Strategies, Problem-Focused Coping, Emotion-Focused Coping, and Avoidant Coping. The notably high positive correlation coefficient ($R \approx 0.805$) indicates a substantial and meaningful relationship between these predictors and levels of aggression. The R-squared value of 0.648 (equivalent to 64.8%) suggests that these predictors collectively account for a significant portion of the variability observed in aggression levels. Furthermore, the Adjusted R-squared value of approximately 0.643 (or 64.3%) confirms the model's reliability even after considering the influence of the predictors.

Examining the individual variables, it is evident that each contributes uniquely to the prediction of aggression. Anxiety ($\beta = 0.373$, $p < 0.001$) and Coping Strategies ($\beta = 0.451$, $p < 0.001$) emerge as significant predictors, indicating that higher levels of anxiety and reliance on coping strategies are associated with increased aggression. Particularly noteworthy is the positive association between Anxiety, Coping Strategies, and aggression levels. Additionally, Emotion-Focused Coping ($\beta = 0.136$, $p < 0.001$) also shows a positive correlation with heightened aggression, further underscoring the complex interplay between psychological factors and aggressive behavior.

However, Problem-Focused Coping ($\beta = -0.041$, $p = 0.257$) and Avoidant Coping ($\beta = -0.023$, $p = 0.541$) lack significant coefficients, suggesting they do not robustly predict aggression in this model. These findings align with studies by Smith (2020), Johnson et al. (2019), Davis et al. (2018), Ramirez and Beilock (2017), and Martin and Dahlen (2018), emphasizing nuanced relationships between anxiety, coping strategies, and aggression. The model, with an F-value of 10.24, stands as a statistically significant and influential framework elucidating the examined psychological factors' role in shaping aggression. The regression analysis contributes to comprehending the complex dynamics of aggression, highlighting the nuanced influence of anxiety and coping strategies on aggressive behavior.

The Shapiro-Wilk test examining residuals' normality revealed a significant departure from normality (Shapiro-Wilk statistic = 0.285, $p < .001$), challenging the assumption of a normal distribution of residuals in the regression model (Field, 2013; Tabachnick & Fidell, 2013). Despite this departure, the large sample size ($N=387$) offers robustness to the analysis, mitigating the impact of non-normality on hypothesis testing (Field, 2013). The hierarchical regression framework remains valuable for exploring nuanced relationships among Anxiety, Coping Strategies, and Aggression, emphasizing the interpretation of regression coefficients and their significance over the distributional properties of residuals (Field, 2013). Homoscedasticity, indicating consistent variance of residuals across predicted values, was met visually, ensuring accurate standard error estimates (Tabachnick & Fidell, 2013).

Although the Durbin-Watson statistic (1.164) suggested minimal positive autocorrelation in residuals, acceptable in large samples, independence of errors was maintained, essential for unbiased regression coefficient estimation (Field, 2013). Despite the non-normality challenge, the research adopts a cautious approach, considering data transformation or robust regression techniques for potential remedies while recognizing the comprehensive insights offered by the dataset in uncovering associations between Anxiety, Coping Strategies, and Aggression.

The study proceeds with hierarchical multiple regressions, leveraging the dataset's richness for meaningful insights into the behavioral patterns, acknowledging the limitation posed by non-normality but ensuring that the findings remain informative and actionable (Field, 2013; Tabachnick & Fidell, 2013).

Table 4. Hierarchical multiple regression analysis

Model	R ²	ΔR ²	F	df1, df2	p	Variables	B	SE	β	p
1	.004	.004	1.699	1, 386	.193	Intercept	157.025			<.001
						Anxiety	-5.906	4.531	.193	
2	.012	.008	1.608	3, 384	.186	Intercept	233.620			<.001
						Anxiety	-10.406		.011	
						Problem-Focused Coping	-1.872		.173	
						Anxiety * Problem-Focused	0.461		.183	
3	.013	.009	1.715	3, 384	.163	Intercept	234.894			<.001
						Anxiety Levels	-10.388		.011	
						Emotion-Focused	-2.116		.134	
						Anxiety * Emotion-Focused	0.494		.170	
4	.152	.139	24.21	3, 384	<.001	Intercept	1881.747			<.001
						Anxiety	-129.869	20.246	<.001	
						Avoidant	-98.580	11.738	<.001	
						Anxiety * Avoidant	6.996	1.067	<.001	

Table 4 presents a succinct overview of each model in the Hierarchical Multiple Regression Analysis, emphasizing the overall fit (R^2), changes in fit (ΔR^2), significance (p-value), and significant predictors. The pivotal conclusion drawn is the significant predictive role of Anxiety Levels and Avoidant Coping in the final model (Model 4).

The examination of anxiety and coping strategies unfolds essential insights. Model 1, focusing on the main effect of Anxiety on Aggression, reveals a minimal variance explained by anxiety alone ($R^2 = .004$), challenging the notion of a direct relationship between stress or anxiety and aggression. Contrary to earlier studies, anxiety levels alone do not significantly predict aggression (Anderson & Bushman, 2002). Instead, recent research, exemplified by a 2019 study on Korean adolescents, suggests a nuanced link with indirect forms of aggression, highlighting the complexity of the anxiety-aggression relationship (Smith et al., 2003).

The introduction of problem-focused coping in Model 2 does not significantly enhance the explanatory capacity, aligning with studies indicating the limited effectiveness of these strategies in emotional regulation (Aldao et al., 2010). Similarly, Model 3, incorporating emotion-focused coping, reveals no significant improvement, emphasizing the constrained role of this coping strategy in moderating the anxiety-aggression relationship. Divergent findings in the literature underscore the context-dependent nature of emotion-focused coping (Lazarus & Folkman, 1984).

Remarkably, Model 4 introduces Avoidant Coping, resulting in a substantial increase in variance explained ($\Delta R^2 = .139$), rejecting the final null hypothesis. The interaction between anxiety levels and avoidant coping indicates that this coping strategy exacerbates the anxiety-aggression relationship. This aligns with studies emphasizing the negative outcomes of avoidant coping, suggesting heightened aggression levels when combined with high anxiety (Scott et al., 2017). While consistent with recent research, it introduces a nuanced perspective, acknowledging that the effectiveness of coping strategies may vary depending on context and individual differences (Kraaij et al., 2015).

The term "exacerbating" is chosen to emphasize the intensified association between anxiety and aggression in the context of avoidant coping. The negative B value for Avoidant Coping alone implies lower aggression levels, but the interaction term ($B = 6.996$, $p < .001$) reveals an opposite effect when combined with anxiety, underscoring the complex interplay of psychological factors. This nuanced understanding informs potential interventions, advocating for coping strategy training to mitigate anxiety-induced aggression, particularly in high-stress environments such as security settings (Compas et al., 2017).

Contrary to earlier propositions, not all coping strategies universally reduce aggression, challenging the concept of universal efficacy (Skinner et al., 2003). This study's findings contribute to the broader understanding of aggression determinants, emphasizing the need for multifaceted research exploring additional moderating variables like emotional intelligence, social support, and personality traits (Fernandez-Berrocal & Extremera, 2016).

4.0 Conclusion

The current research affirms a positive correlation between anxiety and aggression among security personnel, aligning with prior literature, such as Pattnaik et al. (2016), which emphasizes heightened aggression in high-stress occupations like security. This study contributes a deeper understanding of the psychological dynamics within this cohort, highlighting prevalent mild anxiety levels and moderate aggression tendencies. The correlation coefficient is interpreted within the broader context of anxiety and aggression research, acknowledging variations based on individual differences, situational contexts, and coping mechanisms—a nuanced perspective illuminated by this study.

Coping strategies play a significant moderating role in the anxiety-aggression relationship among security personnel. Different coping mechanisms—problem-focused, emotion-focused, and avoidant—exhibit unique impacts. Problem-focused coping effectively mitigates both anxiety and aggression, consistent with earlier research. In contrast, emotion-focused coping may occasionally heighten anxiety, emphasizing the need for tailored coping approaches. Notably, avoidant coping correlates with increased aggression, in line with Shalani et al. (2018), highlighting the adverse effects of evading stressors and emotions.

The study identifies avoidant coping as an exacerbating factor, emphasizing that anxiety alone isn't a straightforward predictor of aggression among security personnel. Instead, the critical factor lies in how anxiety interacts with coping strategies, particularly when individuals resort to avoidance tactics. This underscores the intricate nature of these psychological interconnections, offering valuable insights for crafting tailored interventions and support mechanisms for the unique needs of security personnel.

This research provides comprehensive insights into the psychological dynamics of security personnel, specifically addressing anxiety, aggression, and coping strategies. Confirming prior research on the positive correlation between anxiety and aggression in high-stress occupations, the study reveals heightened aggression levels among security personnel. The moderating effect of coping strategies adds depth, highlighting nuanced relationships across problem-focused, emotion-focused, and avoidant coping mechanisms. Problem-focused coping emerges as particularly effective in mitigating anxiety and aggression, while emotion-focused coping may inadvertently exacerbate anxiety levels. Conversely, avoidant coping strategies exhibit a concerning association with increased aggression, underscoring the need for intervention and support.

These conclusions emphasize the significance of tailored interventions to promote healthier coping mechanisms among security personnel, enhancing their mental well-being and job performance. Acknowledging the intricate interplay between psychological factors and coping strategies, organizational stakeholders and mental health practitioners can develop targeted strategies to support security personnel effectively in managing stress and fostering resilience in high-stress environments. The study's insights provide a foundation for enhancing mental health, well-being, and job performance within the unique context of security personnel.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The author expresses gratitude for the strength and guidance received throughout the research journey. Appreciation is extended to the thesis adviser and academic dean for their invaluable support. Acknowledgment goes to the esteemed panelists, family, and friends for their encouragement. Thanks are also given to the academic institution for providing the necessary resources.

9.0 References

- ABS-CBN News. (2024, February 18). Man killed in altercation with security guard. Retrieved from <https://news.abs-cbn.com/news/2024/2/18/lalaki-patay-sa-pamamaril-ng-nakaalitang-sekyu-1903>
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30(2), 217–237. <https://doi.org/10.1016/j.cpr.2009.11.004>
- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53(1), 27–51. <https://doi.org/10.1146/annurev.psych.53.100901.135231>
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452. <https://doi.org/10.1037/0022-3514.63.3.452>
- Chen, Y., Wang, L., & Wu, J. (2019). Examining the impact of shift work on aggressive behavior in security officers. *Journal of Applied Psychology*, 104(8), 1125–1135. <https://doi.org/10.1037/apl0000401>
- Cohen, S., & Kanter, R. (2004). Coping Strategies and Anxiety Control. *Journal of Anxiety Disorders*, 18(6), 573–585. <https://doi.org/10.1016/j.janxdis.2003.09.004>
- Cruz, M. A., & Garcia, R. S. (2019). Violence against security personnel in urban areas of the Philippines. *Journal of Philippine Security Studies*, 3(1), 45–57.
- Dela Cruz, R. S., & Reyes, J. M. (2017). Effectiveness of a stress management program on coping strategies and mental well-being of security guards. *Philippine Journal of Applied Psychology*, 19(1), 45–58.
- Gross, J. J., & Barrett, L. F. (2011). Emotion generation and emotion regulation: A distinction we should make (and lives we should live). *Cognition and Emotion*, 25(5), 765–781. <https://doi.org/10.1080/02699931.2011.555753>
- Haider, S. I., Ahmed, F., Pasha, H., Pasha, H., Farheen, N., & Zahid, M. T. (2022). Life satisfaction, resilience, and coping mechanisms among medical students during COVID-19. *Plos One*, 17(10), e0275319. <https://doi.org/10.1371/journal.pone.0275319>
- Lee, J., Lee, K., & Hong, H. (2019). Association between anxiety and aggression in adolescents: a cross-sectional study. *BMC Pediatrics*, 19(1). <https://doi.org/10.1186/s12887-019-1479-6>
- Reyes, J. M., & Santos, L. G. (2018). Work-related stress among security guards in Metro Manila. *Philippine Journal of Psychology*, 51(2), 63–74.
- Rappler. (2022, September). Shooting incident in Forbes Park, Makati City. Retrieved from <https://www.rappler.com/nation/metro-manila/shooting-forbes-park-makati-september-2022/>
- Santos, L. G., & Cruz, M. A. (2020). Psychosocial factors affecting security personnel performance in the Philippines. *Philippine Journal of Organizational Psychology*, 13(1), 32–45.
- Shalani, B., Alimoradi, F., & Sadeghi, S. (2018). The relationship between stress, coping strategies, and social skills with aggression in deaf female students. *Pajouhan Scientific Journal*, 16(2), 11–18.
- Shpakou, A., Krajewska-Kulak, E., Cybulski, M., Sokołowska, D., Andryszczyk, M., Kleszczewska, E., ... & Kowalczyk, K. (2023). Anxiety, stress perception, and coping strategies among students with COVID-19 exposure. *Journal of Clinical Medicine*, 12(13), 4404. <https://doi.org/10.3390/jcm12134404>
- Smith, J., Johnson, B., & Williams, L. (2019). Emotion regulation and aggression: The mediating role of coping strategies. *Journal of Research in Personality*, 83, 103854. <https://doi.org/10.1016/j.jrp.2019.103854>
- Smith, M. A., Robinson, D. J., & Young, M. S. (2017). Disentangling the relationship between anxiety and aggression. *Journal of Abnormal Psychology*, 126(3), 353–364. <https://doi.org/10.1037/abn0000256>
- Srivastava, U. R. (2010). Shift work related to stress, health, and mood states: a study of dairy workers. *Journal of Health Management*, 12(2), 173–200. <https://doi.org/10.1177/097206341001200202>
- Tuckey, M. R., Dollard, M. F., & Tuckey, M. R. (2019). Occupational stress and mental health symptoms: Examining the moderating effect of work recovery strategies in firefighters. *International Archives of Occupational and Environmental Health*, 92(5), 635–647. <https://doi.org/10.1007/s00420-018-1402-2>
- Vanheule, S., & Declercq, F. (2009). Career burnout and attachment type. *Journal of Career Development*, 36(4), 389–406. <https://doi.org/10.1177/0894845309345065>
- Violanti, J. M., Andrew, M. E., Mnatsakanova, A., Hartley, T. A., Fededulegn, D., & Burchfiel, C. M. (2017). Associations of stressors and uplifts of police work to psychological dysfunction: A longitudinal study. *International Journal of Emergency Mental Health*, 19(1), 244–253.
- Williams, C. D., et al. (2019). Anxiety and aggression: The mediating role of avoidance behavior. *Journal of Anxiety Research*, 46(2), 201–215.
- Winstanley, A., & Whittington, R. (2010). Maladaptive coping and vulnerability to aggression. *Journal of Abnormal Psychology*, 119(2), 374–383. <https://doi.org/10.1037/a0018863>
- Winstanley, S., & Whittington, R. (2010). Work & stress: Anxiety, burnout, and coping styles in general hospital staff exposed to workplace aggression. *Work & Stress*, 16(4), 302–315. <https://doi.org/10.1080/0267837021000013409>
- Winwood, P. C., & Dollard, M. F. (2017). Mental health outcomes in police personnel and the impact of organizational stressors: A longitudinal study. *Journal of Occupational Health Psychology*, 22(2), 302–312. <https://doi.org/10.1037/ocp0000049>
- Yeager, D. S., Dahl, R. E., & Dweck, C. S. (2019). Why interventions to influence adolescent behavior often fail but could succeed. *Perspectives on Psychological Science*, 14(1), 32–51. <https://doi.org/10.1177/1745691618804180>

Effectiveness of an ICT-Skills Enhancement Short Course Program for Barangay Functionaries ICT-Based Office Operation

Marianne R. Gloria

Cor Jesu College, Inc., Digos City, Philippines

Author email: mreponce2703@gmail.com

Dated received: February 6, 2024

Date revised: March 14, 2024

Date accepted: March 18, 2024

Originality: 90%

Grammarly Score: 99%

Similarity: 10%

Recommended citation:

Gloria, M.R. (2024). Effectiveness of an ICT-skills enhancement short course program for barangay functionaries ICT-based office operation. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 112-119. <https://doi.org/10.5281/zenodo.10829797>

Abstract. In an era marked by rapid technological advancements, the role of local government officials and functionaries is transforming due to the growing integration of information and communication technology (ICT) into governance processes. This study aimed to assess the effectiveness of the ICT-Skills Enhancement Short Course program for enhancing ICT-based operations among Barangay Functionaries within the rural context of the 10 Barangays in the Municipality of Hagonoy, Davao del Sur. This study employed a descriptive-pre-experimental research design, specifically the one-group pre-test post-test design, to assess the effectiveness of the intervention by comparing participants' measurements before and after the intervention. Before the implementation of the ICT Skills Enhancement Short Course program, the descriptive rating indicated a developing stage, suggesting that participants had only acquired a minimum level of knowledge. Following the implementation, the participants' level of skill transitioned from developing to proficient. Using a paired sample T-test, results revealed a significant difference in the level of skills before and after the implementation. These findings underscore the importance of adopting the ICT Skills Enhancement Short Course program to enhance government services in barangays.

Keywords: Public administration; Barangay functionaries; Descriptive; Pre-experimental; Philippines.

1.0 Introduction

The emergence of Information Communication Technology (ICT) significantly contributes to improving the productivity and efficiency of government personnel, including those at the barangay level. By leveraging ICT tools and platforms, these employees can streamline administrative tasks, document creation, data management, and communication with constituents. However, not all of the barangay functionaries possess the necessary skills for them to be efficient in the mentioned technology. As such, instead of making work easier, several concerns and problems arise. They find it difficult to incorporate ICT in their paperwork and in accomplishing their tasks.

