

VOLUME 1 ISSUE 1
OCTOBER 2023

ISSN: 2984-9942



Google Scholar



Ignatian International Journal for Multidisciplinary Research
supports UNESCO in

**ENHANCING GLOBAL
MEDIA & INFORMATION**



Explore the vast realm of human knowledge and innovation through the pages of Ignatian International Journal for Multidisciplinary Research (IIJMR).

Established in 2023, IIJMR aims to provide a venue for the researchers across the globe to get their articles published for network and further study purposes.

This journal is a collection of research articles that transcends the boundaries of individual disciplines to present a harmonious symphony of ideas, insights, and discoveries. It opens exchange of ideas with experts across various fields coming together to unravel the mysteries of our world.

Published monthly, IIJMR bridges the gap between disciplines, fostering a deeper understanding of the complex tapestry of human existence.

Hence, discover the future of research, where collaboration is boundless, networking is borderless, and innovation is limitless.

a publication of
IGNATIAN CENTER FOR CONTINUING EDUCATION



The Ignatian International Journal for Multidisciplinary Research is a monthly publication published by Ignatian Center for Continuing Education, a training institution recognized by the Philippine government through the Department of Trade and Industry, the Bureau of Internal Revenue, and the Office of Quezon City Mayor



research@ignatianph.com



www.icceph.com/research-journal



Blk 1 Lot 14 Gillian Hills Subdivision, Brgy. 167,
Caloocan City, Philippines 1400

a publication of
IGNATIAN CENTER FOR CONTINUING EDUCATION

EDITORIAL BOARD



MARK POL M. CASTRO, CLSSBB

Chairman

Mr. Castro is the Managing Director of Ignatian Center for Continuing Education (ICCE) which oversees the Ignatian International Journal for Multidisciplinary Research (IIJMR). He is a Certified Lean Six Sigma Black Belt whose 12-year leadership & management experience extends from operation, marketing to product development.



ROXAN T. BAYAN, EdD

Vice Chairman

Dr. Bayan is an Associate Professor and currently the Dean of the College of Education of Isabela State University - Jones Campus.

She obtained her post graduate diploma, Doctor of Education in Language Education Major in English at the Isabela State University where her dissertation "Prospective ESL Teachers' International Certification: Input to Language Teacher Education Curriculum" was awarded as Best Research & Best Dissertation.

Her solid 22 years of teaching experience which includes coaching & training Campus Journalists and giving lectures on Basic English to Technical Writing to Research to Basic Grammar even to law students paved the way for her becoming an accreditor under the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP).

Dr. Bayan's extensive contribution in the academe specifically in the English language teaching stemmed from her being an outstanding student back in her college days at the Philippine Normal University - Northern Luzon Campus where she graduated Cum Laude. Her prowess in writing and speaking can be traced to her multiple awards in Campus Journalism & Extemporaneous Speaking.



FREDERICK EDWARD T. FABELLA, PhD

Editor-in-Chief

Dr. Fabella is the Research Director of Ignatian Center for Continuing Education, Editorial Board of Novelty Journals based in India, and Peer Reviewer of Science PG based in New York, USA,

Being published in 46 studies internationally and in 11 journals made him chosen by the Philippine Outstanding Delegates as the Most Promising International Social Scientist of 2023.

INTERNATIONAL PEER REVIEWERS

ASIA



NEPAL

Dr. LOK RAJ SHARMA,
FMIOASD, FSASS
Associate Professor of English
Language & Literature



INDIA

Dr. MANEESH VILAS
DESHPANDE
Ph. D. in Computer Science



INDIA

Dr. DURGESH R
ANJAN KAR
Ph. D. in Pharmacy



INDIA

Dr. ANIL KUMAR VERMA
MD, Community Medicine



INDIA

Dr. M M BAGALI
PhD in Management / PhD in Social Work / Post Doc in HRM
Senior Professor of Management and Human Resources
Director-Management Studies, MBA Program
East Point College of Higher Education
East Point Group of Institutions



BANGLADESH

Dr. ZAKARIA AHMED
Ph. D in Applied Microbiology & Biotechnology

AFRICA



TANZANIA

Dr. JOHNSON NZAU MAVOLE
Ph. D. in Public health



CAPE
VERDE

Dr. EUCLIDES MANUEL
LOPES FURTADO
PhD in Psychology



ETHIOPIA

Dr. JUHAR ABRAR SULORO
Senior Researcher and Public Health
Emergency Management Expert

EUROPE

Dr. RADMILA JOVANOVIC

Doctor in GeoSciences
Postdoctoral Researcher, Department of Geography
Faculty of Tourism. University of Malaga,
Malaga, Spain



SPAIN

NORTH AMERICA

ALEXANDER G. FOWLER
M.S. Clinical Psychology



USA

CONTENTS

Articles	Pages
A Philosophy of Place: Place Attachment and the Dynamics of Change Jane D. Gallamaso	1
Developing Interest in Poetry Among Elementary Learners: Manual for Interesting Poetry Instruction Roberto R. Natividad	14
Lived Experiences of University Students in Learning English Online During the COVID-19 Pandemic Gary Ambito Torremucha, Dr. Virgilio Kim	30
Multiple Intelligences Assessment: A Key in Aligning Differentiated Activities Renilo D. Tatoy, Zaldy B. Fellazar, Francis Howard Q. Napigkit	68
Project Talimansi: A Preliminary Study on the Effects of Parental Involvement in Alalay sa Pagbasa at Talipapa Elementary School Rene Boy E. Abiva, MA-Malikhaing Pagsulat (C), Josefina O. Aranel, MAEd-Fil., Maria Victoria Victa, RSW	78
Success and Failure in Physical Science Pedagogy: Reflections from Teachers and Students in Rural Context Arnold T. Baldevia, Marife S. Magpantay	88
Teachers' Self-Efficacy with Artificial Intelligence (AI) Based Educational Tools Allan H. Sumandal	133
The Impact of Political Satire on the Level of Political Discourse and Civic Engagement among Selected Youth Leaders in the Province of Cavite Joana Marie O. Alegado , Hannah Kayla C. Peñaranda	143