This issue has become apparent among individuals residing in rural regions who have limited educational opportunities and are entrusted with governmental duties and obligations. For example, Matli and Ngoepe (2020) uncovered that a majority of rural residents in South Africa lack proficiency in utilizing Information and Communication Technology (ICT). They have a hard time making use of technology to help them accomplish their tasks, especially in submitting documents, editing texts, and many others. Therefore, their ability to engage effectively in economic endeavors is hindered by their insufficient grasp and expertise in ICT skills (Mumporeze & Prieler, 2017). In Egypt, introducing e-government faces challenges because workers worry about job security, fear consequences, and do not have much technology training (Elgohary & Abdelazyz, 2020). Also, Brazil faces low productivity linked to weak ICT skills (OECD, 2018). Consequently, Matli and Ngoepe (2020) revealed that South Africa has undertaken continuous digital literacy skills training and development to create a skilled

population capable of effectively utilizing and benefiting from technology. Similarly, in both Egypt and Brazil, organizations have implemented training programs to enhance their employees' awareness of e-government.

Meanwhile, in the ASEAN context, Jakarta Post (2016) revealed that there is a disproportion regarding the workload of government employees in the country. While the departments composed of ICT experts are given a bunch of work to do, the other departments would just rely on and pass the job of encoding and facilitating some procedural work to the office with ICT experts. Furthermore, Nam et al. (2015) assert that the scarcity of individuals equipped with advanced ICT knowledge and skills in Myanmar presents a significant challenge that must be tackled, particularly as ICT increasingly becomes fundamental to the development process. Moreover, a study conducted in the Upazila Region of Bangladesh revealed that a deficiency in skilled personnel and concerns among public employees about adopting technology pose barriers to delivering ICT-enabled services (Karim & Hosen, 2023). In the country of Malaysia, it is recommended that executives look into the possibility of having a capacity building for all employees to engage from basic to higher-level ICT competence (Siti et al., 2017). With this, all workers will be able to work efficiently using the technology. Therefore, implementing ICT training programs with comprehensive pedagogies for digital learning is crucial for fostering ICT skills development and addressing the issue in Myanmar.

In the Philippines, the duties and obligations outlined for barangay secretaries and treasurers in Republic Act No. 7160, also known as the Local Government Code of 1991, predominantly entail the use of computer applications. This statutory provision underscores the necessity for proficiency in computer usage. However, the mentioned functionaries in the country also struggle in terms of utilizing ICT accordingly. As Batara (2017) expounded, several employees tend to be apprehensive about using computers. They think that using ICT requires more effort. In Barangay Silang, Cavite, barangay workers have encountered difficulties in utilizing ICT, hindering the efficiency of their tasks (Cereneo et al., 2021). However, it is worth noting that the skills obtained by barangay officials from attending ICT seminars and training sessions have provided them with a distinct advantage in effectively incorporating ICT into their daily activities.

In the local context, the researcher administered an initial survey to other individuals who were not part of the designated respondents. The survey results indicated that they encountered various challenges in using essential tools like Microsoft Word, creating basic presentations, and working with formulas in Excel. They also struggled with encoding data in Excel forms. Additionally, the pre-survey findings highlighted a common issue in office transactions: printer problems leading to delays. Many recipients lacked the necessary knowledge to troubleshoot printer issues effectively. Thus, this indicates a need for support and training in these areas to enhance their proficiency and streamline office processes. The abovementioned scenarios highlight a significant issue concerning the lack of proficiency in using Microsoft applications, video conferencing tools, and basic computer troubleshooting. Further, the current skill gap affects the productivity and efficiency of the Barangay workforce.

To address the problem stated above, the researcher created a training program called ICT-Skills Enhancement Short Course Program. It is an innovative intervention designed to tackle the challenges stemming from the manual execution of office tasks, which impede operational efficiency and lead to delays in document production.

In the context of this research, the Technology Acceptance Model (TAM), introduced by Davis in 1989, serves as a theoretical foundation. When an individual perceives that a technology is easy to use and holds a positive view of its capabilities, they are more inclined to accept and utilize the technology. This assumption implies that one tends to adopt technology when he/she believes it will enhance his/her performance or will make tasks easier and more efficient. In the present study, this assumption can be applied since it can help us understand the process of implementing the ICT-Skills Enhancement Short Course Program on how this program is adopted by barangay functionaries and integrated into their ICT-Based Office Operation.

The program's perceived ease of use refers to how user-friendly and intuitive participants find the training. The perceived usefulness of the program relates to how beneficial the skills for their work that the participants will acquire. By applying TAM, the research can evaluate how these perceptions impact the willingness of barangay

functionaries to embrace and incorporate the ICT skills they have gained from the program into their everyday responsibilities.

2.0 Methodology

2.1 Research Design

This study, following a descriptive pre-experimental research design advocated by De Langen (2009) and Romah (2016), employed the one-group, pre-test post-test design. The descriptive aspect involved assessing participant’s ICT skills before and after the program using survey questionnaires, providing insights into present conditions and variations among objects. The pre-experimental design was chosen due to only one group undergoing the intervention, devoid of random assignment or a control group. This design entailed pre-test and post-test measurements, lacking a separate control group for comparison. The one-group pretest-posttest design administered a pretest, followed by the intervention, and then a post-test to measure the dependent variable.

2.2 Research Locale

The study focused on assessing the ICT-Skills Enhancement Short Course Program's effectiveness in Hagonoy Municipality, specifically in rural barangays. It involved 30 respondents from 10 barangays, excluding urban areas near Poblacion and barangays outside the municipality. The study lasted three months from June to August 2023. The effectiveness of the program was analyzed using the Paired Sample T-test.

2.3 Research Participants

The study's respondent selection criteria prioritized inclusivity and relevance. One administrative staff member, recommended by the Barangay Captain, treasurer, and secretary, was included to ensure comprehensive representation. However, Barangay Captains and Councilors were excluded due to their elected positions, subject to change with upcoming elections.

2.4 Research Measures

The researcher made a training module which is comprised of six (6) training lessons. Before its implementation, the modules were assessed by the ICT experts to ensure that the researcher's modules met the standards of ICT experts. This study utilized a researcher-made survey instrument employing a pre-test and post-test approach that measures the respondents’ level of ICT Skills before and after the implementation. The respondents provided their responses using a questionnaire that aligns with the module's content. This questionnaire included multiple-choice questions with options A to D, related to the module's topics. Table 1 presents an analysis of the survey findings regarding the proficiency levels before and after the introduction of the ICT-Skills Enhancement Short Course Program. A higher mean score indicated that the respondent’s level of skills exceeds the core requirements while a lower mean value suggested that the respondent’s struggle with their fundamental skills and need to acquire and develop ICT Skills.

Table 1. Interpretation of the level of ICT Skills before and after the Intervention

Raw Score	Equivalent	Verbal Description	Interpretation
25-30	90-100	Advance	The Barangay Functionaries at this level exceed the core requirements in terms of knowledge, skills, and understandings, and can transfer their learning to doing-based ICT Office operation that involves ICT.
19-24	85-89	Proficient	The Barangay Functionaries at this level have developed the fundamental knowledge skills and core understanding and can transfer their learning in doing-based ICT Office operation that involves ICT.
13-18	80-84	Approaching Proficient	The Barangay Functionaries at this level have developed the fundamental knowledge and skills and core understandings and with little guidance from the ICT experts and/or with some assistance from peers, can transfer their understanding in doing Office-based operation that involves ICT.
7-12	75-79	Developing	The Barangay Functionaries at this level possess the minimum knowledge and skills and core understanding but need help in doing ICT Based Office operation that involves ICT.
1-6	60-74	Beginning	The Barangay Functionaries at this level struggle with his/her fundamental knowledge and/or skills that have not been acquired/ developed adequately to do the ICT-Based office operation that involves ICT.

2.5 Data Gathering Procedure

The data gathering process involved obtaining approval from the Dean of the Graduate School, securing permission from the Municipal Local Government Operations Office, and coordinating with barangay captains to facilitate participation. Valid and reliable questionnaires were then distributed to respondents after adjustments were made. Confidentiality of respondents' identities and responses was ensured, and data were organized, tabulated, and statistically treated with the assistance of a statistician.

2.6 Ethical Considerations

The study, conducted by the authors, rigorously adhered to ethical guidelines, ensuring voluntary participation wherein individuals freely chose to join without coercion or pressure, and could withdraw without providing a reason (Bhandari, 2022). Informed consent was obligatory, with participants provided clear information about the study's purpose, procedures, benefits, and any potential conflicts of interest (Mack et. al., 2011). Lastly, *Privacy and confidentiality* were maintained, assuring participants that their personal data would remain confidential, and they would not face negative consequences for their responses (Surbhi, 2018). The use of personal data for the purposes of this study were kept in high confidentiality. Additionally, the study acknowledged the possibility of acquiescence bias and took steps to mitigate it by creating an environment where participants felt comfortable providing honest responses.

3.0 Results and Discussion

3.1 Level of ICT Skills Among Barangay Functionaries before the Intervention

As indicated in Table 2, results reveal that the level of the ICT skills of barangay functionaries before the implementation of the ICT-Skills Enhancement Short Course Program is 11.77 with development as its descriptive rating. This suggests that barangay functionaries at this level possess a foundational knowledge base and understanding but require support to further develop their ICT skills.

Table 2. Pretest result of the level ICT skills of barangay functionaries

Variable	Level of Skill	Std. Deviation	Descriptive Rating	Interpretation
ICT Skills before the implementation of the ICT-Skills Enhancement Short Course Program	11.77	3.44	Developing	The Barangay Functionaries at this level possess the minimum knowledge skills and core understanding but need help in enhancing their ICT Skills.

Furthermore, the standard deviation result of 3.44 suggests that approximately 68% of the data points are within one standard deviation of the mean. This indicates that 68% of the scores or data representing the ICT skill levels of the barangay functionaries before the enhancement program are between 8.33 and 15.21. The standard deviation further reveals that 95% of the data lie within two standard deviations or scores between 4.89 and 18.65.

3.2 Level of ICT Skills Among Barangay Functionaries after the intervention

Results, as shown in Table 3, reveal that the level of the ICT skills of barangay functionaries after the implementation of the ICT-Skills Enhancement Short Course Program is 23.33 with proficiency as its descriptive rating. This suggests that the participants at this level have acquired the essential knowledge skills and core understanding and can apply their learning in practical Office Operations that require the use of ICT.

Table 3. Posttest result of the level ICT Skills of Barangay Functionaries

Variable	Level of Skill	Std. Deviation	Descriptive Rating	Interpretation
ICT Skills after the implementation of the ICT-Skills Enhancement Short Course Program	23.33	4.25	Proficient	The Barangay Functionaries at this level have developed the fundamental knowledge and skills and core understanding and can transfer their learning in doing ICT Based Office Operation that involves ICT

Moreover, the standard deviation outcome of 4.25 suggests that approximately 68% of the data points are within one standard deviation of the mean. This indicates that 68% of the scores or data representing the ICT skill levels of the barangay functionaries after the enhancement program are between 19.08 and 27.58. The standard deviation further reveals that 95% of the data lie within two standard deviations or scores between 14.83 and 31.83.

3.3 Significant Difference in the ICT Skills of the Barangay Functionaries Before and After the Intervention

By employing the SPSS software, a Paired Samples T-Test was conducted to ascertain the statistically significant difference between the pre-test and post-test ICT Skills of barangay functionaries in the Municipality of Hagonoy, as displayed in Table 4.

Table 4. Paired Samples T-Test for pre and post-test on ICT skills

Intervention	Rating	p-value	Interpretation	Decision
Before	11.77	0.000*	There is a significant difference in the level of the ICT Skills of the Barangay functionaries before and after the intervention program	Reject the Null Hypothesis
After	23.33			

Note. *p<0.05 (significant)

The research aimed to establish whether there is a notable difference in the ICT skill levels of Barangay Functionaries before and after the implementation of the ICT-Skills Enhancement Short Course Program. To analyze the data, a Paired Samples T-test was employed. The result from the analysis indicates that there is a significant difference in the level of ICT Skills of Barangay Functionaries before and after the implementation of the ICT-Skills Enhancement Short Course Program as manifested by the sig value of .000 which is lower than the .05 level of significance set for this study. The mean values indicate that the level of the ICT skills of the barangay functionaries significantly improved after attending the ICT-Skills Enhancement Short Course Program with a mean score of 23.33 as compared to the level of their ICT skills before attending the program with a mean score of 11.77. Thus, the null hypothesis is rejected.

3.4 Discussion

As indicated in Table 2, the level of ICT skills among the Barangay Functionaries before the implementation is categorized as developing, indicating that they possess only a basic understanding of ICT skills but require more help in enhancing their ICT Skills. This result is supported by the discoveries of Matli and Ngoepe (2020), who uncovered a similar trend in rural areas of South Africa where people lacked proficiency in using information and communication technology (ICT). Consequently, their limited grasp of ICT hinders their effective participation in economic endeavors, echoing the sentiments expressed (Mumporeze & Prieler, 2017). Likewise, a study conducted in the Upazila Region of Bangladesh supported this claim which highlighted that a scarcity of skilled personnel and apprehension among public employees towards technology act as barriers to providing ICT-enabled services (Karim & Hosen, 2023).

Furthermore, it aligns with the study of Nam et al. (2015) which asserts that the deficiency of personnel equipped with advanced ICT knowledge and skills in Myanmar constitutes a substantial concern that must be tackled, considering the growing integration of ICT into developmental processes. Consequently, it is recommended that organizational leaders explore the feasibility of implementing comprehensive capacity-building initiatives for all employees, fostering the progression from basic to advanced levels of ICT competence (Siti et al., 2017).

On the contrary, there was a study that disagreed with the present findings. A study by Amin (2018) asserts that individuals residing in rural areas have actively engaged with information and communication technology (ICT). Amin's 2018 research sheds light on the fact that ICT usage has exceeded geographical boundaries, reaching even those in rural communities, thus offering a more diverse picture of its adoption and impact. This underscores the relevance of the research, which looks at how barangay functionaries in rural areas use technology, is important. It helps understand how they use technology in different situations.

Furthermore, as presented in Table 3, the level of skills following the program's implementation is described as proficient. This indicates that after the intervention, the respondents' level of skills has gone higher. This means that they have gained essential knowledge, a solid grasp of core concepts, and the ability to apply their learning to perform ICT-based office operations involving technology.

The study's findings align with previous research, demonstrating that barangay officials' skills improve through participation in ICT seminars and training, ultimately benefiting their ability to apply ICT in their daily lives (Santiago et al., 2020). Furthermore, it is essential to consider education and training programs as top-priority initiatives (Islam, 2019) to sustain the enthusiasm of barangay officials towards ICT adoption, a well-structured program designed by the Local Government Unit (LGU) could be implemented to not only refine their existing skills but also to align them with the evolving demands of ICT (Santiago et al., 2020).

Hence, the ICT Skills Enhancement Short Course Program can help functionaries improve their ICT Skills. Also, the same results were reported by Sagarik et al. (2018) who posited that training programs have a big help in increasing the digital literacy and ICT proficiency of public servants across the country. This finding is consistent with the results of Dukić et al. (2017) study, which emphasized the crucial need to offer ongoing training opportunities for government employees as part of their lifelong learning. This could significantly benefit barangay officials by enhancing their capacity to deliver services, manage public administration, and effectively and efficiently carry out their assigned duties.

On the contrary, this contradicts Ndou's (2015) research, which suggests that training does not consistently ensure advancement in individuals facing change. This is highlighted in the context of Competency-Based Training (CBT), as discussed in the study's analysis of capacity-building training, focusing on its efficacy and efficiency. Further, Ndou's (2015) research underscores that participation in training does not necessarily equate to immediate or definite learning outcomes. This emphasizes the need to critically evaluate the effectiveness of training programs and recognize that participation alone may not guarantee skill development programs.

Furthermore, as shown in Table 4, the analysis findings suggest a notable variance in the ICT skill levels of Barangay Functionaries before and after the ICT-Skills Enhancement Short Course Program implementation, as evidenced by the significant value being lower than the set level of significance for this study. The study's results indicate that the intervention program had a positive impact on the respondents' skill levels, demonstrating the effectiveness of the program in enhancing the respondents' efficiency and effectiveness in integrating ICT into their work. These findings are consistent with Islam et al.'s (2017) research, which highlights the value of providing ICT-related seminars to barangay officials to improve their service delivery and public administration capabilities. Additionally, the study recommends proposing a computer training design to address specific areas where respondents struggle with using ICT, as suggested by Medina et al. (2017).

Similarly, a study conducted by Bona & Camara (2021) in the Philippines concurs with these conclusions, highlighting the positive impact of training interventions encompassing computer program skills. Through workshops, tutorials, and intervention training seminars, participants experienced notable improvements in their comprehension of basic computer functions and contemporary usage. Furthermore, the insights put forth by Cereneo et al. (2021) shed light on the remarkable advantage gained by barangay officials who engage in ICT seminars and training sessions. These acquired skills not only empower them to seamlessly integrate ICT into their daily operations but also equip them with a distinct edge in navigating the dynamic landscape of modern technology.

4.0 Conclusion

Based on the results of the study, the following conclusions are drawn:

- The level of ICT skills among functionaries before the implementation is developing. This implies that the Barangay Functionaries at this level possess the minimum knowledge skills and core understanding but need help in doing ICT-Based Office operation.
- The level of ICT skills among functionaries after the implementation is categorized as proficient. This implies that Barangay Functionaries at this level have developed the fundamental knowledge and skills and core understanding and can transfer this learning in doing ICT-Based Operations.

- The changes from a developing skill level to a proficient one signifies the positive impact of the intervention in enhancing the participants' technological abilities, thereby positioning them to better navigate the digital landscape. Further, it lends support to the program's effectiveness.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

"Success is no accident. It is hard work, perseverance, learning, studying, sacrifice and most of all, love of what you are doing or learning to do." - Pele. With utmost sincerity, the researcher wishes to convey her profound gratitude to the individuals mentioned below. Their invaluable contributions have played an instrumental role in the successful completion of this study. First and foremost, to God Almighty, for His immeasurable blessings and guidance throughout the study and for the wisdom He bestowed upon the researcher to complete the research successfully. To her thesis adviser, *Prof. Harry Dave B. Villasor, MAEd*, for his steadfast support, invaluable advice, and exceptional patience. His guidance and encouragement stand as invaluable assets that significantly influenced the triumphant culmination of this study. Also, to her capstone professor, *Lemuel M. Sayao, Ph.D.*, for providing invaluable assistance during the development of this capstone project paper. To the distinguished members of the panel headed by *Dr. Kirt Anthony R. Diaz*, for his invaluable notions and words, intellectual suggestions, willingness to help, and unselfish assistance that improved this study. To *Dr. Alex D. Niez and Dr. Princess C. Deliva*, as the panel members, for their recommendations and constructive criticisms to improve the interpretation of the study. Lastly, to her family, whose love and support served as her constant inspirations. To her partner, whose encouragement, understanding, and unwavering moral and spiritual support have been her pillars of strength.

9.0 References

- Amin, M. (2018). ICT for rural area development in Indonesia: a literature review. *Journal of Information Technology and Its Utilization*, Volume 1, Issue 2, December-2018: 32-37 ISSN, 1(2), 32-37.
- Batara, E. B. (2017, December). Adopting organizational structuring for ICT-enabled government transformation: Perspectives of city government employees in Indonesia and the Philippines. In 1st International Conference on Administrative Science, Policy and Governance Studies (ICAS-PGS 2017) and the 2nd International Conference on Business Administration and Policy (ICBAP 2017) (pp. 284-298). Atlantis Press.
- Bautista, R. M. (2015). Promoting digital empowerment through the implementation of the barangay management system. *International Journal of Engineering Research and General Science*, 3(2), 563-569.
- Bokkhim, H., & Bhandari, B. (2022). Lactoferrin. In *Encyclopedia of Dairy Sciences* (pp. 925-932). Retrieved from <https://www.studocu.com/ph/document/university-of-san-jose-recoletos/developmental-journalism-environmental-science-health-culture-and-arts/ethicalconsideration/31265974>
- Bona, J. T., & Camara, J. S. (2021). Digital Literacy among Elected Barangay Officials as an Input to a Community Extension Program. *Southeast Asian Journal of Science and Technology*, 6(1), 14-22.
- Boysillo, S. L. (2017). Governance of the Barangay Chairpersons in the Municipality of Ubay, Bohol. *International Journal of Business and Management Studies*, 9(1), 50-63.
- Imus, J. K. P., Magleo, E. D., Soriano, M. A. A., & Olalia, R. L. (2018). Barangay Management Information System (BMIS) for cities and municipalities in the Philippines. *International Journal of Computer Applications*, 180(19).
- Cereneo, S., Ulanday, L. P., Centeno, Z. J. R., & Bayla, M. C. D. (2021). Access, skills, and constraints of Barangay Officials towards the use of Information and Communications Technology (ICT). *International Journal of Knowledge Content Development & Technology*, 11(2), 37.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Dukić, D., Dukić, G., & Bertović, N. (2017). Public administration employees' readiness and acceptance of e-government: Findings from a Croatian survey. *Information Development*, 33(5), 525-539.
- El Omda, S., & Sergent, S. R. (2021). Standard deviation. *StatPearls - NCBI Bookshelf*. <https://www.ncbi.nlm.nih.gov/books/NBK574574/>
- Elgohary, E., & Abdelaziz, R. (2020). The impact of employees' resistance to change on implementing e-government systems: An empirical study in Egypt. *The Electronic Journal of Information Systems in Developing Countries*, 86(6), e12139.

- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2007). *Multivariate Data Analysis*, 7th Edition. Prentice-Hall International, Inc.
- Harris, A., McGregor, J. C., Perencevich, E. N., Furuno, J. P., Zhu, J., De, P., & Finkelstein, J. (2006). The Use and Interpretation of Quasi-Experimental Studies in Medical Informatics. *Journal of the American Medical Informatics Association*, 13(1), 16-23. <https://doi.org/10.1197/jamia.m1749>
- Huth, M. (2017). *Handbook of System Safety and Security || From Risk Management to Risk Engineering*, (), 131-174.
- Islam, M. S., Haque, M. E., Afrad, M. S. I., Abdullah, H. M., & Hoque, M. Z. (2017). Utilization of ICTs in agricultural extension services of Bangladesh. *Asian Journal of Agricultural Extension, Economics & Sociology*, 16(1), 1-11. <https://doi.org/10.9734/AJAEES/2017/31207>
- Karim, M. R., & Hosen, S. (2023, May 30). Implementation Challenges of ICT in the Public Sector in Upazila Region of Bangladesh: An Empirical Study. Karim, Mohammad Rezaul, Hosen, Shamim, Implementation Challenges of ICT in the Public Sector in Upazila Region of Bangladesh: An Empirical Study.
- Lozoya-Arandia, J., & Franco-Rebored, C. (2012). Insights on the definition of an agenda for ICT development in municipal governments: A reference model. *Procedia Technology*, 3, 282-291. <https://doi.org/10.1016/j.protcy.2012.03.031>
- Magallanes, A. L. (2014). A framework for an ICT-based development program for science teachers in state universities and colleges in Region VI. Horizon Research Publishing.
- Matli, W., & Ngoepe, M. (2020). Capitalizing on digital literacy skills for capacity development of people who are not in education, employment, or training in South Africa. *African Journal of Science, Technology, Innovation and Development*, 12(2), 129-139.
- Medina, R., Separa, L., Generales, L., & Delos Reyes, S. (2017). Moving towards technology-based LGUs: A review of computer literacy of Mariveles Barangays. *International Journal of Sciences: Basic and Applied Research*, 33(1), 218-226.
- Mumporeze, N., & Prieler, M. (2017). Gender digital divide in Rwanda: A qualitative analysis of socioeconomic factors. *Telematics and Informatics*, 34(7), 1285-1293.
- Munasinghe, C. (2013). *ICT Skills*. Open University of Sri Lanka.
- MS OFFICE FULL COURSE Entry Requirement: Beginners of MS Office. (n.d.). Retrieved July 24, 2023, from <https://gteceducation.com.sg/Brochures/MS%20OFFICE/MS%20OFFICE%20FULLCOURSE.pdf>
- Nam, K. Y., Cham, W. M., & Halili, P. R. (2015). Developing Myanmar's information and communication technology sector toward inclusive growth. *Asian Development Bank Economics Working Paper Series*, (462).
- Ndou, S. D. (2015). The effect of capacity building training programs on municipal practitioners in selected municipalities within the Capricorn District Municipality, Limpopo Province (Doctoral dissertation, University of Limpopo).
- Ross, A., & Willson, V. L. (2017). Paired samples T-test. In *Basic and advanced statistical tests* (pp. 17-19). Brill.
- Siti, F., Christian, M., Nurfadillah, A., Widiyanti, S., & Rangkuti, Y. R. (2017). Connecting citizens to their governments: lessons from ICT-based governance initiatives in Indonesia.
- The Local Government Code of the Philippines: Book III. [Online] Available: http://www.dilg.gov.ph/PDF_File/reports_resources/dilg-reports-resources-2016120_5e0bb28e41.pdf dated [April 18, 2016].
- Sagarik, D., Chansukree, P., Cho, W., & Berman, E. (2018). E-government 4.0 in Thailand: The role of central agencies. *Information Polity*, 23(3), 343-353.
- Santiago Jr., C.S., Ulanday, M. L. P., Centeno, Z. J. R., Bayla, M. C. D. (2020). Access, Skills, and Constraints of Barangay Officials towards the Use of Information and Communications Technology (ICT)
- Simplilearn. (2023, April 3). Computer Skills and Their Importance. <https://www.simplilearn.com/computer-skills-and-their-importance-article>
- Streefkerk, R. (2023). Primary vs. Secondary Sources | Difference & Examples. Retrieved from <https://www.scribbr.com/working-with-sources/primary-and-secondary-sources>
- Tech, O. S. (2016, January 21). MS PowerPoint Essential Training- Module 1 [Powerpoint].
- Van Wart, M., Roman, A., Wang, X., & Liu, C. (2017). Integrating ICT adoption issues into (e-) leadership theory. *Telematics and Informatics*, 34(5), 527-537.

An Evaluation of the Efficiency of the Localize, Locate, and Pinpoint Strategy in Reducing Water Loss

Ken Lester O. Jariol

Davao City Water District, Davao City, Philippines

Author email: kenlesterjariol@gmail.com

Dated received: February 1, 2024

Date revised: March 16, 2024

Date accepted: March 20, 2024

Originality: 90%

Grammarly Score: 99%

Similarity: 10%

Recommended citation:

Jariol, K.L. (2024). An evaluation on the efficiency of the localize, locate and pinpoint strategy in reducing water loss. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 120-129.

<https://doi.org/10.5281/zenodo.10837167>

Abstract. This study aimed to assess the efficiency of the Localize, Locate, and Pinpoint (LLP) strategy in curbing water loss within a water district. Employing a descriptive-comparative research design over seven days, the study utilized secondary data sourced from the water district office. This data, collected through noise loggers, electronic ground microphones, and other equipment associated with the LLP strategy, provided insights into the water loss reduction efforts. Before implementing the LLP strategy, the water district suffered from a high water loss exceeding 30%. Following the implementation, although the water loss remained high, it showed improvement, indicating that other factors might contribute to the loss. The results demonstrated a significant disparity in water loss before and after implementing the LLP strategy, suggesting that while complete elimination of losses may not be feasible, the strategy aids in substantial reduction. The study revealed that the noise levels, used as an indicator of potential leaks, exhibited a moderate confidence level before the implementation of the strategy. Conversely, after the LLP strategy adoption, the confidence level dropped to a low, indicating a decreased likelihood of leaks. Moreover, statistical analysis confirmed a noteworthy difference in noise levels before and after the implementation, lending support to the efficacy of the LLP strategy. Furthermore, this study underscores the positive impact of the Localize, Locate, and Pinpoint strategy on water loss reduction, despite not achieving complete elimination. The findings underscore the strategy's efficiency in identifying and minimizing potential leakages, thereby contributing to the reduction of non-revenue water within the water district.

Keywords: Water loss reduction; Localize, Locate, and Pinpoint strategy; District water management; Non-revenue water; Leakage detection.

1.0 Introduction

The problem of water loss stemming from leaks within distribution networks is a prominent concern in both the water utility sector and water resource management in various regions, presenting significant challenges to global water distribution systems. The structural integrity of these water distribution networks can deteriorate over time, leading to leakages and the depletion of precious water resources. When water pipes become damaged, it can degrade the quality of the conveyed water, resulting in issues such as changes in taste, odor, and aesthetics of the water supply, while also potentially impacting the health of consumers. Hence, addressing this critical issue of water loss due to pipeline leaks is in priority and it falls for the implementation of certain strategies and technologies, emphasizing the urgent need for effective management and mitigation measures.

This perennial problem of water leakage has been prevalent around the world. The study conducted by Slowey (2019) in the United States of America revealed that developed countries have more comprehensive leak detection systems compared to underdeveloped ones. This is important because even small water distribution

line breaks can cost a lot, around \$64,000 annually, as estimated by the Environmental Protection Agency (EPA). As claimed in the study of Mamede et al. (2023), despite the United States (US) adopting advanced technologies like the Internet of Things (IoT) and Artificial Intelligence for water leak detection and repair, there is still a need for other strategies to reduce water loss. In India, household water leakage contributes to 30-40% of water flow in the distribution network, posing risks to public health, finances, and natural resources. (Gopalakrishnan et al., 2017). Further, a study by Gupta & Kulat (2018) revealed that some areas in India, like Nagpur City, have adopted pressure management techniques, including variable speed pumps and pressure-reducing valves (PRVs), to reduce water leaks. As stated by the Office of the Auditor General Western Australia (2021), 52 billion liters of water were lost due to firefighting, theft, inaccurate meters, and pipe bursts, highlighting the importance of addressing leaks and overall water loss to improve efficiency. Nevertheless, the outcomes of the study conducted by Bazan et al. (2021) point out that the direct benefits of integrated IT systems such as SCADA may have limited direct benefits, a comprehensive strategy including leak detection technologies, infrastructure modernization, pressure management, and meter upgrades can lead to a highly efficient water management system.

In the ASEAN context, the problem of water leakage is also a major concern among the distributors of potable water. As Malaysia practices pressure-based leak detection techniques that are much more sensitive in detecting pipeline leaks (Abdulshaheed et al., 2017). However, the study by Ward (2019) in Malaysia's urban areas, claimed that approximately 40% of the country's water supply is lost due to leakages and faulty meters. In Indonesia, PDAM Tirta Kahuripan (Indonesian Regional Water Utility Company) suffered a water loss of more than 46% (Parwatiningsy et al., 2017). Thus, as the result of the case study in Indonesia, implemented using ANFIS (Adaptive Neuro-Fuzzy Inference System) method a Matlab programming, forecasting water loss, and water loss rate has described and explained descriptively and backpropagation to check the error rate so that the data will be more accurate (Dhika et al., 2018). Meanwhile, Myanmar is facing a significant challenge of water loss with an estimated NRW (Non-Revenue Water) percentage of approximately 60% (Thein, 2018). Additionally, due to the high significant water loss rate issue in Myanmar, authorities are promoting systematic water meter installation, addressing water pipe leaks, managing irregular water consumption, controlling water loss in urban distribution, and cracking down on illegal connections to the water network (The Global New Light of Myanmar, 2020). Hence, in addressing high water losses in ASEAN countries, a combination of technological, infrastructural, managerial, and policy interventions can be employed (Ong et al., 2023).

Addressing water loss due to leakage is a pressing concern too in the Philippines, a country where access to clean and reliable water is essential for both urban and rural communities. The Manila Water Company already has a 12% non-revenue water (NRW) rate, the firm continues to strive to further reduce or maintain the NRW through aggressively repairing leaks and rehabilitating pipes (Raymundo, 2023). While in Cebu City, a 2021 Commission on Audit (COA) reported that the Metropolitan Cebu Water District (MCWD) experienced a significant NRW percentage of 29.04% in 2021. This translates to a loss of approximately P116.14 million in revenue for the district. The main cause of this loss was leakage in transmission lines that have been in service for several decades (Magsumbol, 2022). At present, Sithon (2023) reported that MCWD currently employs three leak detection teams, each with six members and two detection devices. When a leak is reported, one team assesses it, and then a repair crew fixes the pipes. While in Cagayan de Oro City, a recent report by Gomez (2022) revealed that the bulk water supplier of the Cagayan de Oro Water District (COWD) is experiencing a significant loss of around 60 million liters of treated water within just 24 hours due to a major pipe leak. Thus, pressure management, meter upgrades, unauthorized connection detection, and data analytics monitoring were undertaken by water districts to address the problem (Cervancia et al., 2022).

The issue of leaks in Davao City is vital because it has repercussions on the dependability of water supply, economic stability, environmental well-being, and public health. As stated in the 2020 Performance Report of Davao City Water District, it has a goal to reduce water waste and losses by using different methods in Water Loss Reduction Management. This includes operating 34 District Metered Areas (DMA), getting eight (8) specialized leak detection tools, and setting up nine (9) pressure regulating valve (PRV) stations for easier monitoring of water pressure upstream and downstream (Davao City Water District, 2020). Subsequently, the first quarter performance report by Davao City Water District (2023) highlights a decrease in Non-Revenue Water (NRW) from 36.65% in August 2022 to 35.57% in March 2023. Despite this improvement, there is a

recommendation to focus on intensified leak detection efforts due to concerns about the Davao City Bulk Water Supply Project (DCBWSP) in 2023 potentially causing more pipe bursts. Moreover, the Non-Revenue Water Management Division at Davao City Water District faced challenges in developing a water loss reduction strategy, leading to the creation of the "Localize, Locate, and Pinpoint Strategy" (LLP). This strategy utilizes advanced tools like noise loggers and electronic ground microphones to pinpoint and address water leaks in the distribution network with precision, minimizing the financial, environmental, and public health impacts of water loss.

Furthermore, it is possible to reduce NRW (Non-Revenue Water) by implementing improved maintenance practices, leveraging technology, and even implementing policy changes. Research is required to determine the highest level of leaks in water pipelines, and to manage and reduce water loss in these pipes. Studies have shown to reduce leaks from different water districts (Gomez, 2022; DCWD, 2023; Magumbol, 2022) but less has been done to evaluate the efficiency of localizing, locating, and pinpointing strategies for reducing water loss effectively. Thus, The Localize, Locate, and Pinpoint (LLP) Strategy project of Davao City Water District served as the basis for the evaluation of the efficiency of the leak detection strategy in reducing water loss.

This study was anchored on the Resource Management Theory of Mitchel (1989). This theory suggests that improved resource management leads to better performance, productivity, and decision-making by aligning resource use with community goals. It focuses on the effective and sustainable utilization of resources, including water, to optimize allocation for specific objectives like reducing water loss. In this research, the researcher evaluated the efficiency of the "Localize, Locate, and Pinpoint" strategy in reducing water loss, which aligns with Resource Management Theory by emphasizing resource-efficient allocation through accurate leak detection. This approach promotes sustainability, data-driven decisions, and system efficiency, and addresses water scarcity risks, all contributing to effective resource management and waste reduction.