A Philosophy of Place: Place Attachment and the Dynamics of Change

Jane D. Gallamaso

Philosophy department, Xavier University Cagayan de Oro City, Philippines

DOI: 10.5281/zenodo.10002214

ABSTRACT

The paper examines the fundamental nature of place and its relationship with self-identity, subjectivity, and memories, which ultimately contribute to the formation of place attachment. The objective of the paper is to investigate the various factors that influence individuals' emotional connections to these places, their preference for stability, and their resistance to change. Additionally, it aims to elucidate the opposing processes occurring within a place. From a practical standpoint, understanding place attachment is crucial for comprehending and elucidating the arguments, resistance, and disagreements that arise when individuals and groups decide to relocate their residences, businesses, or educational institutions in pursuit of change. This document constitutes a qualitative study that exclusively employs content analysis from diverse sources to investigate the phenomenological approach to comprehending the notion of place. The document delineates the emotional connection that individuals establish with specific locations, which is manifested in their recollections and narratives that shape their identities and sense of purpose in life. Additionally, the study scrutinizes the interplay between humanity's yearning for permanence and continuity and the reality of the constant flux of place. It concludes that change is an inevitable aspect of being situated in a place and that one's appropriate relationship with place, regardless of the depth of our attachment, must be comprehended within the context of change.

Keywords: *Place; Place attachment; Self-identity; memories; Change*

INTRODUCTION

The human being, in its physical form, can be described as a being-in-place. In this paper, the author conducts an analysis of the fundamental essence of place as a comprehensive framework that facilitates the cultivation of one's subjectivity, self-identity, and communal existence. This is achieved through the creation of meaningful memories and narratives, which contribute to the attachment individuals feel towards specific places. The paper explores the various factors that influence individuals' emotional connections to these places, their preference for stability, and their resistance to change. It delves into the lived experience of place and elucidates how individuals perceive, inhabit, and interact with the physical location known as place. Additionally, it employs the notion of topophilia, which refers to people's emotional attachment to place, and provides an account of their attachment and sense of place. The paper describes the emotional bond that individuals have with specific locations, which is reflected in their memories and narratives that shape their identities and sense of purpose in life. Furthermore, the paper examines the interplay between man's yearning for permanence and continuity and the reality of the constant flux of place.

The study holds philosophical significance as it provides insight into the fundamental connection between place and humanity, and how it influences one's worldview and sense of self. Specifically, it allows us to acknowledge the inevitability of change in light of our own mortality and limited existence. In terms of practical relevance, understanding place attachment is essential for comprehending and explaining the arguments, resistance, and disagreements that arise when individuals and groups make the decision to relocate their homes, businesses, or schools for the sake of change. This research sheds light on the various processes involved in place transformation and how it impacts one's longing for permanence. Moreover, this research proves valuable in the field of environmental ethics, particularly in community planning and sustainability efforts.

The scope of this study encompasses an exploration of the nature and role of place in the development of self-identity and subjectivity, as expressed through memories and narratives associated with a particular location. These factors contribute to an understanding of why individuals form attachments to place and resist change, seeking permanence instead. Furthermore, this paper delves into the veracity of change and mobility, elucidating their inherent natural progression and manifestation within a specific locale. These transformative processes pose a formidable obstacle to the yearning for constancy and enduring stability. It is crucial to acknowledge that this paper does not offer resolutions to the conflict arising from the yearning for lasting connections juxtaposed with the inevitability of change. Instead, it underscores the significance of comprehending the limited nature of places, which in turn unveils the finite and mortal condition of humanity. Consequently, attachment to a place must be comprehended within the context of change and finitude. The paper solely confines itself to a phenomenological depiction of place and the emotional connection to it, as well as the ever-evolving processes of transformation within a particular location. It does not endeavor to delve deeper into the epistemological and metaphysical ramifications that may arise from the study of place, leaving such considerations to be explored in future research.

Several relevant literary sources were consulted regarding the definition of place. In the realm of Ancient Greek philosophy, Aristotle's renowned work 'Physics' associates place with the notion of motion or change, as opposed to rest or potentiality. Additionally, the term 'chora' denotes a tangible physical concept of place, representing the innermost stationary boundary of a surrounding body or the inner surface of said body where an object may be located. The concept of place holds significant importance in comprehending the natural world. (Aristotle, 1996) Conversely, Neo Platonists such as Plotinus and Augustine perceive place in relation to the organization of the universe. The lower order encompasses the places within the realm of sensory perception, while the higher order represents the place of immortal existence and the dwelling place of God. (Harrington, 2016) Another work by Eliade explores the distinction between place and space, categorizing them into two distinct types based on the experiences of religious and non-religious individuals. Places possess a qualitative demarcation, with the profane place representing the material space associated with mundane activities, devoid of any sense of power, mystery, or ability to captivate. Conversely, the sacred place is characterized by its enigmatic nature, inherent power, and profound significance as perceived by those who adhere to religious beliefs. (Eliade, 1959)

On the other hand, Husserl, the phenomenologist, posits that consciousness is intrinsically linked to our perception and comprehension of places. Our consciousness is directed towards objects of knowledge and a particular location. Given that consciousness is both spatial and temporal, perceptions, thoughts, and emotions are invariably associated with a specific place. Similarly, our recollections of the past and our expectations for the future are imbued with a sense of place. Ultimately, in his phenomenology, the objective physical reality of a location can be temporarily suspended through the process of "epoche" in order to know the essence of life-world as known in one's consciousness. (Cairns, 2012)

Another significant contribution is that of Heidegger, the renowned German philosopher, who presents a profound understanding of place as a form of "dwelling". In his perspective, buildings and other symbolic creations transcend their physical existence, serving as spaces where one can discover profound meaning, establish identity, and connect with history. The concept of place, in relation to Being, is intricately intertwined with four fundamental aspects of the universe: the earth, the sky, the world of gods, and mortals. Heidegger's book, "The Origin of the Work of Art", delves into the inherent connection between place, the essence of a thing and the revelation of Being. (Malpas, 2017)