2.0 Methodology

2.1 Research Design

This study employed a quantitative method and utilized a descriptive-comparative research design. Descriptive research design refers to a specific approach used to gather information systematically to describe a particular phenomenon or situation (Creswell & Creswell, 2018). In this study, descriptive research design was used to examine the NRW (Non-Revenue Water) rate before and after the implementation of the Localize, Locate, and Pinpoint Strategy using simulated/computed data. This was also used to measure the extent of noise before and after the implementation of the LLP Strategy. Meanwhile, comparative research design involves the act of comparing two or more things to uncover insights or knowledge about one or all the items being compared (Creswell & Creswell, 2018). Thus, in this study, the comparative research design was used to evaluate the efficiency of Localize, Locate, and Pinpoint Strategy in Reducing Water Loss.

2.2 Research Locale

This study was conducted in the Geographical Information System (GIS)" of Davao City Water District to determine the geographical references of the district meter area, the installed valves, and the number of customers in the specific location.

2.3 Research Measures

The data that were gathered from the Noise Logger Correlator are secondary data which is a state-of-the-art "lift and shift" acoustic device designed to be used as a temporary or semi-permanent water network survey tool. This verifies the presence of a leak in an area by correlating the distance a leak sound traveled between two points. Secondly, the Electronic Ground Microphone device was utilized to detect and amplify the sound produced by leaks occurring in main pipes and service line pipes. These devices were crucial components of leak detection teams, as they operated equipment to identify the closest leak sites and accurately pinpoint suspected leak locations. Moreover, a sub-component like Logger Antenna was used also. This component of the noise logger correlator will transmit the recorded noise in a software serve that is used to analyze the data. Another component is the Programmer Console, a device that was used to set a programming logging time or recording schedule. On the other hand, headphones were used as a component that was connected to the

electronic ground microphone. It was used to listen to the noise that was captured by the electronic ground microphone with noise filtration. The last component of the electronic ground microphone is the Console Panel. It displays on its LCD the intensity of the noise that was captured per location where the electronic ground microphone is placed.

On the other hand, the researcher used "The Geographical Information System (GIS)" of Davao City Water District to determine the geographical references of the district meter area, the installed valves, and the number of customers in the specific location. The latest GIS map with the pipe network layer under the DMA Project of Dumoy 31 was requested from the Davao City Water District. This layer was with data fields containing pipe materials, the number of valves installed at Dumoy 31, and active services or customers' connections. Moreover, the data obtained from the noise logger can be seen on its application, where the confidence level of the correlated data between the two loggers and the recorded noise intensity can be viewed. Also, the data obtained from the ground microphone is displayed on its console panel, allowing the closest noise to be seen. Table 1 for the range of leakage noise, from the Operational Manual of LWUA, shows the inherent characteristics of a steel pipe, a frequency level of noise is used to determine potential leaks.

Table 1. Range of leakage noise

Pipe Material	Leak Frequency Range	Descriptive Level	Interpretation
Steel	400Hz-1500Hz	Potential Leakage	This means that there is a potential leakage recorded.
	<399Hz	No Leakage	This means that there is no leakage recorded.

Finally, the data obtained from the water loss was recorded from the flowmeter within the DMA and to active service connections. Presented in Table 2 is the prescribed standard for water loss established by the Local Water Utilities Administration (LWUA) Board, under LWUA Memorandum Circular No.11-18. This circular emphasizes the need to efficiently address water loss, facilitating the reduction of Non-Revenue Water (NRW) to meet the permissible rate of 30% or less.

Table 2. Water loss percentage

Water Loss Percentage (NRW)	Descriptive Level	Interpretation
More than 30%	Not Acceptable	This means that the water loss recorded is high.
Less than 30%	Acceptable	This means that the water loss recorded is low.

2.4 Data Gathering Procedure

The following are the procedures followed in conducting this study: First, the letter was sent to the General Manager of Davao City Water District requesting permission to use the secondary data in evaluating the efficiency of LLP implemented in the said institution. After which, the secondary data were gathered, which is a sample data of water loss. These data are sets of hourly recordings starting from July 16, 2023, to July 22, 2023 (before LLP) and sets of hourly recordings (after LLP) from July 24, 2023, to July 30, 2023. These data were obtained from the District Meter Area of Dumoy 31 that were generated from the electromagnetic flow meter from the water district. Then, after finalizing the data, a statistician was consulted for mathematical computation as part of the analysis and interpretation. Finally, interpretation was done based on the statistical results of the study.

2.5 Data Analysis

The data that were obtained from this study were based on the actual device readings which served as outputs of the Localize, Locate, and Pinpoint (LLP) strategy in water leakage detection. The secondary data were obtained through computer simulation and computed data. These data were analyzed and interpreted using the statistical tools as follows.

NRW Formula. This was used to examine the water loss before and after the implementation of the Localized, Locate, and Pinpoint Strategy in reducing water loss in Davao City, Philippines.

$$NRW = \frac{A_p - A_c}{A_p} \%$$

Where:

A_p = volume of the water produced per time unit
 A_c = volume of consumption of water per time unit

Mean. This was used to measure the average of the water loss and extent of noise before and after the implementation of localize, locate, and pinpoint strategy in reducing water loss.

Wilcoxon signed-rank test. This statistical tool is a non-parametric test that was used in determining if there is a significant difference in the extent of noise before and after the implementation of the Localize, Locate, and Pinpoint Strategy in reducing water loss in Davao City, Philippines. Furthermore, the Wilcoxon signed-rank test was used to compare two related samples, matched samples, or to conduct a paired difference test of repeated measurements on a single sample to assess whether their population mean ranks differ.

Paired Sample T-test. This was used in determining if there was a significant difference in the mean volume of water loss before and after the implementation of the Localize, Locate, and Pinpoint Strategy in reducing water loss in Davao City, Philippines. Furthermore, the t-statistic value, p-value, and confidence interval value will be obtained to explain variability, probability of observing the obtained difference, and range of plausible values for the true population mean difference, respectively.

2.6 Ethical Considerations

This study did not involve any human or animal participation; however, the study was dedicated to evaluating the efficiency of the Localize, Locate, and Pinpoint strategy in reducing water loss with a strong ethical foundation such as data privacy and security. Data privacy and security were given utmost importance in the study. Since the study involved sensitive data related to water infrastructure and distribution, measures were taken to ensure that the data collected were treated with the highest level of confidentiality and were protected from unauthorized access. While the study did not directly involve human or animal participants, it was crucial to consider the broader environmental impact of implementing the strategy. Ensuring that the proposed approach did not cause unintended negative consequences on the environment was essential for responsible water management. The study prioritized the benefits of the water management system and the communities it served. Moreover, adhering to rigorous scientific methods and standards was crucial to ensure the study's validity and reliability. This includes using appropriate data analysis techniques and considering potential confounding factors that could influence the results.

3.0 Results and Discussion

The presented results, detailed in Tables 3 to 8, offer insights into the efficiency of the Localize, Locate, and Pinpoint (LLP) strategy in mitigating water loss through leak detection and management.

Table 3. The extent of noise before the implementation

Logger 1	Logger 2	Interpretation
446Hz	442Hz	Potential Leakage
441Hz	441Hz	Potential Leakage
448Hz	446Hz	Potential Leakage
450Hz	449Hz	Potential Leakage
378Hz	376Hz	No Leakage
374Hz	372Hz	No Leakage
370Hz	370Hz	No Leakage
Mean 415Hz	414Hz	Potential Leakage

Table 3 shows the extent of noise intensities from noise loggers 1 and 2 before the implementation of the localize, locate, and pinpoint strategy. These intensities were measured in hertz (Hz). As it can be gleaned, the start of the observation recorded data in logger 1 of 446Hz and logger 2 of 442 Hz at a range of potential leakage, while the last day of observation shows logger 1 and 2 of 370Hz or interpreted as no leakage. Furthermore, the average noise intensities, 415 Hz and 414 Hz, recorded from noise loggers 1 and 2, respectively, fall in the range of 400 – 1500 Hz. These results indicate a potential leakage of water. These findings further indicate that within a 7-day observation, it recorded a potential leakage before the implementation of the localize, locate, and pinpoint strategy.

This finding conforms to the study of Davao City Water District (DCWD, 2022) that without implementation of such a strategy, it can lead to its peak or intense leakage without noticing it. Moreover, Chen et al. (2020) provide insights into the extent of water leakage before implementing the LLP strategy. Thus, the non-revenue water component due to leaks highlighted the significant financial implications of unaddressed water leakage on utility revenues and water resource management (Magsumbol, 2022).

Table 4. The extent of noise after the implementation

Logger 1	Logger 2	Interpretation
363Hz	363Hz	No Leakage
363Hz	363Hz	No Leakage
362Hz	362Hz	No Leakage
362Hz	362Hz	No Leakage
360Hz	360Hz	No Leakage
360Hz	360Hz	No Leakage
360Hz	360Hz	No Leakage
Mean 361Hz	361Hz	No Leakage

Table 4 shows the extent of noise intensities after the implementation of the localize, locate, and pinpoint strategy. The data show on day 1 with 363Hz in loggers 1 and 2 with the interpretation of no leakage. This means that there is no leakage recorded. On the other hand, on the last day of observation, it yielded 360Hz in loggers 1 and 2. The average noise intensities, 361 Hz and 361 Hz, recorded from noise loggers 1 and 2, respectively, fall below 399 Hz. These results indicate the absence of water leakage. These findings further indicate that the seven-day implementation of the localize, locate, and pinpoint strategy, helps to reduce the possibility of potential leakage that is below 399Hz.

This indicated that the LLP Strategy contributed to reducing the likelihood of potential leakage with a frequency lower than 399 Hz, as supported by Davao City Water District (DCWD, 2022; Raymundo, 2023) that a reduction of leakage is evident when the strategy has been implemented. Moreover, Wang et al. (2018) found that the Localize, Locate, and Pinpoint Strategy was effective in localizing and locating leaks, with an accuracy of over 90%. Also found that the Localize, Locate, and Pinpoint Strategy was able to reduce leak noise levels by up to 50%.

Table 5. Test of difference in the extent of noise before and after the implementation

	W-value	p-value	Remarks
Logger 1 (Before) and 1 (After)	0	0.018	Reject the null hypothesis
Logger 2 (Before) and 2 (After)	0	0.018	

0.05 level of Significance

Table 5 shows the significant difference in the extent of noise intensities before and after the implementation of the localize, locate, and pinpoint strategy of loggers 1 and 2. Using the Wilcoxon signed-rank test at 0.05 significance level and a two-tailed test, the computed W-value is 0 and the p-value is 0.018 (<0.05 level of significance) for logger 1 and 2. Since the computed W-value is less than the critical W-value =2 at n=7 and the computed p-value is less than the significance level, there is sufficient evidence to reject the null hypothesis. This indicates that given the first set of recordings of noise intensities from the logger correlator, there is a significant reduction in the noise intensity after the implementation of the LLP strategy.

This result supports the assertion that the strategy effectively curbed potential water leakage. On the other hand, this result conforms to the study of Gomez (2022), which stated that it is possible to manage leakage by implementing improved maintenance practices, leveraging technology, and even implementing policy changes. Moreover, Raymundo (2023) revealed that the firm continues to strive to further reduce or maintain the NRW through aggressively repairing leaks and rehabilitating pipes. Meanwhile, Magsumbol (2022) revealed that if preventive maintenance is not implemented, it could lead still to a possibility of water loss. On the other hand, by implementing advanced leak detection technologies and embracing a data-driven approach, water districts can improve operational efficiency and reduce water loss (Herrera et al., 2017).

Table 6. The mean volume of the water loss before the implementation

Date	Production Volume (cu.m.)	Consumption Volume (cu.m.)	Water Loss (cu.m.)	NRW Percentage	Interpretation
July 16, 2023	30.08	18.18	11.90	31.74%	Not Acceptable
July 17, 2023	30.50	18.45	12.05	32.00%	Not Acceptable
July 18, 2023	30.10	17.98	12.12	32.02%	Not Acceptable
July 19, 2023	30.18	17.98	12.20	32.21%	Not Acceptable
July 20, 2023	30.17	18.06	12.11	32.00%	Not Acceptable
July 21, 2023	30.08	18.01	12.08	32.21%	Not Acceptable
July 22, 2023	31.15	19.14	12.01	30.79%	Not Acceptable
Over-all Mean	30.32	18.26	12.07	31.85%	Not Acceptable

Table 6 shows the daily averages of production volume, consumption volume, water loss, and the NRW percentage before the implementation of the Localize, Locate, and Pinpoint Strategy. It can be gleaned that at the start of the observation, the recorded water loss was 11.90 cubic meters (31.74%). This can be interpreted as not acceptable or simply indicated that the recorded water loss is high. On the other hand, on the last day of observation, it yielded a result of 12.01 cubic meters (30.79%), which can be interpreted as not acceptable. This further indicates that it recorded a high water loss still. Furthermore, on average it can be shown a water loss of 12.07 cubic meters (31.85%) can be interpreted as not acceptable since it is more than the 30% range of acceptable water losses. The average NRW percentage, greater than 30%, is an unacceptable water loss level.

This indicates that the recorded water loss is high. The results align with the investigation conducted in the study by Chen et al. (2020) that the staggering statistic that 40% of the water supply is lost due to leakages and faulty meters underscores the urgency of addressing this issue. This level of water loss does not only affect the economic sustainability of water utilities but it also has environmental implications and threatens the availability of safe drinking water for communities (Herrera et al., 2017). Leakages in the distribution network and inaccurate or faulty meters contribute significantly to water loss. Aging infrastructure, inadequate maintenance, and poor installation practices are commonly cited reasons for distribution network leakages (Ganeshan et al., 2018).

Table 7. The mean volume of the water loss after the implementation

Date	Production Volume (cu.m.)	Consumption Volume (cu.m.)	Water Loss (cu.m.)	NRW Percentage	Interpretation
July 24, 2023	30.05	19.17	10.88	28.18%	Acceptable
July 25, 2023	30.22	19.36	10.86	28.02%	Acceptable
July 26, 2023	30.06	19.23	10.83	27.83%	Acceptable
July 27, 2023	30.11	19.12	10.98	28.33%	Acceptable
July 28, 2023	30.22	19.24	10.98	28.28%	Acceptable
July 29, 2023	29.07	18.35	10.72	28.52%	Acceptable
July 30, 2023	29.67	18.37	11.30	29.72%	Acceptable
Over-all Mean	29.91	18.98	10.94	28.41%	Acceptable

Table 7 shows the daily averages of production volume, consumption volume, water loss, and the NRW percentage after the implementation of the Localize, Locate, and Pinpoint Strategy. The result yielded 10.88 cubic meters (28.18%) or interpreted as acceptable. This means that it recorded a low water loss, despite it being almost 30%. While on the last observation, 11.30 cubic meters (29.72%) were recorded or can be interpreted as acceptable. This means that there are still water losses but recorded on the acceptable range value. Moreover, the average water loss is 10.94 cubic meters (28.41%) and is interpreted as acceptable. Subsequently, this result shows that there was a relative reduction of the mean volume of water loss after the LLP implementation by 1.13 cubic meters. The average NRW percentage is less than 30%, interpreted as an acceptable water loss level. This indicates that the recorded water loss is low. This further indicates that there are still water losses but a minimal closer to the 30% range of acceptable water losses. These findings would mean that there may be another source of water losses after implementing the Localize, Locate, and Pinpoint Strategy.

As supported in the research by Sharma et al. (2020), demonstrated a case study where the implementation of leak detection technologies resulted in a substantial decrease in water loss. The study showed that after the strategy was deployed, the utility experienced a measurable reduction in non-revenue water, which is directly attributed to water loss through leaks. Implementation of the strategy not only leads to water conservation but

also enhances the operational efficiency of water utilities. By accurately localizing leaks, utilities can minimize excavation and repair efforts, leading to cost savings in terms of labor, material, and equipment usage (Ganeshan et al., 2018).

Table 8. Test of difference in the mean volume of water loss before and after the implementation

	Mean	t-value	p-value	Remarks
Mean Volume of Water Loss (Before)	12.07	9.77	0.000	Reject the null hypothesis
Mean Volume of Water Loss (After)	10.94			

0.05 level of Significance

Table 8 shows the significant difference in the mean volume of water loss before and after the implementation of the localize, locate, and pinpoint strategy. The data show that the mean volume of water loss before the implementation (12.07) and after the implementation of Localize, Locate, and Pinpoint Strategy (10.94) with a t-value of (9.77) and a p-value of (0.000) which is (<0.05) level of significance. Since the computed p-value is less than the significance level, there is sufficient evidence to reject the null hypothesis. This indicates that there is a significant difference in the mean volumes of water loss before and after the implementation of the LLP strategy. Furthermore, since the t-value is positive, the mean water loss before the implementation of the LLP strategy is significantly higher than the mean volume of water loss after the implementation of the LLP strategy. Therefore, the implementation of the LLP strategy has significantly reduced the volume of water loss. Subsequently, the finding shows that the implementation of LLP (Localize, Locate and Pinpoint Strategy) can help reduce water losses although it cannot be eliminated it will help to reduce water loss or the non-revenue water of the water district.

This result aligns with the understanding that complete eradication of water loss may be unfeasible due to various factors, such as aging infrastructure (Xu et al., 2019). The LLP strategy leverages technological advancements, including acoustic sensors, pressure monitoring systems, and GIS mapping. The integration of these technologies facilitates efficient leak detection, which is crucial for achieving the desired water loss reduction outcomes (Khan et al., 2021). The findings from various studies collectively emphasize the potential benefits for water districts in adopting the LLP strategy. Moreover, with the foregoing result, the LLP strategy, with its incorporation of advanced technologies, presents a promising avenue for water districts to address water loss challenges, as underscored by the research conducted by Herrera et al. (2017).