In addition, prior scholarly works pertaining to place and place attachments were also referenced. Giuliani argues that mobility and place attachment are contradictory concepts. Individuals who are mobile do not prefer to be tied down to a specific location, whereas those with a strong attachment to a place are unlikely to relocate. Places hold significant meaning for people, even those who are highly mobile, particularly if they derive great satisfaction from their former location. (Giuliani, 2017)

This notion is supported by Gustafson's research, which suggests that places hold value and meaning for mobile individuals, especially when the place they are leaving behind has provided them with opportunities for personal growth and accomplishment. (Gustafson, 2002) Conversely, Barkus and Brunn's study reveals that individuals who are deeply integrated into their community are more inclined to remain in their current location by choice and develop a strong affinity for the place over time. On the other hand, individuals with weaker attachments tend to harbor negative feelings towards a place and frequently relocate. However, there are individuals

who are attached to their home but frequently move in search of better economic opportunities, with the intention of returning to their place of origin when circumstances allow, driven by nostalgia. The study also highlights the desire for continuity among individuals who are deeply attached to a place but are mobile. When these individuals move to a new location due to economic necessities, they tend to maintain a connection with their former place of attachment in various ways. This includes participating in local events when time permits, maintaining constant communication through social media and emails, and making frequent visits. (Barcus & Brunn, 2010)

Research Questions

The central thesis of this paper posits that despite the fact that place facilitates the development of self-identity and the formation of life's narratives and memories that lead to place attachment, change and mobility are inherent characteristics of place. Moreover, the desire for permanence and continuity in a world that is constantly evolving is both impractical and untenable. This is due to the fact that places are inherently dynamic and continuously evolving, reflecting the finite and mortal nature of humanity. This notion is supported by the various processes of change that take place in the world. Only by understanding the mutable nature of place, recognizing it as a delicate entity susceptible to degradation and modification, can individuals come to terms with their true identity as finite and mortal beings and their fundamental connection with place.

This paper aims to address the following inquiries:

1. What constitutes the concept of place?
2. What is the significance of place in the development of subjectivity, self-identity, memories, and narratives?
3. What factors contribute to individuals forming emotional attachments to a particular place?
4. What are some examples that demonstrate the processes of change occurring within a specific location?
5. How does mankind reconcile their longing for permanence with the undeniable reality of change?

METHODOLOGY

The paper is a purely qualitative study that heavily relies on an extensive examination of selected sources, including books, journals, and other electronic or hard copy materials. Content analysis is conducted by carefully analyzing and synthesizing the arguments and insights provided by the authors, leading to the formulation of conclusions based on the findings. The review of related literature primarily focuses on the works of philosophers such as Aristotle, Husserl, and Heidegger, who have conducted studies on the concept of place. Two particularly significant works, namely "Place and Experience: A Philosophical Topography" by Malpas (2018) and "Place Attachment and Phenomenology: The Dynamic Complexity of Place" by Seamon (2020), were consulted extensively as they directly addressed the topic under investigation.

RESULTS and DISCUSSION

As used in this paper, place refers to a specific geographical location, physical environment, or region of space. Within a place, there can be multiple layers or levels. The human being is a being-in-place. However, the definition of a particular place goes beyond these basic descriptions. Place serves as a comprehensive structure that encompasses and connects various elements, including the natural landscape, objective surroundings, and the organized activities of both personal and communal life. Conversely, place is shaped and influenced by human individuals who collectively contribute to their surroundings. While place encompasses all these elements, its unity and distinct identity are derived from the people who interact with it. (Malpas, 2018)

Our sense of self and understanding of ourselves are intricately connected to the specific location in which our lives are intertwined. The overarching structure of our surroundings allows us to actively participate in the world, encounter various entities, individuals, and ultimately gain insight into our own being. The progression of human subjectivity, the shared experiences with others, the growth of our intellect, and the acquisition of self-awareness all occur due to our existence within a particular place. It is solely through our comprehension and connection to our surroundings that our sense of identity is established. Our individuality, the formation and advancement of our intellect and emotions, are inherently reliant on the environment in which we reside. The landscape plays a fundamental role in shaping our character, self-awareness, and ultimate destiny. (Malpas, 2018)

Furthermore, subjectivity is intrinsically linked to one's sense of self, which is in turn influenced by the places they have experienced. Our memories of ourselves are intertwined with the locations we have inhabited and the people we have interacted with within those spaces. The significance of place in shaping our self-perception cannot be understated.

Malpas, asserts the fundamental significance of place in shaping one's self-identity, subjectivity, and memory. Place transcends mere recognition, as it serves as a comprehensive framework that encompasses individuals, objects, and events within the world. These constituents are inherently shaped and reliant upon this overarching structure. Subjectivity, self-perception, and cognitive experiences, which contribute to the formation of memories and narratives, are intrinsically intertwined with a specific place. (Malpas, 2018)

As a being that is bound to a particular location, the development of his thoughts, memories, and experiences is made possible through his active engagement with that place. As Simon Weill once stated, "To be rooted is the most important and least recognized need of the human soul." (Weil, 2020) The reality of human embodiment is that it is inherently tied to a physical place. People require a sense of grounding in a particular location, and place attachment is a universal phenomenon. The term "place attachment" refers to a special and strong emotional connection that individuals have with certain places, such as their home, school, nearby cafeteria, or sports arena. This strong attachment indicates a sense of belonging, a willingness to settle in that place permanently, and a desire to return to it with nostalgia and enthusiasm when separated. Self-knowledge and memory are intrinsically linked to spatiality, location, and one's embodiment as a being. Consequently, our comprehension of ourselves is always contextual and dependent on specific places, objects, and our environment.

Remembering encompasses not only individuals, but individuals within a specific setting. This connection between memory and place highlights how our subjectivity is intertwined with

physical interactions. Remembering is not solely about being remembered in relation to a particular location, but also about who we have become and what we have experienced in the place where our lives have unfolded. Returning to a place entails revisiting numerous memories associated with that place. A sense of place permeates our recollection, encompassing the distinct characteristics of the location and the emotional qualities that have developed over the years of residing there. Memories demonstrate that our connection to a place runs deeper than what can be externally acknowledged. Our identity becomes intertwined with the places we have lived and associated with, whether it be a school where we have taught for many years or a home where we have resided for an extended period of time. Rediscovering oneself after a loss also entails rediscovering the associated place and the time period in which one's life was shaped. However, the memory of a place is not solely based on a linear sequence of experiences. Instead, it is a complex amalgamation of communal history, stories, and narratives that are made possible through the relationships and interactions fostered by the place itself. (Malpas, 2018) For example, cultural memories are often tied to specific landscapes and physical locations. In such places, people construct monuments, parks, schools, museums, historic buildings, and other structures. These places become repositories and landmarks of shared memories and cultural ideas within a community. Place enables the development of personal and cultural histories, as well as socio-political narratives of people. (Malpas, 2018)

One facilitator of place attachment is the accumulation of narratives and memories stemming from regular routines and persistent habitual activities, such as periodic events, celebrations, shared rites, rituals, and ceremonies. These experiences allow for meaningful interactions and develop over time. People consistently meet and engage in various activities, like working in an office, selling goods at a market, enjoying Friday nights at a nearby café, participating in chapel recollections or retreats, or formally gathering for four years as students on a school campus. These habitual and routine gatherings form social connections, facilitate exchanges, and foster shared activities on a regular basis, establishing meaningful connections to the places where these events occur over time. These shared lived experiences cultivate a sense of attachment to a place, leading individuals to be more inclined to reside, stay, and become emotionally connected to a specific location. These experiences serve as the foundation for long-term involvement and commitment to a place, keeping the memories and connections alive even when individuals are no longer physically present in that place. This demonstrates that the shared daily routines carried out in specific places form the basis for the attachment between people and those places. (Malpas 2018)

A deeper connection to a location, particularly in relation to memories, is evoked by the experience of autobiographical rootedness. This attachment develops gradually through the construction of one's life history and narrative, ultimately shaping one's identity, and it is made possible by the place itself. Time also plays a crucial role in fostering place attachment. The duration of one's stay is a determining factor in establishing a strong bond with a place, especially when there is an intention to make it a permanent residence. Individuals who have a strong attachment to a place tend to stay there longer and aspire to live there permanently. They seek to continuously bring their past experiences into the present, hoping that their attachment to the place will remain undisturbed in the future. Place attachment signifies a desire for an enduring connection with the object of attachment. Furthermore, it is plausible for new residents to develop a sense of attachment to a particular location, particularly if said location aligns with their lifestyle, social standing, and personal identity. Additionally, prolonged residency and the establishment of robust social connections within a community may also contribute to this phenomenon.

Certain locations that hold significant meaning for us as a result of our prolonged presence within them. It is within these places that our memories and stories, both personal and historical, are shaped through continuous interaction. These places contribute to the formation of our self-identity. Consequently, the desire for permanence in a place where one has experienced joyful memories and established their identity stems from a genuine understanding of the significance of place in our lives. Individuals may be reluctant to leave such a place or resistant to any alterations to its physical structure or relocation.

Moreover, the individual's connection to a particular location becomes increasingly profound and expansive as they age and spend many memorable years there. Autobiographical and communal memories and narratives multiply and expand over time. Furthermore, our sense of self becomes firmly rooted in a specific place. Consequently, there is a desire for continuity and permanence. Personal belongings, activities, and events are preserved and cherished, or relocated to a new place in the event of a transfer, in order to maintain this sense of continuity. The sudden change of location, resulting in the loss of objects and activities that hold personal and interpersonal significance over the years, can lead to a disorienting experience and a loss of identity. It is challenging to adapt to being estranged from familiar places and possessions. (Malpas, 2018)

Drawing upon previous literature consulted prior to the study, the current discourse establishes a connection between memories and narratives in relation to architectural structures. This notion aligns with the writings of Heidegger, who posits that memories intertwined with buildings and the symbols present within them serve as means of engaging with the world and the act of dwelling. Furthermore, the insights presented regarding the interplay between memories and place resonate with Husserl's exploration of the inherent link between our consciousness and the external realm of objects, which constitutes our sense of place and consequently imbues our existence with significance.

However, in the face of the longing for stability and consistency, opposing factors arise that undermine the sense of connection to a particular location. As Seamon highlights, the presence of change and mobility is an intrinsic aspect of any place, and comprehending the constant interplay and processes between permanence and change is a more effective approach to understanding the emotional bond to a place. (Seamon, 2020)

The act of movement is an indisputable facet of human existence. Across the annals of history, individuals have consistently engaged in relocation, be it for enduring or transitory purposes. The act of transitioning to a distinct geographical setting can bring about a substantial disruption to the established patterns and habits that one has become accustomed to over time. This abrupt alteration can elicit sentiments of estrangement and necessitate the need for adjustment. Nevertheless, this transformation in one's reality frequently leads to the formation of novel routines within the unfamiliar surroundings, which may be unrecognizable to an individual who is deeply connected to their previous environment. (Seamon, 2020)

Initially, Seamon provides an explanation of the concept of place and its function for individuals. He posits that our comprehension of place can be understood as a lived dialectic, which involves a continuous lived experience of opposing patterns that influence our attachment to place. This dialectic of opposing lived experiences is inherent in human nature, as our embodiment is characterized by the typical condition of change on one hand and permanence on the other. Seamon draws upon the work of Ponty to emphasize that movement and staying in one

place are fundamental and pre-reflective experiences of human embodiment. The dynamics of place demonstrate that our habitual and daily living is characterized by patterns of movement and rest that are pre-reflective and automatic ways of acting. Bodily habits, routine actions, situations, and experiences operate in a pattern that is grounded in the reality of rest and movement that characterizes human embodiment. Among embodied beings, there is a fundamental experience of shifts, either sudden or gradual, from a present status to another status in relation to their attachment to place. (Seamon, 2020)