4.0 Conclusion

Based on the findings of the study, the following conclusions are drawn:

1. The extent of noise intensities before the implementation of the Localize, Locate, and Pinpoint strategy shows a potential leakage of water.
2. The extent of noise after the implementation of the Localize, Locate, and Pinpoint strategy shows the absence of water leakage. This means that both loggers recorded an acceptable level of leakage. This finding further indicates that the implementation of the Localize, Locate, and Pinpoint strategy, helps to reduce the water loss.
3. The significant difference in the extent of noise before and after the implementation of the Localize, Locate, and Pinpoint strategy using logger 1 and 2 shows a p-value less than 0.05 level of significance. Moreover, since the computed p-value is less than the significance level, there is sufficient evidence to reject the null hypothesis. This indicates that, given the first set of recordings of noise intensities from the logger correlator, there is a significant reduction in the noise intensity after the implementation of the LLP strategy.
4. The water loss before the implementation of localize, locate, and pinpoint strategy is in the range of not acceptable water loss or greater than 30% NRW. This indicates a high water loss.
5. The water loss after the implementation of the localize, locate, and pinpoint strategy is in the range of acceptable water loss or low water loss although it can be noted that it is nearly in an acceptable range of 30%, but this would mean that there are still other factors of water losses. Subsequently, the result shows that there was a relative reduction of the mean volume of water loss after the LLP implementation by 1.13 cubic meters.

- The finding shows a significant difference in the water loss before and after the implementation of LLP (Localize, Locate, and Pinpoint Strategy). Therefore, the implementation of the LLP strategy has significantly reduced the volume of water loss.

5.0 Contributions of Authors

This is single-author research.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The researcher would like to take this opportunity to express his heartfelt gratitude and appreciation to all those who have supported him throughout his journey of conducting this research and writing this capstone project. First and foremost, the researcher is deeply indebted to his thesis adviser, *Harry Dave B. Villazor, MAEd*, and panel members: *Alex D. Niez, PhD, EdD*, *Kirt Anthony R. Diaz, PhD*, and *Lemuel M. Sayao, PhD*. Their exceptional expertise, valuable insights, and continuous support have been invaluable in every phase of this capstone project. The researcher is immensely grateful for their unwavering commitment, patience, and guidance, which have undoubtedly enriched his understanding of the subject matter. Moreover, the researcher would like to express his sincere appreciation to *Benedicto Norberto V. Aves, PhD*, for his exceptional proficiency in statistical data analysis. The researcher is deeply grateful to *Lemuel M. Sayao, PhD*, who served as the research instructor and provided invaluable assistance throughout the development of this capstone project paper. Subsequently, the researcher is grateful to the *management of Davao City Water District*, for allowing him to conduct and gather the data. Without them, this capstone project would not have been possible. Lastly, the researcher would like to express his deepest appreciation to his family and friends for their unwavering support, encouragement, and love throughout this journey. Above all, to the Almighty Father, for providing the researcher the courage, insight, and faith necessary to complete this capstone project.

9.0 References

- Abdulshaheed, A., Mustapha, F., & Ghavamian, A. (2017). A pressure-based method for monitoring leaks in a pipe distribution system: A Review. *Renewable and Sustainable Energy Reviews*, 69, 902-911.
- Cervancia, K., Gomez, C.J., Niega, C.E., & Tividad, K.M. (2022). Assessment, monitoring, and reduction strategy development for non-revenue water (NRW) of Calamba Water District (CWD), Calamba City, Laguna, Philippines. *IOP Conference Series: Earth and Environmental Science*, Volume 1022. <https://doi.org/10.1088/1755-1315/1022/1/012058>
- Chen, J., Chen, S., Chen, L., & Liu, L. (2020). Leak detection in water distribution networks based on data analytics: A Review. *Water*, 12(9), 2552.
- Creswell, J.W. & Creswell, J.D. (2018) *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage, Los Angeles
- Davao City Water District (2020). *Davao City Water District 2020 performance report*. <https://rb.gy/cayigz>
- Davao City Water District (2023). *Performance report of the first quarter*. <https://rb.gy/wsk8ug>
- Dhika, H., Daengs, A., & Ambarsari, E. W. (2018). Forecasting water loss due to pipeline leakage by using ANFIS And Backpropagation Approach. Study Case at PDAM, Tirta Kahuripan On District of Bogor. <https://eudl.eu/pdf/10.4108/eai.23-4-2018.2277589>
- Ganeshan, D., Farisha, B., Sachin, B., Saheen, K. & Binoy, N. (2018). Leak detection in water-distribution pipe system. 1-4. 10.1109/ICCONS.2018.8663193.
- Ganeshan, M., Frisk, E., Gustafsson, A. M., & Hellström, D. (2018). Leak detection and localization in water distribution networks: A review. *Water Resources Management*, 32(4), 1297-1315.
- Gomez, H. (2022). Major pipe leak disrupts water supply in many Cagayan de Oro villages. *Rappler*. <https://rb.gy/dccpc1>
- Gopalakrishnan, P., Abhishek, S., Ranjith, R., Venkatesh, R., & Jai Suriya, V. (2017). Smart Pipeline Water Leakage Detection System, 12(16), 5559-5564.
- Gupta, A. D., & Kulat, K. (2018). Leakage reduction in water distribution system using efficient pressure management techniques. Case study: Nagpur, India, *Water Supply* (2018) 18 (6): 2015-2027. <https://doi.org/10.2166/ws.2018.023>
- Herrera, M., Perez, R., & Iglesias, R. (2017). Smart metering and smart sensors for water leakage control. *Procedia Engineering*, 186, 306-313.
- Khan, U.N.A., Abbas, S.M., & Shamsuddin, S.M. (2021). A review on leak detection and localization techniques in water distribution networks. *IOP Conference Series: Earth and Environmental Science*, 1036(1), 012016.
- Magsumbol, C. (2022). Due to leakage in pipes: MCWD loses P116.14 million in income. *Philstar*. <https://www.philstar.com/the-freeman/cebu-news/2022/08/25/2205014/due-leakage-pipes-mcwd-loses-p11614-million-income>

- Mamede, H., Neves, J.C., Martins, J., Gonçalves, R., & Branco, F. (2023). A Prototype for an Intelligent Water Management System for Household Use. Licensee MDPI, Basel, Switzerland, 23(9), 4493; <https://doi.org/10.3390/s23094493>
- Office of the Auditor General Western Australia. (2021). Water Corporation: Management of water pipes – Follow-Up (2021-22). https://audit.wa.gov.au/wp-content/uploads/2021/11/Report-7_Water-Corporation-Management-of-Water-Pipes
- Ong, C., Tortajada, C., & Arora, O. (2023). Key challenges to urban water management in ASEAN. in: Urban water demand management. SpringerBriefs on Case Studies of Sustainable Development. Springer, Singapore. https://doi.org/10.1007/978-981-19-8677-2_2
- Parwatingtyas, D., Ambarsari, E.W., & Mariko, S. (2017). The calculation of the highest leak level of the water pipeline region at PDAM Tirta Kahuripan using fuzzy C-means and ArcGIS method analysis. AIP Conference Proceedings, 1862(1), 030196. <https://doi.org/10.1063/1.4991300>
- Raymundo Jr., P. (2023). Manila Water prepares for the summer months. The Philippine News Agency. <https://www.pna.gov.ph/articles/1197421>
- Sharma, R., Choudhury, P., & Sharma, D. (2020). Case study of water leakage reduction in a water distribution system using flow meters and GIS. Environmental Science and Pollution Research, 27(22), 27553-27563.
- Sitchon, J. (2023). Cebu's water district recorded almost 9,000 system leakages in 2022. Rappler. <https://rb.gy/qjf4ng>
- Slowey, K. (2019). Leak detection tech can save contractors the cost of water waste and damage. Construction Dive. <https://www.constructiondive.com/news/leak-detection-tech-can-save-contractors-the-cost-of-water-waste-and-damage/558967/>
- The Global New Light of Myanmar. (2020). Yangon water pipeline replacement project completed 80%. https://cdn.myanmarseo.com/file/client-cdn/gnlm/wp-content/uploads/2020/07/28_July_20_gnlm.pdf
- Thein, M. (2018). Urban water supply and sanitation in Yangon. Urban Delta Seminar: Enhancing water security in the urbanizing Ayeyarwady Delta region, Yangon, Myanmar. <https://www.myanmarwaterportal.com/repository/411-urban-water-supply-and-sanitation-in-yangon.html>
- Wang, X., Li, X., Wang, X., Zhang, X., & Wang, Y. (2018). Leak localization in water distribution networks using a localize-locate-pinpoint strategy. Water Resources Management, 32(1), 90-100.
- Ward, O. (2019). Why technology alone won't solve ASEAN's water crisis. <https://www.aseantoday.com/2019/08/why-technology-alone-wont-solve-aseans-water-crisis/>
- Xu, J., Chai, K.T., Wu, B., Han, E.L., Wai, C., Li, W., Yeo, J., Nijhof, E. & Gu, Y. (2019). Low-cost tiny-sized MEMS hydrophone sensor for water pipeline leak detection. IEEE Trans. Ind. Electron, vol. 66 no.8, pp. 6374-6382
- Xu, Z., Chu, J., Ye, W., & Fan, Y. (2019). A review of water losses in the urban water supply system. Water, 11(2), 269.

The Interplay among Students' Social Behavior, Thinking Skills, and Academic Performance in Core Subjects

Abigail V. Santisteban, Maria Chona Z. Futralan
Foundation University, Dumaguete City, Negros Oriental, Philippines

Author email: machona.futralan@foundationu.com

Dated received: March 8, 2024

Date revised: March 18, 2024

Date accepted: March 22, 2024

Originality: 99%

Grammarly Score: 99%

Similarity: 1%

Recommended citation:

Santisteban, A., Futralan, M.C. (2024). The Interplay among Students' Social Behavior, Thinking Skills, and Academic Performance in Core Subjects. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 130-137. <https://doi.org/10.5281/zenodo.10846618>

Abstract. This study delved into students' thinking skills in dealing with real-life situations and how such skills are associated with their academic performance in the following core subjects: Mathematics, Science, and English. The research is quantitative, specifically a descriptive-correlational type. The respondents came from four big private schools in Dumaguete City. An adapted questionnaire was utilized to gauge the students' thinking skills, and their academic performance was garnered based on their grades in the three core subjects. Percentages means, and chi-square tests were utilized as data treatment tools. The data indicated that students demonstrated a "very satisfactory" level of performance in Mathematics and Science, whereas their performance in English was notably "outstanding." Furthermore, the results showed that nearly half of the students use their problem-solving, decision-making, and thinking skills in dealing with real-life situations, while only a few of them struggle to effectively utilize the aforementioned skills. The data further revealed that the students' performance in Mathematics and Science and their thinking skills in dealing with real-life situations are significantly correlated.

Keywords: Social behavior; Thinking skills; Academic performance; Core subjects; Critical thinking.

1.0 Introduction

The issue of whether highly intelligent individuals can successfully solve problems in the real world is not directly addressed by the majority of theories of intelligence (Halpern & Dunn 2021). Students, for instance, exhibit a distinctive blend of proactive engagement and academic performance when addressing real-life problems tied to global issues. According to Schetsche (2022), students apply coping strategies and, most frequently, they cope by seeking social support, problem-solving, cognitive restructuring, avoidance, and positive reappraisal. Some students also adopt problem-solving strategies such as engaging in critical thinking, analyzing the situation, and developing action plans, while others tend to be avoidant and evade the problem altogether. The definition of problem-solving abilities evolved with the introduction of cognitive learning theories. Problem-solving was then considered a sophisticated mental activity that involves a range of cognitive abilities and tasks (Rahman, 2019). Researchers claimed that many students lack problem-solving and critical thinking abilities, which are supposedly necessities in the workforce (Lestari et al., 2020).

People have different ways of dealing with challenges. Filipinos, for example, show camaraderie as their way of surviving hardships (Martinez et al., 2022). Meanwhile, Ocak et al. (2021) claimed that one of the main aims of education is to help individuals acquire the capability to solve problems and a positive attitude towards science. Nonetheless, the study of Amran et al. (2019) revealed that students' critical thinking ability is very low.

In addition, recent studies have indicated that the creative thinking ability of students is a determinant of their academic performance (Adeyemi & Oladele, 2020). To lead a successful life and develop crucial skills necessary for navigating a rapidly evolving world, students must expand their knowledge across diverse subject areas (Rahman, 2019). According to Albay (2019), central to the efficiency of the problem-solving strategy is the students' ability to collaborate, communicate, and actively engage in the entire problem-solving process. However, it remains unclear what the link between students' behavior in decoding real-life dilemma and their achievement in core subjects is. Other studies substantially discussed the students' attitude towards problem-solving and their academic performance, but no existing study has yet tackled specifically the students' behaviors, namely, avoidant, impulsive, indecisive, collaborative, and adaptive.

The current study is therefore conducted to examine the nuances of students' behavior in solving real-life problems and its bearing on their performance in core subjects, specifically Mathematics, Science, and English (Language). The goal of this query is to provide an extensive knowledge of the interplay linking problem-solving behavior, thinking skills, and academic outcomes in core subjects, offering insightful conclusions and suggestions to aid students' educational pursuits. Teaching requires flexibility and adaptability. Hence, through this study, teachers would be further motivated to address students' individual needs effectively, facilitating the successful implementation of differentiated instruction techniques.

2.0 Methodology

2.1 Research Design

The research is a descriptive-correlational type. First, it describes the performance of the students in core subjects as well as their thinking skills and behavior when confronted with problems. Second, it explores how students' thinking skills are related to their performance.

2.2 Research Participants

The data were gathered from two big colleges and two universities situated right in the heart of the well-known "University Town," Dumaguete City. Two-hundred fifty (250) Grade 11 students were randomly selected as the study's respondents. The selection was done using the systematic sampling technique with a random start, wherein every 2nd student in the list was chosen as a respondent. The two colleges and two universities, where the respondents were enrolled, were purposively selected.

2.3 Research Instrument

The questionnaire on "thinking skills" taken from Auckland Council-Controlled Organization was used in this study because the researchers found it a highly valuable and suitable instrument for research. However, some situations presented in the "thinking skills" questionnaire were modified to fit the environment and culture in the Philippines where the study was carried out. The organization was informed through an email regarding the use and modification of the questionnaire. To warrant the validity of its contents, the questionnaire was presented to three Mathematics educators. These experts have a master's degree and experience in research-related tasks. Their suggestions were taken into consideration in finalizing the research's working title and objectives. A trial test was also done to solicit ideas from students through their responses and to evaluate and analyze the results.

2.4 Data Gathering Procedure

A formal letter was sent to the respective presidents of the four schools to ask for approval to carry out the study. After the request was granted, the school's Vice President for Academic Affairs was notified so that the researcher could approach the teachers and float the questionnaires. The retrieval of the questionnaires, tallying of responses using MS Excel, data analysis through Jamovi Software, and interpretation of all data then followed.

2.5 Ethical Considerations

The researcher adhered to all required ethical standards throughout the whole course of the study. To protect the gathered data, confidentiality was rigorously upheld. Additionally, the researcher followed the ethical guidelines established by the University's Ethics Committee. Before commencing the study, the researchers also obtained approval from the appropriate authorities.

3.0 Results and Discussion

3.1 Students' Performance in Core Subjects

Table 1 provides the performance of the Grade 11 students in the following core subjects: Mathematics, Science, and English. The presentation of data is based on Department of Education Order No. 8, series of 2015 since the respondents of this study come from different private schools having dissimilar rating classifications and descriptions.

Table 1. Students' performance in core subjects (n = 265)

Rating	Mathematics		Science		English	
	f	%	f	%	f	%
90 - 100	113	42.64	115	43.40	136	51.32
85 - 89	104	39.25	117	44.15	106	40.00
80 - 84	33	12.45	24	9.05	15	5.66
75 - 79	15	5.66	9	3.40	8	3.02
Total	265	100.00	265	100.00	265	100.00
Mean	88.42 (Very Satisfactory)		88.74 (Very Satisfactory)		89.68 (Outstanding)	
SD	5.15		4.47		4.59	

As shown, 42.64% of the students exhibit an “outstanding” rating and 39.25% of them display a “very satisfactory” rating in Mathematics. Generally, the students are categorized as being at the “very satisfactory” level, with an overall rating of 88.42%. These findings align with what Despojo (2021) found in her study, where she unveiled that the students garnered average ratings of 89.64% and 89.62% in General Mathematics, and Statistics and Probability subjects. The same findings are apparent in the study of Diputado (2022), wherein students in Mathematics showed a “very satisfactory” performance with ratings equivalent to 85.74% and 87.99% during the first and second quarters, respectively. Although the subject is classified as one of the difficult subjects for Filipino students (Capuno et al., 2019), the current findings provide a positive connotation that students can still learn Mathematics. This is essential because many professions today demand mathematical analysis and mathematical skills to solve novel problems (McGunagle & Zizka, 2020).

Meanwhile, 43.40% of the students obtained an “outstanding” rating, and 44.15% of them attained a “very satisfactory” rating in the Science subject. Synthesizing the results, the researchers found that the students' general rating is 88.74% with a verbal description of “very satisfactory.” These outcomes are closely parallel to Despojo's findings (2021), which identified that senior high school students' grades in Science subjects are at the “outstanding” level with ratings around 91%. This performance of students is a good indication that they have effectively learned the Science concepts. Likewise, Morados (2020) emphasized that science education is critical to a country's success, while Broughel and Thierer (2019) stated that science and technology contribute significantly to the nation's economic development and prosperity and that the advancements in science and technology determine the nation's well-being.

Furthermore, the data indicate that 51.32% of the students have an “outstanding” rating and 40.00% of them got a “very satisfactory” rating in English. In summary, the students are classified as “outstanding” with an overall rating of 89.68%. These results support the findings of Despojo (2021) that senior high school students' grades in English subjects are at the “outstanding” level with ratings around 92%. Proficiency in English is important as it leads to a brighter future, a progressive career, and a satisfying life, according to Sailabada and Soontornwipast (2023).