To explicate the dynamics of the interplay between the desire for permanence and change, Seamon presents an illustration of how certain individuals choose to remain in a specific location due to the meaningful shared routines and habits that have brought personal order, continuity, and satisfaction to their existential needs for a significant period of time. However, the sensation of estrangement and loss of place is experienced when a dramatic shift in patterns of life suddenly occurs, such as in the case of sickness, disaster, or war, which would compel one to vacate their cherished abode. The profound realization of how integral routines and patterns of meaningful life are felt when one becomes estranged from their place. Such sudden or gradual changes can affect an individual who has become attached to a place and desires permanent residency. Being uprooted from a place where one is already rooted can cause sadness, regret, worry, and depression. The degree and depth of attachment determine one's resistance to change, flexibility, and adaptability. (Seamon, 2020)

Moreover, Seamon asserts that the dialectical dynamics of place attachment are multifaceted and exhibit varying degrees of intensity depending on the inward and outward dimensions of places, as perceived and experienced by insiders and outsiders. He demonstrates that the dynamics of place necessarily encompass the integral aspect of both internal and external dimensions. For instance, residents have their own private homes, which constitute the inward dimension of place. However, their private homes are situated in a larger place, which is the surrounding external environment that enables them to sustain themselves. They must interact with business and industrial establishments outside for food sustenance and protection. Another example is that a school as a place cannot solely focus on its own campus life-world. It must look beyond and acknowledge that there are other schools that are more competitive, which in turn prompts them to integrate with the outside world. Furthermore, attraction and repulsion towards a place can occur in either the inward or outward aspect of the place. It is plausible that a school community appreciates its own campus community but disapproves of its location due to heavy traffic and noise within the city where it is situated. Hence, adverse external circumstances pertaining to a particular location may instigate the decision to relocate and transfer to an alternative site.

Thirdly, Seamon asserts that it is of utmost importance to ascertain the underlying life world processes that shape and determine the essence of a place, as well as its potential for future development. A place should not be perceived as a static entity, but rather as a dynamic entity that is continuously engaged in ongoing processes that can either uphold its permanence or dismantle its lived structure. It is imperative to thoroughly examine the life-world processes that transpire within a place in order to fully comprehend its inherent nature. One notable process that takes place within a place is the interaction among its inhabitants. These interactions encompass the shared daily lives of individuals within a place, including their customary actions, behaviors, experiences, events, and situations. These ongoing tasks evolve over time, week after week, year after year, and signify communal interactions that involve co-presencing and meaningful

interpersonal exchanges, such as learning and collaborating within an educational setting. But Seamon argues that while place can facilitate meaningful social interaction, it can also impede it. Certain social interactions hold significance for some individuals, while others may not find them meaningful. Furthermore, change is an inherent aspect of the processes that occur within a place. The emergence of new actions, situations, and events can disrupt communal unity and lead to division, conflict, and a decline in participation. What was once a meaningful co-presence can now be either inherently destructive or completely absent. For instance, a previously tranquil school campus may now be filled with noise and various forms of disruption, both internal and external. Close friends and colleagues who previously contributed to the meaningful communal interaction may have departed, resulting in a decrease in friendliness among individuals. The past, which was once filled with positive memories, can transform into unsettling situations characterized by conflict, distrust, and misunderstanding. This transformation can also be triggered by the arrival of newcomers with different behaviors, cultural orientations, and social statuses. (Seamon 2020)

Furthermore, the attachment to a specific location possesses the potential to cultivate and mold an individual's sense of self. This phenomenon transpires gradually over time, as individuals engage in meaningful interactions, partake in shared events, and undertake tasks that contribute to the significance of the place in their lives. This personal and communal identity is essential to one's self-definition and inherent worth as a human being. Nevertheless, conversely, when alterations occur, the very place that once bestowed a sense of belonging can transform into a source of seclusion for individuals. Emotions of distrust, threats posed by others, and unfavorable circumstances may impel individuals to retreat and seek sanctuary in a safer environment where they can reclaim a sense of belonging. Some individuals may opt to remain and adapt to the changes, but this encounter inevitably impacts the bedrock of their identity.

Moreover, a location facilitates the accessibility of numerous favorable prospects and avenues for personal development. Within the confines of an educational institution, one may unexpectedly encounter a highly lucrative employment prospect, a promotion in status, or the opportunity to assume a new administrative role. These occurrences serve as pleasant surprises, fostering an environment conducive to growth and advancement. Nevertheless, as time elapses, a place may gradually diminish its capacity to offer ongoing opportunities. Consequently, individuals may exhibit waning enthusiasm in engaging in activities they once actively participated in.

Place attachment occurs when a location possesses an inherent and distinctive character that is further enhanced by the community residing within it. This unique character sets it apart from all other places and contributes to the formation of a distinct identity for its inhabitants. For instance, a place may boast exceptional architectural features, a school may possess a clear and unique mission and vision that distinguishes it from other educational institutions, or it may be renowned for having the highest standards of education in the entire country. However, place attachment can be negatively impacted when the opposite occurs. Neglect, inadequate policy implementation, the occurrence of conflicts or disasters can drastically alter the face of a place, causing it to lose its defining characteristics. Consequently, the place may become disorderly and deteriorated.

Moreover, Seamon elucidates the myriad benefits that arise when individuals within a locality actively, responsibly, and wholeheartedly engage in the process of cultivating and nurturing a sense of place. By pooling their resources, altering policies, executing projects, and

advancing as a unified community, they are able to effect positive change. These efforts may be spearheaded by teams of experts from diverse fields who willingly collaborate to make meaningful contributions. Conversely, the converse scenario can unfold when endeavors to foster progress fail to align with the genuine needs of those who stand to benefit. In such instances, plans, policies, and constructions may prove superfluous or ill-suited to the specific characteristics of the locale.(Seamon, 2020)

Furthermore, it is conceivable that individuals residing in a particular location, such as a town or school, may consider the concept of place enhancement with the aim of revitalizing or improving it in order to align with societal trends. In such instances, the physical structures and spatial modifications can significantly alter the human experience, thereby bringing the place to life. The alteration of a place's physical structure or relocation to a new environment can enhance the character and lifestyle of the local population. The relocation to a more favorable location, the construction of new infrastructure, and the redesigning of the physical environment can all contribute to an improved quality of life for the residents. However, the converse may also occur when the new constructions fail to surpass the previous ones or when the new location poses transportation challenges that burden the residents.

Despite the interplay between the desire for permanence and continuity, the inevitability of change remains ever-present. Consequently, one must contemplate how place would ultimately be perceived. Malpas contended that the definition of a place and the emotional sentiments attached to it ultimately determine its character. It is imperative to acknowledge that a place possesses an inherent material nature that is susceptible to alteration, deterioration, destruction, loss, and vulnerability. This may result in a loss of one's sense of belonging, identity, and livelihood. Despite the belief that a physical location is immutable, change is inevitable, and one's identity that is tied to a place is not enduring.

The concept of place is a paradoxical one, characterized by a complex interplay between permanence and change. This is due to the inherent nature of place as both an activity and a movement. Human life, being fragile and subject to sudden or gradual change, is deeply connected to the material reality of place. While this connection helps to shape our identity and give meaning to our existence, it also renders us vulnerable to the loss and change of place, which can have a profound impact on our sense of self. It is important to acknowledge and accept this reality, even if the place we inhabit brings us a sense of meaning, identity, and cherished memories. (Malpas, 2017)

The desire for a place that never changes is ultimately futile, as the transient nature of place is an essential part of its character. Displacement, loss, vulnerability, and the disintegration of locations that form our lives are inherent threats to those who seek permanence. To deny the essence of place by seeking a permanent and unchanging environment is to deny the very purpose of existence.(Malpas, 2018)

The inherent connection we possess to a particular location unveils our transient nature, limitations, and mortality. The transition from existence to death is a direct consequence of our inherent existence within a specific place. This shift in location signifies our identity as human beings and our fundamental nature as beings constrained by time. On a positive note, our existence within a specific place also facilitates the formation of meaning, identity, and experiences. Being situated in a specific place enables us to reconcile with our finite existence and mortality, as these aspects are essential to our essence, much like the concept of place. As

Malpas suggests, it is solely through our embodiment, our connection to a specific place, and our physical presence that the value and significance of life become intertwined with the experience of both cherished memories and the inevitable loss, decay, and eventual demise.

It is crucial to understand that an individual's connection to a specific location does not equate to being imprisoned or restricted to a fixed position. Instead, it indicates that if one truly identifies with a place, they must recognize that they are also influenced by the dimensions of space and time, thus embracing temporality. Striving for permanence in a world that is perpetually changing is comparable to seeking shelter from the impermanence and vulnerability of things, and evading the genuine essence of a place. Special locations in our lives are not immune to the effects of time. These places undergo transformations and deterioration, a reality that is evident in various processes that introduce change, whether gradual or rapid. The concept of place is inherently linked to the notion of change. Ultimately, it is susceptible to decay and disintegration. (Malpas, 2018)

Conclusions

In conclusion, it can be posited that the notion of a perpetual abode within our world is nonexistent. The dynamic nature of individuals, objects, and surroundings mandates incessant metamorphosis. The yearning for establishing permanence within a specific milieu is a mere fallacy. The inevitability of alteration is an intrinsic attribute of actuality. What was once extant may no longer endure at a particular juncture. Conceivably, the modification of our accustomed environs acts as a catalyst for embracing novel beginnings and personal growth, notwithstanding the unease experienced by those who have developed an attachment to their current dwelling. The desire for permanence implies a distinct perspective on a realm beyond the fundamental nature of the material world. The notion of an enduring location that remains unchanged over time is an unattainable concept that contradicts the principles of self-identity, self-reflection, and experience. To exist in a place in communion with other individuals is to acknowledge that life and location are inherently mutable, delicate, and fleeting. Recognizing the truth of our finite and mortal nature, and coming to terms with change and decay, demonstrates an understanding of our innate placement as human beings. Only then can we establish a sense of grounding and genuine belonging in a world of perpetual transformation. Mortality, change, and disintegration are integral aspects of the human condition. Being human and situated in a particular place entails comprehending that we are corporeal beings inherently situated in space, and thus, our encounters are fundamentally marked by the vulnerability of loss, change, and disintegration. If this reality is properly comprehended, we can also grasp the natural finitude and transience of place, as well as our own. The essence of place reveals who we are as mortal beings. Lastly, The perpetual desire for permanence within a constantly evolving world suggests the existence of a realm beyond the physical realm. This longing is consistently the focus of one's sincere religious sentiments, making it a subject worthy of future scholarly investigation.

Recommendations

In the realm of philosophy, there exists ample opportunity for extensive inquiry into the nature and essence of place, as evidenced by the works of esteemed scholars Husserl and Heidegger. Additionally, an examination of memories and consciousness would provide valuable insight into the concepts of self-identity, consciousness, and place as

explored by John Locke. From a socio-cultural perspective, future research could involve the analysis of case studies or personal narratives of individuals with longstanding connections to a particular place, exploring how they navigate change while remaining rooted in their surroundings. Finally, further investigation into the relationship between place and human mobility would allow for a deeper understanding of the reconciliation between the desire for rootedness and the need for movement.

Compliance with Ethical Standards

Due to the purely qualitative nature of the study, it does not involve the use of actual human subjects, thereby eliminating the need for ethical permission requirements. Nevertheless, the researcher subjected her paper to scrutiny using the Turnitin software in order to identify any similarities with existing works. Additionally, the researcher sought assistance from AI software primarily to detect and rectify any grammatical errors or punctuation mistakes that may have been overlooked during the writing process.