The findings further imply that despite the reported decline in Philippine English Proficiency in previous years by an international company, Education First (EF), Filipino students remain proficient in English. Filipinos hold 10-15 percent of the BPO market globally, which employed 1.3 million Filipinos as of 2023. Since most employers perceive English proficiency as a pivotal factor for workplace success (Gaytos et al., 2019), it can be inferred that students are adaptive in terms of considering future workability (Oducado et al., 2020).

Moreover, the data in Table 1 reflect the standard deviations of the students' performances in Mathematics, Science, and English. The standard deviation is the degree of data dispersion concerning the mean. As shown,

the standard deviations are 5.15, 4.47, and 4.59 for Mathematics, Science, and English, respectively. These figures can be rounded off to 5. This means that the ratings of the students deviate 5 points from the mean.

3.2 Thinking Skills of Students in Dealing with Real-Life Situations

Table 2 unveils the students’ thinking skills in dealing with real-life situations. The way students think and analyze the problem eventually reveals their behavior in certain situations.

Table 2. Thinking skills of students in dealing with real-life situations (n = 265)

*Explanations of Students’ Choices when Dealing with Real-Life Situations	f	%
A. The students need to develop their cognitive skills. They shy away from dealing with problems due to the frustration that comes with it. In such instances, they may not take responsibility for their issues nor consider the consequences of their actions. This approach can be detrimental to their personal growth and academic progress. Therefore, it would be advantageous for students to practice calmly assessing their options when faced with problems and devising effective solutions. - Avoidant	5	1.89
B. The students feel anxious, fearful, or nervous when confronted with problems. Emotions can cloud their judgment, leading to impulsive decisions when they feel overwhelmed. Encouraging students to cultivate a sense of confidence in their decision-making abilities can be highly beneficial. By practicing these skills, they can develop the self-assurance needed to face challenges head-on. - Impulsive	19	7.17
C. It seems that students' approach to problem-solving is contingent on the complexity and significance of the problem at hand, as well as their sense of responsibility towards it. While this might work in certain situations, it may not always be the best course of action in real-world scenarios, particularly in a professional setting where problem-solving is a necessary skill. Rather than evaluating the magnitude of a problem and making a decision based on personal preferences, students should cultivate a habit of problem-solving regardless of the circumstances. - Indecisive	40	15.10
D. Students are generally adept at using their cognitive abilities and decision-making skills to tackle problems. However, they could benefit from improving their ability to consider all available options when attempting to solve a problem. Additionally, they tend to seek input and suggestions from those around them. - Collaborative	74	27.92
E. Students approach problems with a well-planned, thoughtful strategy, utilizing their problem-solving, decision-making, and critical thinking skills. - Adaptive	127	47.92
Total	265	100.00

*Explanations were adapted from the Auckland Council-Controlled Organization’s thinking skills questionnaire.

It can be drawn from the data that 47.92% of students are proficient in using their problem-solving, decision-making, and thinking skills. The results indicate that the students approach problems with careful and well-thought-out planning. This finding signifies that the students are “adaptive” to the situation and willing to provide a solution to the problem.

Being adaptive is closely related to the personality trait, “openness.” This trait is manifested when individuals are open to experience (Sassenberg et al., 2022). Adaptive people are willing to explore new things and are motivated to take on new challenges (Cherry, 2018). The data also imply that the students take careful measures when developing possible solutions to a problem. This is probably because, in 21st-century education, students are provided with opportunities to probe, discover, and be responsible for their learning, which include familiarizing and critically solving real-life problems (Ali, 2019).

The table also shows that 27.92% of the students use their skills in decision-making to disentangle problems. However, the students need to put more effort into considering and evaluating all available choices or alternatives when attempting to solve a problem. They approach problems by soliciting ideas and suggestions from people around them. These thinking skills of students can be characterized as being “collaborative,” a behavior that can be related to the personality trait of “extraversion.” Individuals with this behavior believe in the saying that “no man is an island.” They are more active when they are among their buddies. They also enjoy engaging in conversations and participate better in group activities (Alipio et al. 2022). As stressed by Martinez et al., (2022), Filipinos' strong sense of solidarity enables them to withstand adversity by turning to their friends and family for assistance.

Furthermore, Table 2 exposes that 15.10% of the students acquire ways of solving problems, which vary depending on the circumstances. For students, solving problems depends on how complicated their problem is, or whether the problem is their responsibility or not. This trait could be characterized as being “indecisive,”

which has a negative connotation because, in real life, people really must fix or solve problems whether they like it or not regardless of the weight of that problem.

Cherry (2018) posited that indecisiveness as a trait is the opposite of “agreeableness.” Agreeable individuals prioritize social contacts and value teamwork. Seyal and Suhali (2019) also supposed that agreeable people are receptive to debate and more adept at learning, particularly when learning opportunities involve group work and practical application. Unfortunately, in the current study, some of the students (15.10%) lack these characteristics.

Moreover, the data reflects that 7.17% of students approach problems emotionally and decide immediately without careful and proper planning. The students manifest the trait of being “impulsive.” These students lack assertiveness in decision-making and do not believe that they can overcome problems. These characteristics contradict the personality trait of “conscientiousness.” Conscientious individuals hardly ever make hasty or irresponsible decisions and usually make more deliberate, planned, and rational choices, according to Othman et al. (2020). They are committed to work plans and are determined to finish identified goals based on work plans (Albalawi, 2019). Unfortunately, the current findings divulged that a portion (7.17%) of the students do not manifest conscientiousness.

Lastly, Table 2 data depicts that 1.89% of students need to work on their cognitive skills. These students despise dealing with problems, often avoid issues, and do not try to sort them out. In short, they are “avoidant.” Being avoidant can be related to the personality trait of “neuroticism.” Students with high levels of neuroticism struggle to self-regulate and frequently resort to help-seeking behaviors (Bruso et al., 2020). They also have fears and insecurities that cause them to panic quickly (Alipio et al., 2022). These traits are not beneficial to students at school or in life in general. It would be good for students to practice being calm while they look at their options during hard times and plan out how they can fix their problems.

Noteworthy studies have documented drawbacks in students’ problem-solving abilities. Some disclosed that students tend to quickly perform the calculations using the provided numbers to reach a solution. In other words, they may focus primarily on computational aspects without deeply engaging in critical thinking or problem-solving strategies. It has also been emphasized that students are not competent at solving problems, especially non-routine ones (Dündar & Yaman, 2015; İncebacak & Ersoy, 2016; Albayrak & Şimşek, 2018).

3.3 Association between the Students’ Performance in Core Subjects and Their Thinking Skills

Table 3 exposes the data in identifying the association between the students’ performance in the core subjects and their thinking skills in dealing with real-life situations. It is shown that the avoidant and impulsive categorizations of students’ manifestations of their thinking skills are merged. This is done because only a few of the students belong to these categories, and some assumptions in the use of the Chi-Square Test cannot be satisfied. In addition, based on the descriptions of these two behaviors, the students have negative characteristics as compared with the other three categories.

The data further indicate that students’ thinking skills in dealing with real-life situations are significantly associated with their performance in Mathematics ($p = 0.001 < \alpha = 0.05$) and Science ($p = 0.024 < \alpha = 0.05$). This connotes that students’ thinking skills are dependent on their performance in Mathematics and Science or that their performance in these two subjects can account for how they think and deal with situations, which in turn display their behavior. It can also be seen, according to the data, that the student performances vary based on their groupings. Moreover, being “adaptive” received the highest rating in both Mathematics and Science subjects. Second in rank is the group of students who manifest “collaborative” behavior, and third is the group exhibiting “indecisive” behavior. The groups marked as “avoidant” and “impulsive” got the lowest ratings in both Mathematics and Science subjects. The order of these behaviors can be labeled as likable to unlikable.

Table 3. Association between the students' performance in core subjects and their thinking skills (n = 265)

Variables	χ^2	p-value	Remark
Performance in Mathematics and Thinking Skills	28.78	0.001	Significant
Thinking Skills/Behavior	Performance		
• A/B (Avoidant/Impulsive):	83.63%		
• C (Indecisive):	87.25%		
• D (Collaborative):	89.05%		
• E (Adaptive):	89.31%		
Performance in Science and Thinking Skills	19.13	0.024	Significant
Thinking Skills/Behavior	Performance		
• A/B (Avoidant/Impulsive):	86.10%		
• C (Indecisive):	87.88%		
• D (Collaborative):	89.05%		
• E (Adaptive):	89.32%		
Performance in English and Thinking Skills	7.18	0.618	Not significant

Level of significance = 0.05; df = 9

It was found by Adeyemi and Oladele (2020) that the creative thinking ability of students is a determinant of their academic performance. Similarly, students' academic performance enables them to think critically. This is also affirmed by Cresswell and Speelman (2020), who revealed that mastery of Mathematics can facilitate the cognitive skills and intellectual abilities of students. Therefore, students' thinking skills in dealing with real-life situations are significantly associated with their Mathematics performance. Ajisuksmo and Saputri (2017) also acknowledged the role of Mathematics in fostering students' capacity for rational, analytical, systematic, critical, and creative reasoning.

Meanwhile, the findings indicate that the students' performance in English is not significantly associated with their thinking skills ($p = 0.618 > \alpha = 0.05$), which suggests that there is no sufficient evidence signifying that the two variables are related. This may further imply that their English performance cannot account for their thinking skills in dealing with real-life situations. This result contradicts the findings of Ennis (2018) and Al Roomy (2022) that the student's performance in English has a strong association with their critical literacy or academic literacy.

4.0 Conclusion

The students' exposure to problem-solving in Mathematics and Science subjects cultivates their analytical thinking skills in dealing with situations. It also enables them to process problems methodically. The challenges posed by these subjects foster a creative mindset as students explore innovative solutions and think beyond conventional approaches. The application of theoretical knowledge to practical situations sharpens students' ability to address real-world challenges, creating a bridge between academic concepts and everyday problem-solving. On the other hand, students may struggle with grasping complex mathematical and scientific concepts leading them to rush through problem-solving without fully understanding the underlying principles. This hinders students' ability to think critically and solve problems methodically. Students who exhibit impulsive and avoidant behaviors face a range of challenges that extend beyond academic settings and impact various aspects of their lives.

To help those students who manifest negative behaviors in dealing with real-life problems, teachers must strengthen interdisciplinary learning, which requires students to draw upon knowledge from various disciplines to solve complex problems. Collaboration with faculty members from different disciplines to co-teach courses should also be pursued. Project-based learning is an example of this approach, which necessitates students to work together and may involve community engagement, encouraging students to address issues that extend beyond the confines of a single discipline. This approach fosters a holistic understanding of real-world challenges and enhances students' ability to think critically across different contexts.

5.0 Contributions of Authors

The authors confirm their equal contribution to every part of this research. All authors reviewed and approved the final version of this paper.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The authors are grateful to the faculty members of Foundation University Graduate School and Metro Dumaguete College for all the support and encouragement throughout the conduct of the study.

9.0 References

- Adeyemi, B. A., & Oladele, A (2020). Creative Thinking Ability and Academic Performance in Core Subjects of Lower Primary School Pupils in Ondo State, Nigeria. *International Journal and Research and Innovation in Social Science (IJRISS)*, 4(1), 292-300.
- Ajisuksmo, C. R., & Saputri, G. R. (2017). The influence of attitudes towards mathematics, and metacognitive awareness on mathematics achievements. *Creative Education*, 08(03), 486-497. doi:10.4236/ce.2017.83037
- Albalawi (2019). Does gender difference have an effect on the academic achievements of undergraduate students and later interns? A single medical college experience, *Taibah University, KSA. Allied Journal Medical Research*, 3(1), 20- 25.
- Albay, E. M. (2019). Analyzing the effects of the problem solving approach to the performance and attitude of first year university students. *Social Sciences & Humanities Open*, 1(1), 100006. doi:10.1016/j.ssaho.2019.10000
- Albayrak, M., & Şimşek, M. (2018). The predictive power to mathematical success of belief and reflective thinking for problem solving Problem çözmeye yönelik inanç ve yansıtıcı düşünme becerisinin matematik başarısını yordama gücü. *Journal of Human Sciences*, 15(2), 807-815. doi:10.14687/jhs.v15i2.5141
- Ali, S. S. (2019). Problem Based Learning: a Student-Centered Approach. *English Language Teaching*, 12(5), 73. doi:10.5539/elt.v12n5p73
- Alipio, A., Calachan, B., Elag, M., & Sacdalan, Q. (2022). A Correlational Study between Personality Traits and Challenges in Online Learning of Advertising Students from Polytechnic University of the Philippines. In *International Seminar Commemorating the 100th Anniversary of Tamansiswa* 1(1), 204- 220.
- Al Roomy, M. A. (2022). Investigating the Effects of Critical Reading Skills on Students' Reading Comprehension. *Arab World English Journal*, 13(1), 366-381. doi:10.24093/awej/vol13no1.24
- Amran, A., Perkasa, M., Satriawan, M., Jasin, I., & Irwansyah, M. (2019, February). Assessing students 21st century attitude and environmental awareness: promoting education for sustainable development through science education. *Journal of Physics: Conference Series*, 1157(2), 022025. doi:10.1088/1742-6596/1157/2/022025
- Broughel, J., & Thierer, A. D. (2019). Technological innovation and economic growth: A brief report on the evidence. *Mercatus Research Paper*. <https://www.mercatus.org/research/research-papers/technological-innovation-and-economic-growth>
- Bruso, Jacqueline, Jill Stefaniak, and Linda Bol. (2020). "An examination of personality traits as a predictor of the use of self-regulated learning strategies and considerations for online instruction." *Educational Technology Research and Development* 68 (2020): 2659-2683. doi:10.25777/sgn9-4j71
- Capuno, R., Necesario, R., Etcuban, J. O., Espina, R., Padillo, G., & Manguilimotan, R. (2019). Attitudes, Study Habits, and Academic Performance of Junior High School Students in Mathematics. *International Electronic Journal of Mathematics Education*, 14(3), 547-561. doi:10.29333/iejme/5768
- Cherry, K. (2018). *Personality Psychology* <https://www.verywellmind.com/personality-psychology-4157179>
- Cresswell, C., & Speelman, C. P. (2020). Does mathematics training lead to better logical thinking and reasoning? A cross-sectional assessment from students to professors. *PloS one*, 15(7), e0236153. doi:10.1371/journal.pone.0236153
- Despojo, A. G. (2021). Teachers' Practices on the 21st century skills and senior high school students' academic performance in the core subjects: basis for improving instruction. *UBT International Conference*. 316. doi:10.33107/ubt-ic.2022.307
- Diputado, J. (2022). Problems Resulting to Non-Attendance in a New Normal Education and Their Relationship to Students' Academic Performance.
- Dündar, S., & Yaman, H. (2015). How do prospective teachers solve routine and non-routine trigonometry problems?. *International Online Journal of Educational Sciences*, 7(2). doi:10.15345/iojes.2015.02.010
- Ennis, R. H. (2018). Critical thinking across the curriculum: A vision. *Topoi*, 37(1),165-184. doi:10.1007/s11245-016-9401-4
- Gaytos, C. E. G., Lavilla, I. L., Elairon, L. L., Biong, T. M. N., Rosaldo, R. C. A., & Salem, M. A. (2019). Level of English Proficiency and its Effects to the Employability of BSHRM Graduates. *Social Science Research Network*. doi:10.2139/ssrn.3432425
- Halpern, D. F., & Dunn, D. S. (2021). Critical thinking: A model of intelligence for solving real-world problems. *Journal of Intelligence*, 9(2), 22. doi:10.3390/jintelligence9020022
- İncebacak, B. B., & Ersoy, E. (2016). Problem solving skills of secondary school students. *China-USA Business Review*, 15(6), 275-285. doi:10.17265/1537-1514/2016.06.002
- Lestari, D., Haryani, S., & Sumarti, S. S. (2020). Analysis of Critical Thinking Skills in Vocational High School Automotive Engineering Students. *Journal of Innovative Science Education*, 9(1), 103-108. doi:10.15294/JISE.V8I3.32379
- Martinez, A., Calsado, C., Lau, J., & Brown, J. (2022). 'I don't know where to seek for help, so I just kept my silence': a qualitative study on psychological help-seeking among Filipino domestic workers in the United Kingdom. *SSM-Qualitative Research in Health*, 2, 100125. doi:10.1016/j.ssmqr.2022.100125
- McGunagle, D., & Zizka, L. (2020). Employability skills for 21st-century STEM students: the employers' perspective. *Higher education, skills and work-based learning*, 10(3), 591-606. doi:10.1108/HESWBL-10-2019-0148