Acknowledgments

The researcher would like to express her gratitude to the Xavier University Ateneo de Cagayan Libraries for the vast array of sources that she had the privilege of consulting. Additionally, she extends her appreciation to the Xavier University Research Center for their encouragement and support in her endeavors to write and publish. Finally, the researcher would like to convey her thanks to the Ignatian International Journal for providing her with the opportunity to submit her paper.

REFERENCES

- Aristotle. (1996). *Physics*. In *Oxford World's Classics: Aristotle: Physics*. Oxford University Press. <http://dx.doi.org/10.1093/oseo/instance.00262105>
- Barcus, H. R., & Brunn, S. D. (2010). Place elasticity: exploring a new conceptualization of mobility and place attachment in rural america. *Geografiska Annaler: Series B, Human Geography*, 92(4), 281–295. <https://doi.org/10.1111/j.1468-0467.2010.00353.x>
- Cairns, D. (2012). *The Philosophy of Edmund Husserl*. Springer Science & Business Media.
- Donohoe, J. (2017). *Place and Phenomenology*. Rowman & Littlefield.
- Eliade, M. (1959). *The Sacred and the Profane: The Nature of Religion*. Houghton Mifflin Harcourt.
- Giuliani, M. V. (2017). Theory of Attachment and Place Attachment. In *Psychological Theories for Environmental Issues* (pp. 147–180). Routledge. <http://dx.doi.org/10.4324/9781315245720-11>
- Gustafson, P. (2002). *Place, Place Attachment and Mobility: Three Sociological Studies*.
- Harrington, L. (2016). *Sacred Place in Early Medieval Neoplatonism*. Springer.
- Husserl, E. (1964). *The Idea of Phenomenology*. Springer.
- Locke, P. M., & McCann, R. (2016). *Merleau-Ponty: Space, Place, Architecture*. Ohio University Press.
- Malpas, J. (2017). *Heidegger and the Thinking of Place: Explorations in the Topology of Being*. MIT Press.
- Malpas, J. (2018). *Place and Experience: A Philosophical Topography*. Routledge.
- Manzo, L. C., & Devine-Wright, P. (2020). *Place Attachment: Advances in Theory, Methods and*

- Applications. Routledge.
- McEwen, J. (n.d.). Sense of Place, Place Attachment, and Rootedness in Four West Baton Rouge Parish, Louisiana Bars [Louisiana State University Libraries]. Retrieved September 25, 2023, from http://dx.doi.org/10.31390/gradschool_dissertations.1500
- Poulter, R. (n.d.). House vs. Home: What does home mean to New Zealand? [Victoria University of Wellington Library]. Retrieved September 25, 2023, from <http://dx.doi.org/10.26686/wgtn.21214223>
- Seamon, D. (2020). Place attachment and phenomenology: The dynamic complexity of place. In *Place Attachment* (pp. 29–44). Routledge. <http://dx.doi.org/10.4324/9780429274442-2>
- Weil, S. (2020). *The Need for Roots: Prelude to a Declaration of Duties Towards Mankind*. Routledge.



DEVELOPING INTEREST IN POETRY AMONG ELEMENTARY LEARNERS: MANUAL FOR INTERESTING POETRY INSTRUCTION

Roberto R. Natividad

*Faculty, Felipe G. Calderon Integrated School (Elementary), Manila, Philippines
PhD Student, Bulacan State University, Malolos, Bulacan, Philippines*

DOI: 10.5281/zenodo.10002238

ABSTRACT

This study aimed to analyze and pinpoint young learners' preferences and interest in reading and in poetry to make it as basis in developing a manual in improving poetry instruction. The quantitative descriptive design using the survey method was used because the study aimed to discover and describe Grade 5 learners' reading and poetry interest and preferences. Data were gathered from 80 pupils in Grade 5 of Felipe G. Calderon Elementary School, Tondo, Manila. A questionnaire survey was administered to the pupil-respondents using the 5-point Likert Scale with the following rating: Very High (5), High (4), Average (3), Low (2), and Very Low (1) to determine their level of interest in reading and in poetry. The findings revealed that Grade 5 pupils have an "Average" level of interest both in reading and poetry. Storybooks are their most preferred reading material while they showed less interest in reading poems though when provided with suitable materials, they would prefer poems about fantasy and those with rhymes. Subsequently, they would want their teachers to teach poetry using silent reading and reading aloud. Ultimately, they lose interest and focus if the material is difficult for them. Therefore, to make young learners become interested in reading, parents and teachers should expose them to reading materials that are suitable, relatable, and within their level of understanding at a very young age to develop intrinsic and permanent desire to read.

Keywords: *interest; poetry; poetry instruction; preferences; reading; young learners*

INTRODUCTION

Reading is an important skill, but it is alarming that people are less interested in it for some reason. Reading is viewed as a highly valued skill in our technology-driven world today (Khairuddin, 2013) but this reality is never realized by many and the number of students who show interest in reading is declining. In this era of technology, people tend to devote most of their time surfing the net, mobile gaming and chatting using social media. In school, reading has been neglected and it has become just a classroom activity. It appears to be low on the list of activities children choose to do in their spare time.

The scenario mentioned is indeed a dilemma since it does not only happen to those who belong to low sections but even in high performing classes. The truth is pupils can read but lack motivation. As observed during English classes, learners show less interest in reading most especially if the lesson being tackled is a poem. Language and Literature teachers are facing problems regarding how to make young learners read poems. The researcher, being a teacher in Grade 5, is alarmed that many pupils are not into reading poems. That is one reason why their skills grow little and their quality as readers also diminishes.

These determinants moved the researchers in pursuing this study. Increasing the pupils' interest in reading poems is the ultimate goal of the researcher, but beforehand, it is important to dig into the root of their noninterest in reading as a whole. There are inhibiting factors which the researcher would like to disclose and give solution to. This study also gives baseline data of the learners' reading habits and preferences in poetry which if considered might revive their interest in reading and eventually motivate them in becoming lifelong readers.