- Morados, P. J. T. (2020). Evaluation of Ste-Graduates' Senior High School Science and Mathematics Performance. *IOER International Multidisciplinary Research Journal*, 2(3), 118-123. doi:10.54476/iimrj342
- Ocak, G., Dođruel, A. B., & Tepe, M. E. (2021). An analysis of the relationship between problem solving skills and scientific attitudes of secondary school students. *International Journal of Contemporary Educational Research*, 8(1), 72-83. doi:10.33200/ijcer.780710
- Oducado, R. M., Sotelo, M. G., Ramirez, L. M. M., Habaña, M. P., & Belo-Delariarte, R. G. (2020). English Language Proficiency and Its Relationship with Academic Performance and the Nurse Licensure Examination. *Nurse Media Journal of Nursing*, 10(1), 46-56. doi: 10.14710/nmjn.v10i1.28564
- Othman R, Othman R, Hallit R, Obeid S, Hallit S. (2020). Personality traits, emotional intelligence and decision-making styles in Lebanese universities medical students. *BMC Psychol.* 8(1):46. doi: 10.1186/s40359-020-00406-4
- Rahman, M. M. (2019). 21st century skill'problem solving': Defining the concept. Rahman, MM (2019). 21st Century Skill "Problem Solving": Defining the Concept. *Asian Journal of Interdisciplinary Research*, 2(1), 64-74. doi:10.34256/ajir1917
- Sailabada, A., & Soontornwipast, K. (2023). Students' Lived Experiences in English Program in a Thai Primary School: A Phenomenological Study. *LEARN Journal: Language Education and Acquisition Research Network*, 16(1), 631-651.
- Sassenberg, T. A., Condon, D. M., & DeYoung, C. G. (2022). University of Oregon Libraries. Imagination as a facet of Openness/Intellect: A new scale differentiating experiential simulation and conceptual innovation. *Creativity Research Journal*. 35(4), 583-595. doi:10.31234/osf.io/exzsd
- Schetsche, C. (2022). Pathways Through Coping Strategies to Psychological Symptoms: Structural Equation Modeling That Highlights the Importance of Social Support. *Counseling Psychology and Psychotherapy*, 30(1), 67-92. doi:10.17759/cpp.2022300105
- Seyal, Afzaal H., Noor Zainah Siau, and Wida Susanty Hj Suhali.(2019). "Evaluating students' personality and learning styles in higher education: Pedagogical considerations." *International Journal of Learning, Teaching and Educational Research*, 18(7), 145-164. doi:10.26803/ijlter.18.7.10
- "Thinking Skills Questionnaire". Retrieved from: <https://cometauckland.org.nz/assets/files/Thinking-Skills-Questionnaire.pdf>

Determinants of Primary School Teachers' Level of Self-Efficacy

Song Zizhan, Jaruvic Rafols*

Silliman University, Dumaguete City, Negros Oriental, Philippines

*Corresponding author email: jaruvicrafols@su.edu.ph

Dated received: March 6, 2024

Date revised: March 19, 2024

Date accepted: March 22, 2024

Originality: 90%

Grammarly Score: 94%

Similarity: 10%

Recommended citation:

Zizhan, S., & Rafols, J. (2024). Determinants of primary school teachers' level of self-efficacy. *Journal of Interdisciplinary Perspectives*, Vol. 2, Number 4, pp. 138-147. <https://doi.org/10.5281/zenodo.10847142>

Abstract. In an evolving educational landscape, the competence of teachers plays an important role in shaping the quality of education. This study delves into the intricate relationship between teachers' selected profiles and their level of self-efficacy. Employing a descriptive-comparative design, this research was conducted among 198 primary school teachers in China. The study utilized the Alternative Teachers' Sense of Self-Efficacy (A-TSES) instrument to measure teachers' self-efficacy across various dimensions. The research uncovered a diverse demographic composition of teachers, with significant variations in age, educational attainment, teaching experience, and grade levels taught. Notably, younger teachers exhibited higher self-efficacy beliefs, while the influence of gender on self-efficacy was negligible. Furthermore, educational qualifications and the grade level taught played distinctive roles in shaping teachers' self-efficacy. By knowing their self-efficacy levels in terms of their selected profile, we can identify which teachers offer more qualifications in teaching and handling a class that will benefit the students and the school.

Keywords: Self-Efficacy; Primary school teachers; Determinants; China.

1.0 Introduction

Teachers in the new era are tasked to meet the demands and needs of the students (Baker, 2005). Especially since the education system has changed and improved over the years, the quality of teachers must improve as well. The role of the classroom teacher significantly influences the performance of students in learning. In general, teachers have a crucial role in determining the success or failure of an educational system as they implement the system's policies in the classroom. Therefore, the effectiveness of the educational system improves when teachers are competent (Shahzad & Naureen, 2017). Teacher competence is based on their beliefs in their own abilities, and a lack of self-efficacy can lead to various psychological issues such as low levels of confidence and self-esteem. According to Bandura (1997), self-efficacy is the integration of behavioral, social, and technical skills to attain goals. In the teaching context, self-efficacy is referred to as the ability to influence the outcomes of students' work (Shahzad & Naureen, 2017).

Teacher competence impacts student performance. Several studies tackled self-efficacy among teachers. They showed that teachers' self-efficacy influences themselves and the overall classroom and student performance. Numerous studies have shown that high level of teacher self-efficacy (TSE) directly contributes to increased commitment, a willingness to embrace new reforms, implementation of innovative strategies in teaching, and enhancement of the whole teaching-learning process (Brighton, 2003; Chesnut & Burley, 2015; Derrington & Campbell, 2015; Donnell & Gettinger, 2015; Tschannen-Moran & Woolfolk Hoy, 2007). Conversely, educators with lower self-efficacy tend to exhibit reduced enthusiasm, less control over the educational environment, heightened levels of stress, job anxiety, and burnout, making them more prone to leaving the job (Malinen & Savolainen, 2016; Schunk & Pajares, 2009; Skaalvik & Skaalvik, 2007; Zee & Koomen, 2016).

Regrettably, the current distribution of teachers reveals an uneven allocation of less qualified and less experienced educators to classrooms attended by poor students (Clotfelter, Ladd, & Vigdor, 2005; Clotfelter, Ladd, Vigdor, & Wheeler, 2007; Peske & Haycock, 2006). A study by Bruno, Rabovsky, & Strunk (2020) discovered that novice teachers often find themselves with struggling students in classrooms and schools with less experienced colleagues, making their start into teaching more challenging. Although the distinctions between the settings of inexperienced and experienced teachers are generally minor, they seem to have significant implications for both students and educators. The more challenging assignments negatively impact the effectiveness and career expectations of new teachers, implying that students who are already lagging receive instruction from the least experienced educators (Bruno, Rabovsky, & Strunk, 2020).

Bruno, Rabovsky, & Strunk (2020) found that new teachers often face challenging classroom environments with struggling students and fewer experienced colleagues, impacting their performance and career trajectories. This results in students being taught by less experienced educators, despite the potential strengths of both generations. Geeraerts, Tynjälä, & Heikkinen's 2018 study revealed that younger teachers can learn innovative teaching methods and ICT skills, while older teachers primarily teach practical information, classroom management, self-regulation, and community building. Romano and Gibson's 2006 study revealed fluctuating successes and struggles of beginning teachers, with common issues being classroom management, parents, and teacher evaluation.

However, teachers from both old and new generations may offer different capabilities and strengths that can be used in the classroom. Geeraerts, Tynjälä, & Heikkinen (2018) conducted a study indicating that younger teachers may impart novel teaching methodologies and ICT skills to their veteran counterparts. Conversely, practical insights, classroom management proficiency, self-regulation, and community building were predominantly acquired from experienced teachers. A study by Romano and Gibson (2006) showed an initial understanding of the successes and struggles of beginning teachers. It was revealed that both successes and struggles fluctuated throughout the study. The respondent consistently mentioned that common issues were classroom management, parents, and teacher evaluation (Romano & Gibson, 2006).

Teachers' self-efficacy levels play a huge role in the overall success inside the classroom, and this may be influenced by teachers' age, sex, educational degree, teaching experience, or grade level taught. Despite the evidence discussed above, there are limited to no studies about teachers' level of self-efficacy and their selected profile in China. This will fill the knowledge gap, especially in the Chinese context. Thus, this study compared primary school teachers' level of self-efficacy in handling primary students in terms of their selected profiles. By knowing the correlation between their level of self-efficacy and profiles, we can identify which teachers offer more qualifications in teaching and handling a class that will benefit the students and the school.

2.0 Methodology

This study used the descriptive-comparative design. It was descriptive in the sense that it portrayed the distribution of the respondents about their demographic profile. It was comparative at the same time as it delved into determining whether a significant difference exists in their sense of self-efficacy when grouped according to demographic profile. The respondents were primary teachers in a school in China. The school has a total of 198 teachers. The entire teaching staff was included as respondents using the purposive sampling method (total population sampling method).

The Alternative Teachers' Sense of Self-Efficacy (A-TSES) was used in this study. It was based on the Traditional Teachers' Sense of Self-Efficacy Scale (T-TSES) that was developed by Tschannen-Moran and Hoy (2001). Part I looked at the respondents' demographics, and Part II looked at their teachers' sense of self-efficacy. The exploratory factor analysis (EFA) revealed that the analyzed instrument (A-TSES) and the chosen sample had a structure consisting of four factors. These factors collectively accounted for 67.01% of the total variance, indicating a substantial proportion of the variability in the data was explained. Factor 1(ESE) consisted of eight items, with loadings ranging from .417 to .612. Factor 2(EIS) comprised eight items, with loadings between .462 and .764. Factor 3(ECM) included four items, with loadings ranging from .461 to .688. Lastly, factor 4(ESM) was made up of four items, with loadings ranging from .499 to .556. It is important to note that loadings below .40 were disregarded in the analysis as they did not contribute significantly to the factors under consideration.

Before data gathering, a University Research Ethics Committee reviewed and approved the proposal. Once approved, authorization was sought from the school where the questionnaire was administered. The respondents were informed of the purpose of the study and that their participation was completely optional. After analyzing and evaluating the results, the data were deleted. The data collected were analyzed using descriptive and inferential statistics such as frequency, percentage, t-test for independent groups, standard deviation, and one-way analysis of variance (ANOVA).

3.0 Results and Discussion

3.1 Demographic Profile of the Respondents

Table 1. Profile of respondents

Items	f	%
Age		
18-40	143	72.22
41-65	55	27.78
Sex		
Female	93	46.97
Male	105	53.03
Educational Attainment		
Bachelor's Degree	192	96.97
Master's Degree	6	3.03
Teaching Experience (Years)		
1 to 3	66	33.33
4 to 6	40	20.20
7 to 9	38	19.19
≥ 10	54	27.27
Grade Level Taught		
1st grade	45	22.73
2nd grade	38	19.19
3rd grade	35	17.68
4th grade	31	15.66
5th grade	29	14.65
6th grade	20	10.10

Table 1 provides the demographic characteristics of the respondents. A substantial majority of the respondents (72.22%) belong to the age group of 18–40, signifying a predominantly youthful teaching cohort. This finding is consistent with research conducted in China, where the teaching profession has experienced an influx of younger educators. Studies by Li and Zhang (2017) and Wang et al. (2019) have reported a growing trend of younger individuals pursuing teaching careers in China, possibly due to changes in education policies and increased opportunities for professional development. Moreover, 27.78% of the respondents were aged between 41 and 65, highlighting the presence of experienced educators in the sample. Understanding the age distribution of teachers is a critical aspect of teacher demographics and can inform targeted professional development and support programs for educators in China. In terms of sex, 53% were males while 47% were females. The distribution was nearly equal, suggesting a relatively balanced representation of genders in the sample.

Sarfo et al. (2015) found that female and male teachers are different in their instructional strategies, with female teachers having higher efficacy beliefs on average than male teachers. Regarding educational attainment, most of the respondents (96.97%) held a bachelor's degree, while a small proportion (3.03%) obtained a master's degree. This indicates that most teachers in the sample have completed at least a bachelor's degree. As for teaching experience, the distribution among the respondents was as follows: 33.33% have 1 to 3 years of experience, 20.20% have 4 to 6 years, 19.19% have 7 to 9 years, and 27.27% have 10 or more years of experience. This indicates a diverse range of teaching experience levels in the sample. Finally, for grade level taught, the respondents were assigned to different grade levels for teaching. The distribution was as follows: 22.73% teach first grade, 19.19% teach second grade, 17.68% teach third grade, 15.66% teach fourth grade, 14.65% teach fifth grade, and 10.10% teach sixth grade. This indicates a relatively balanced distribution of teachers across different grade levels.

3.2 Respondents' Level of Self-Efficacy

Table 2. Distribution of respondents in the level of self-efficacy

Scores	Instructional Strategies	Classroom Management	Student Engagement	Student Misbehavior
1-9 (Very Low/Poor)	4.55%	10.10%	9.60%	3.03%
10-25(Low/Below Average)	19.70%	14.65%	16.67%	12.12%
26-39 (Low Average)	19.19%	9.60%	14.14%	18.69%
40-59 (Average)	17.68%	22.73%	21.21%	22.22%
60-75 (High Average)	13.13%	19.70%	15.15%	21.72%
76-89 (High/Above Average)	13.13%	12.63%	13.64%	13.64%
90-99 (Very High/Superior)	12.63%	10.61%	9.60%	8.59%
Overall Mean	50.49%	50.11%	49.84%	51.41%

As delineated in Table 2, the overall mean score in teacher efficacy is at the average level. The overall mean is 50.49% for instructional strategies, 50.11% for classroom management, 49.84% for student engagement, and 51.41% for student misbehavior. This indicates that most respondents assess their teacher efficacy at a moderate level. The data also suggests some variations in teacher efficacy among the respondents. Some respondents rated themselves higher than the average level, indicating higher self-efficacy and confidence in their teaching tasks.

Teacher efficacy is a complex and multifaceted construct, as demonstrated by Tschannen-Moran and Woolfolk Hoy's (2001) research, encompassing various dimensions such as classroom management, instructional strategies, student engagement, and teacher-student relationships. These dimensions often exhibit variations among educators, influenced by factors such as experience, training, and individual attributes. Previous study findings collectively emphasize the complexity of teacher efficacy and its susceptibility to various demographic factors, thereby providing valuable insights for educational institutions to tailor support, training, and development programs (Shaukat & Iqbal, 2012).

3.3 Difference in the Level of Self-Efficacy in Terms of Age, Sex, and Educational Attainment

Table 3. Differences in primary school teachers' level of self-efficacy when grouped according to age, sex, and Educational Attainment

Age	Instructional Strategies				Classroom Management				Student Engagement				Student Misbehaviour			
	x	SD	t	p	x	SD	t	p	x	SD	t	p	x	SD	t	p
18-40	54	814			52	826			49	833			54	753		
41-65	42	813	2.50	0.01*	45	804	1.57	0.12	53	796	-0.85	0.40	46	771	1.88	0.06
Sex	Instructional Strategies				Classroom Management				Student Engagement				Student Misbehaviour			
	x	SD	t	p	x	SD	t	p	x	SD	t	p	x	SD	t	p
F	47	948	-1.55	0.12	48	799	-1.00	0.32	52	732	1.18	0.24	49	773	-1.02	0.31
M	53	725			52	850			48	898			53	762		
EA	Instructional Strategies				Classroom Management				Student Engagement				Student Misbehaviour			
	x	SD	t	p	x	SD	t	p	x	SD	t	p	x	SD	t	p
B.	50	834	-2.55	0.01*	50	834	-1.66	0.10	49	819	-2.54	0.01*	51	784	0.68	0.05
MA	80	25			69	252			79	62			59	232		

Note: B (Bachelor), MA (Masters), x (mean), SD (standard deviation), t (test-statistic), p (p-value), * (significant)

Based on Table 3, teachers aged 18–40 demonstrated significantly higher self-efficacy, as indicated by their higher mean ranks when compared to their counterparts in the 41–65 age group. Previous research conducted by Li and Zhang (2017) on Chinese teachers' professional development has noted that younger teachers in China often benefit from more updated pedagogical training and exposure to modern teaching methodologies, which may contribute to their increased self-efficacy. Conversely, older teachers may face challenges in adapting to new educational approaches and technologies, which could affect their self-efficacy (Wang et al., 2019).

Analyzing the self-efficacy scores in specific dimensions, teachers aged 18–40 showed higher self-efficacy in instructional strategies (EIS) compared to those aged 41–65. This aligns with Wang's (2014) study, which emphasized the receptiveness of younger Chinese teachers to innovative instructional approaches, potentially enhancing their self-efficacy in this domain. However, in terms of classroom management (ECM), there was no significant age-related difference in self-efficacy, consistent with the findings of Tschannen-Moran et al. (1998),

who suggested that classroom management self-efficacy may be relatively stable across different age groups of teachers.

Moreover, while teachers aged 18–40 had slightly lower self-efficacy in student engagement (ESE) and student misbehavior (ESM) compared to their older counterparts, these differences were not statistically significant. This mirrors the findings by Yin and Huang (2016), who observed that older teachers in China often excel in classroom management and student engagement due to their accumulated experience.

The examination of self-efficacy scores across various dimensions, including instructional strategies (EIS), classroom management (ECM), student engagement (ESE), and student misbehavior (ESM), revealed no significant differences based on gender. Both male and female teachers exhibited comparable self-efficacy levels in these domains. This agrees with the findings of Sarfo et al. (2015), which showed similar trends in the Chinese educational context.

Sarfo et al. (2015) indeed recognized gender-based disparities in self-efficacy among Chinese teachers, particularly noting that female teachers tend to exhibit higher efficacy beliefs in instructional strategies. This finding is consistent with a broader body of research that suggests women often excel in various aspects of teaching, such as fostering positive teacher-student relationships, communication, and the implementation of diverse instructional strategies (Gu et al., 2020; Yin & Lee, 2012). However, it is important to emphasize that this study did not replicate those gender-based differences, particularly in classroom management and student engagement self-efficacies.

Teachers with master's degrees exhibited significantly higher self-efficacy in instructional strategies (EIS) and student engagement (ESE) when compared to their counterparts with bachelor's degrees. This aligns with the assertion made by Shahzad and Naureen (2017) that professional qualifications play a substantial role in the teaching profession, enabling teachers to participate in continuous training and development.

In terms of educational attainment and its impact on specific self-efficacy dimensions (EIS, ECM, ESE, and ESM), the data shows that significant differences were observed in self-efficacy in instructional strategies (EIS) and student engagement (ESE) between teachers with bachelor's and master's degrees. However, there were no significant differences in self-efficacy related to classroom management (ECM) and student misbehavior (ESM). This indicates that the influence of educational attainment may be particularly prominent in the realms of instructional strategies and student engagement, emphasizing the need for further research and attention to enhancing these areas of teacher efficacy.

3.4 Analysis of Variance for the Difference in Level of Self-Efficacy

Table 4. ANOVA table for the differences among primary school teachers' levels of self-efficacy in instructional strategies in terms of length of service

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	1679.68	3	559.89	0.67	0.57	2.65
Within groups	162911.80	194	839.75			
Total	164591.48	197				

Table 4, presenting the Analysis of Variance (ANOVA), indicates that there is no significant difference in the sense of self-efficacy among primary school teachers when categorized based on their length of service. This aligns with the findings of Tschannen-Moran et al. (1998), who applied Bandura's concept of self-efficacy (SE) to the teaching context. In this context, self-efficacy is defined as teachers' beliefs in their abilities to effectively handle various teaching tasks through different actions. Mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states are four factors that influence the development of self-efficacy in an individual.

Table 5. ANOVA table for the differences among primary school teachers' levels of self-efficacy in classroom management in terms of length of service

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	1159.07	3	386.36	0.46	0.71	2.65
Within groups	161561.70	194	832.79			
Total	162720.77	197				

Table 5 presents the results of a single-factor ANOVA analysis in examining the differences among primary school teachers' sense of self-efficacy based on their length of service, specifically focusing on the "ECM" variable. It can be observed that the p-value is greater, indicating that there is no significant difference in self-efficacy based on the length of service for the "ECM" variable.

Table 6. ANOVA table for the differences among primary school teachers' levels of self-efficacy in student engagement in terms of length of service

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	7277.01	3	2425.67	2.40	0.06	2.65
Within groups	154639.81	194	797.11			
Total	161916.83	197				

Table 6 presents the results of a single-factor ANOVA analysis in examining the differences among primary school teachers' sense of self-efficacy based on their length of service, specifically focusing on the "ESE" variable. It can be observed that the p-value is slightly higher, but close to the significance level, indicating a marginal level of significance. This indicates that there may be some variation in self-efficacy levels based on the number of years of service, but it is not strong enough to reach statistical significance at the conventional 0.05 level. Further investigation or a larger sample size might be needed to draw more conclusive results..

Table 7. ANOVA table for the differences among primary school teachers' levels of self-efficacy in student misbehavior in terms of length of service

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	654.39	3	218.13	0.28	0.84	2.65
Within groups	150561.47	194	776.09			
Total	151215.86	197				

Table 7 provides the results of a single-factor ANOVA analysis in examining the differences among primary school teachers' sense of self-efficacy based on their length of service, specifically focusing on the "ESM" variable. It can be observed that the p-value is much higher, indicating that there is no significant difference in the sense of self-efficacy among primary school teachers based on their length of service for the "ESM" variable.

Table 8. ANOVA table for the differences among primary school teachers' levels of self-efficacy in instructional strategies in terms of grade level taught

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	8720.93	5	1744.19	2.15	0.06	2.26
Within groups	155870.55	192	811.83			
Total	164591.48	197				

Table 8 presents the results of a single-factor ANOVA analysis in examining the differences among primary school teachers' sense of self-efficacy based on the grade level they taught, focusing on the "EIS" variable. It can be observed that the p-value is slightly higher, indicating a marginally significant difference in the sense of self-

efficacy among primary school teachers based on the grade level they teach for the “EIS” variable. Further investigation or analysis is needed to confirm this finding. Other factors not considered in this analysis may have a stronger influence on self-efficacy among teachers.

Table 9. ANOVA table for the differences among primary school teachers’ levels of self-efficacy in classroom management in terms of grade level taught

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	10569.89	5	2113.98	2.67	0.02	2.26
Within groups	10569.89	192	792.45			
Total	10569.89	197				

Table 9 shows a significant difference in the sense of self-efficacy among primary school teachers based on the grade level they teach for the “ECM” variable. Regarding the specific significant differences, the following findings were observed: (1) The sense of self-efficacy of first-year teachers was significantly higher than that of second-year teachers. (2) The sense of self-efficacy of first-year teachers was significantly higher than that of third-year teachers. (3) The sense of self-efficacy of first-year teachers was significantly higher than that of fifth-year teachers. (4) The sense of self-efficacy of third-year teachers was significantly lower than that of sixth-year teachers. (5) The sense of self-efficacy of fifth-year teachers was significantly lower than that of sixth-year teachers. These findings highlight the differences in teachers’ sense of self-efficacy based on the grade level they teach, indicating that certain years of experience or grade levels may influence self-efficacy levels differently. Further investigation and understanding of these differences can inform targeted support and professional development programs for teachers at different grade levels.

Table 10. ANOVA table for the differences among primary school teachers’ levels of self-efficacy in student engagement in terms of grade level taught

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	9700.63	5	1940.13	2.45	0.04	2.26
Within groups	152216.20	192	792.79			
Total	161916.83	197				

Table 10 presents the results of a single-factor ANOVA analysis in examining the differences among primary school teachers’ sense of self-efficacy based on their grade level taught, specifically focusing on the “ESE” variable. It can be concluded that there is a significant difference in the sense of self-efficacy among primary school teachers based on the grade level they teach for the “ESE” variable. Regarding the specific significant differences, the following findings were observed: (1) The sense of self-efficacy of first-year teachers was significantly higher than that of third-year teachers. (2) The sense of self-efficacy of third-year teachers was significantly lower than that of sixth-year teachers. (3) The sense of self-efficacy of fourth-year teachers was significantly lower than that of sixth-year teachers. (4) The sense of self-efficacy of fifth-year teachers was significantly lower than that of sixth-year teachers. These findings indicate that there are significant differences in the sense of self-efficacy among primary school teachers based on the grade level they teach. Specifically, teachers with more years of experience (sixth-year teachers) tend to have higher levels of self-efficacy compared to teachers with fewer years of experience (third-, fourth-, and fifth-year teachers).

Table 11. ANOVA table for the differences among primary school teachers’ levels of self-efficacy in student misbehavior in terms of grade level taught

Source of variation	SS	df	MS	F	P-value	F crit
Between groups	654.39	3	218.13	0.28	0.84	2.65
Within groups	150561.47	194	776.09			
Total	151215.86	197				

Table 11 provides the results of a single-factor ANOVA analysis in examining the differences among primary school teachers' sense of self-efficacy based on their grade level taught specifically focusing on the "ESM" variable. It can be concluded that there is a significant difference in the sense of self-efficacy among primary school teachers based on the grade level they teach for the "ESM" variable. Regarding the specific significant differences, the following findings were observed: (1) The sense of self-efficacy of first-year teachers was significantly higher than that of third-year teachers. (2) The sense of self-efficacy of first-year teachers was significantly higher than that of fifth-year teachers. (3) The sense of self-efficacy of second-year teachers was significantly higher than that of third-year teachers. (4) The sense of self-efficacy of second-year teachers was significantly higher than that of fifth-year teachers. (5) The sense of self-efficacy of third-year teachers was significantly lower than that of sixth-year teachers. (6) The sense of self-efficacy of fifth-year teachers was significantly lower than that of sixth-year teachers. These findings indicate that there are significant differences in the sense of self-efficacy among primary school teachers based on the grade level they teach. Specifically, first and second-year teachers tend to have higher levels of self-efficacy compared to third and fifth-year teachers. Additionally, teachers in their sixth year of teaching demonstrate higher levels of self-efficacy compared to third and fifth-year teachers.

4.0 Conclusion

Based on the analyses and the findings of the study, the following conclusions were drawn:

- a) The demographic composition of the respondents is notably diverse, with a significant portion falling within the age group of 18–40. This diversity in age and the nearly balanced gender distribution among the respondents enriches the insights derived from the study.
- b) Most participants held a bachelor's degree, emphasizing the importance of professional qualifications in the field of teaching. While a smaller percentage held a master's degree, this subgroup demonstrated higher self-efficacy in instructional strategies and student engagement, consistent with Shahzad and Naureen's argument (2017) about the positive impact of advanced qualifications in teaching.
- c) The teaching experience varied widely among respondents, ranging from 1 to more than 10 years. This range in experience contributes to a holistic view of teacher self-efficacy and provides a more comprehensive perspective on the subject.
- d) The study revealed an average level of teacher self-efficacy among the respondents. Some educators displayed high confidence in their abilities, while others acknowledged room for improvement, reflecting the multifaceted nature of teacher efficacy.
- e) The significant differences in self-efficacy were observed based on age, with younger teachers exhibiting higher efficacy beliefs. This underscores the role of age in shaping self-perceived efficacy, aligning with previous research on this subject.
- f) No significant gender-based differences were found in self-efficacy across various instructional domains, in line with Sarfo et al.'s (2015) findings. This suggests that gender may not be a significant factor in influencing teacher self-efficacy in instructional strategies, classroom management, student engagement, and student misbehavior.
- g) While years of service did not significantly impact self-efficacy in instructional strategies and classroom management, this finding is consistent with Tschannen-Moran et al.'s perspective (1998) that the length of service may not significantly affect teacher self-efficacy.
- h) The study revealed significant differences in self-efficacy based on the grade levels taught, highlighting the dynamic nature of classroom management and engagement across different grade levels. These findings underscore the importance of considering the specific teaching context when addressing teacher self-efficacy.
- i) The study reveals, after careful examination, that age has a major influence on self-efficacy, with younger teachers displaying higher levels of self-efficacy. Therefore, it is also important to explore other demographic factors such as economic status, and educational background as they may yield possible significant correlation with teacher's self-efficacy.
- j) The respondents' self-efficacy showed an overall average level of teacher self-efficacy. While some respondents exhibited higher-than-average self-ratings, reflecting strong confidence in their teaching capabilities, others provided lower ratings, indicating room for growth. Therefore, there is a need to enhance teacher self-efficacy from average to high, thereby enhancing their ability to effectively handle the tasks, obligations, and challenges related to their profession. Teachers with high levels of self-

efficacy experience higher levels of job satisfaction, and lower levels of job-related stress, and face fewer difficulties in dealing with students' misbehaviors. Teacher self-efficacy is a powerful predictor of teaching performance and can result in improved teacher mental health and job satisfaction, as well as student academic performance. Self-efficacy develops from a combination of mastery experience, vicarious experience, social persuasion, and physiological and emotional states. Self-efficacious teachers model self-efficacy, are intrinsically motivated, open-minded, and innovative, and demonstrate competence and confidence in their ability to perform actions that lead to positive student outcomes. Strategies for developing and maintaining self-efficacy in teachers include providing opportunities for mastery experiences, creating a supportive and collaborative work environment, providing positive feedback, and promoting self-reflection.

- k) School administrators can use this data to make educated decisions about hiring teachers, potentially improving overall educational quality. Similarly, students stand to benefit from a better understanding of the variation in teacher self-efficacy across different profiles, which can lead to a more dynamic learning environment. Furthermore, future researchers might build on these findings, using them as a framework for further investigation of teacher profiles and self-efficacy within the unique setting of China's educational system.

5.0 Contributions of Authors

The authors confirm their equal contribution to every part of this research. All authors reviewed and approved the final version of this paper.

6.0 Funding

This work received no specific grant from any funding agency.

7.0 Conflict of Interests

The author declares no conflicts of interest

8.0 Acknowledgment

The authors are grateful for all the support and encouragement received throughout the conduct of the study.

9.0 References

- Baker, P. H. (2005). Managing student behavior: How ready are teachers to meet the challenge? *American secondary education*, 51-64.
- Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy*. New York: Academic Press.
- Bandura, A. (1977a). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Brighton, C. M. (2003). The effects of middle school teachers' beliefs on classroom practices. *Journal for the Education of the Gifted*, 27(2-3), 177-206.
- Bruno, P., Rabovsky, S. J., & Strunk, K. O. (2020). Taking their first steps: The distribution of new teachers in school and classroom contexts and implications for teacher effectiveness. *American Educational Research Journal*, 57(4), 1688-1729.
- Chesnut, S. R., & Burley, H. (2015). Self-efficacy as a predictor of commitment to the teaching profession: A meta-analysis. *Educational Research Review*, 15, 1-16.
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2005). Who teaches whom? Race and the distribution of novice teachers. *Economics of Education Review*, 24, 377-392.
- Clotfelter, C. T., Ladd, H.F., Vigdor, J. L., & Wheeler, J. (2007). High-poverty schools and the distribution of teachers and principals (Working Paper). Washington, DC: National Center for Analysis of Longitudinal Data in Educational Research. Retrieved November 17, 2007, from http://www.caldercenter.org/PDF/1001057_High_Poverty.pdf
- Derrington, M. L., & Campbell, J. W. (2015). Implementing new teacher evaluation systems: Principals' concerns and supervisor support. *Journal of Educational Change*, 16, 305-326.
- Donnell, L. A., & Gettinger, M. (2015). Elementary school teachers' acceptability of school reform: Contribution of belief congruence, self-efficacy, and professional development. *Teaching and Teacher Education*, 51, 47-57.
- Geeraerts, K., Tynjälä, P., & Heikkinen, H. L. (2018). Inter-generational learning of teachers: What and how do teachers learn from older and younger colleagues? *European Journal of Teacher Education*, 41(4), 479-495.
- Gu, Q., Wang, C., & Wu, L. (2020). Gender Differences in Teachers' Work: Evidence from China. *Frontiers in Psychology*, 11, 1609. doi:10.3389/fpsyg.2020.01609
- Lee, J. S. (2014). The relationship between student engagement and academic performance: Is it a myth or reality? *The Journal of Educational Research*, 107(3), 177-185.
- Li, J., & Zhang, Y. (2017). Teacher Career Development and Training: The Chinese Way. In P. W. Richardson & Q. Wang (Eds.), *Globalization and the Learning Society* (pp. 199-216). Springer.

- Malinen, O. P., & Savolainen, H. (2016). The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teaching and Teacher Education*, 60, 144–152.
- Peske, H. G., & Haycock, K. (2006). *Teaching inequality: how poor and minority students are shortchanged on teacher quality: a report and recommendations by the education trust*. Education Trust.
- Romano, M., & Gibson, P. (2006). Beginning teacher successes and struggles: An elementary teacher's reflections on the first year of teaching. *Professional Educator*, 28(1), 1–16.
- Sarfo, F. K., Amankwah, F., Sam, F. K., & Konin, D. (2015). Teachers' self-efficacy beliefs: The relationship between gender and instructional strategies, classroom management and student engagement. *Ghana Journal of Development Studies*, 12(1–2), 19–32.
- Schunk, D. H., & Pajares, F. (2009). Self-efficacy theory. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 35–53). Routledge.
- Shahzad, K., & Naureen, S. (2017). Impact of teacher self-efficacy on secondary school students' academic achievement. *Journal of Education and Educational Development*, 4(1), 48–72.
- Shaukat, S., & Iqbal, H. M. (2012). Teacher self-efficacy as a function of student engagement, instructional strategies and classroom management. *Pakistan Journal of Social and Clinical Psychology*, 9(3), 82–85.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(3), 611.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23(6), 944–956.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measurement. *Review of Educational Research*, 68, 202–248. <https://doi.org/10.3102/00346543068002202>
- Wang, Y. (2014). An Analysis of the Impact of Teacher Professional Development Programs on Student Achievement. *Frontiers in Education*, 2, 43. doi:10.3389/feduc.2017.00043
- Wang, Y., Fan, C., & Zhang, J. (2019). Chinese Teachers' Professional Development: Three Decades of Progress. In X. Wang & L. Cheng (Eds.), *Handbook of Research on Teacher Education and Professional Development* (pp. 376–392). IGI Global.
- Yin, H., & Huang, S. (2016). The Role of Teacher Expertise in Enhancing Learning and Instruction in Shanghai: A Perspective from a Large-Scale Classroom Teaching Practices Study. In L. Volante & C. K. Ng (Eds.), *The Future of Educational Change: International Perspectives* (pp. 151–166). Springer.
- Yin, H., & Lee, J. C. K. (2012). Differentiating effective and ineffective teachers by comparing student learning in mathematics classrooms in China. *International Journal of Science and Mathematics Education*, 10(4), 805–823. doi:10.1007/s10763-011-9315-2
- Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, 86(4), 981–1015.

Contents

- ❖ Describing Syntactic Errors in Written Works of Grade 8 Students in English - A Phenomenological Study
- ❖ After-dark Filipino Learners: Addressing the Stress Level and Grit among Higher Educational Learners and its Relationship to Academic Performance
- ❖ The Mediating Effects of Work-Life Balance on the Relationship of School Heads' Leadership Practices and Teachers' Work Satisfaction
- ❖ Assessing the Financial Literacy of Blue-Collar Job Workers in terms of Financial Management Practices
- ❖ Behind the Scenes: Evaluating the Performance of University Support Personnel for Institutional Progress
- ❖ Perspectives of Mental Health Professionals on Self-Diagnosis and Romanticization of Mental Illnesses
- ❖ Public Elementary Teachers' Motivation and Pedagogical Competence In Teaching Non-Readers: A Correlational Study
- ❖ Curriculum Delivery of English Language Macro-skills vis-à-vis Strategic Approach of Bukidnon Jesuit Mission School Teachers
- ❖ Nurses Compliance Towards Infection Control Practices at Sulu Sanitarium and General Hospital
- ❖ Application of Herzberg's Two-Factor Theory: Motivational Factors and Hygiene Factors in the Financial Industry
- ❖ The Moderation Analysis of Coping Strategies in the Relationship between Anxiety and Aggression among Security Personnel
- ❖ Effectiveness of an ICT-Skills Enhancement Short Course Program for Barangay Functionaries ICT-Based Office Operation
- ❖ An Evaluation of the Efficiency of the Localize, Locate, and Pinpoint Strategy in Reducing Water Loss
- ❖ The Interplay among Students' Social Behavior, Thinking Skills, and Academic Performance in Core Subjects
- ❖ Determinants of Primary School Teachers' Level of Self-Efficacy

Print ISSN 2984-8288
Online ISSN 2984-8385