Research Questions

In order to achieve these goals, the following questions were sought to answer:

1. How may the reading habits and preferences of the pupil-participants be determined in terms of:
 - 1.1 length of time spent in reading;
 - 1.2 reading preferences;
 - 1.3 format/ medium used in reading; and
 - 1.4 influences in reading?
2. What is the level of interest of the respondents in the following areas: reading and poetry?
3. How may the interest of respondents in poetry be stimulated through poetry devices, content/ theme, strategies used by the teachers of English?
4. What are the factors that discourage pupil-participants from reading poems?
5. How may a supplementary material (Manual for Poetry Instruction) help in teaching and learning poetry?

METHODOLOGY

The quantitative descriptive design using the survey method was used in this study having questionnaire as the main tool in gathering data, and that it aimed to discover and describe the Grade 5 pupils' reading and poetry interests and their preferences. This was supplemented with interview with teachers of English to strengthen the results of the survey. This study employed

quantitative techniques to assess the interest of the pupils in reading and in poetry to be used to develop skills in meaningful poetry analysis.

Quantitatively, a survey questionnaire consisted of (1) reading habits, (2) reading interest, (3) poetry preferences, and (4) interest in reading poems were utilized. The questionnaire also consisted of 10 items to determine the interest and reading as well as interest in poetry using the 5-Point Likert-Scale, namely Very High, High, Average, Low, and Very Low. The items covered the willingness to read, indication of interest in reading, and interest in poetry, effort in making time to read, engagement in reading, and perception on the benefits of reading and of poetry.

Participants

The researcher considered the two highest sections in Grade 5 of Felipe G. Calderon as respondents of this study. Purposeful sampling was used to determine the number of respondents since they are the only sections handled by the researcher; meaning they were picked in terms of accessibility. Therefore, Grade 5 pupils composing of 80 were chosen as respondents.

Materials

Survey questionnaire was used as instrument for this research. Some of the items in the questionnaire particularly in the reading interest section were adapted from Noortyani (2018) but was customized by adding some more suitable items in order to fit the respondents' level and the study itself. It consisted of four sections namely (1) reading habits, (2) reading interest, (3) poetry preferences which also include reasons for disliking poems, and (4) interest in poetry. The second and fourth sections both consisted of 10 items to determine the interest in reading and in poetry which has five options using Likert-Scale, namely Very High (5), High (4), Average (3), Low (2), and Very Low (1). For sections 1 and 3 namely reading habits and poetry preferences, the pupil-respondents were also asked to write their reasons for their responses or choices.

Consecutively, an interview using an open-ended questionnaire was conducted to teachers of English to investigate their views towards poetry and the strategies they use in teaching poetry with their most convenient and permitted time.

Additionally, to identify the respondents' poem preferences, a survey was conducted first through the questionnaire. After the responses were gathered and tallied, the researcher then identified the top 5 most favorite or preferred poems of the respondents with corresponding reasons for choosing, including those which they did not choose. These five poems were used for analysis using the SLAM tool.

Statistical Treatment

The gathered responses were tabulated and arranged into the desired format for use in this study. The respondents' answers from the questionnaire consisting of (1) reading habits, (2) reading interest, (3) poetry preferences, and (4) interest in reading poems were given descriptive analysis using frequency count, percentages, and means. Weighted mean was also used to assess the level of interest of the pupils in reading and in poetry. While the information gathered from the teachers' interview were interpreted qualitatively.

Data Analysis

The survey questionnaire administered to the pupil-respondents also included their reasons for their choices or responses pertaining to their reading habits, poetry preferences, and reasons why they are discouraged to read poems. Moreover, the pupil-respondents were instructed to just choose one option which they considered their most preferred in terms of poetry preferences, reasons why they are discouraged to read poems, and their reading habits. The responses were stipulated as P1 for pupil 1, P2 for pupil 2, P3 for pupil 3 and so forth. Their responses were not altered or improved and were written as is.

RESULTS

This section contains various information and different tables and charts which present the data of the findings of this study.

Part I. Reading interest of the respondents

Table 1 shows the frequency distribution and percentage of the reading interest of the respondents in terms of length of time they spend in reading in a week.

Table 1

**Frequency and Percentage Distribution of the Pupils' Reading Interest
In terms of Length of Time Spent in Reading in a Week**

No.	Items	Frequency	Percentage (%)	Rank
1	Everyday	5	6.25	4
2	4-6 days	11	13.75	3
3	Less than 3 days	50	62.5	1
4	Never read	14	17.5	2
		N= 80	100%	

It can be inferred from the table that most grade 5 pupils read English materials for at least 3 days and less. It means that even if they belong to the highest sections, reading English materials is not their everyday activity.

Table 2 shows the frequency distribution and percentage of reading interest of the respondents in terms of their reading preferences.

Table 2

**Frequency and Percentage Distribution of the Pupils' Reading Interest
In terms of Reading Preferences**

No.	Items	Frequency	Percentage (%)	Rank
1	Story Books	48	60	1
2	Poems	9	11.25	2.5
3	Newspapers	5	6.25	4.5

4	Comics	9	11.25	2.5
5	Magazines	1	1.25	7.5
6	Academic Books	5	6.25	4.5
7	Encyclopedia	2	2.5	6
8	None	1	1.25	7.5

N=80

TOTAL= 100

It can be inferred that most grade 5 pupils select story books which according to them are more interesting to read because they contain pictures which they imagine while reading. It is noteworthy that they prefer to read stories like fables and short stories.

Similarly, in the study of Muliati (2017) conducted to fifth semester students, it was revealed that story books belonged to the top three favorites for most students. To reiterate, it was mentioned in the study of Khairuddin (2013) that 45 students liked to read story books while only 17 pupils chose poetry. In the study of Bonto (2015) called *Development of Book Selection Criteria Based on the Reading Interest of Grade 5 Male Students* in Mandaluyong City, Marikina City, and Quezon City, it was revealed that poetry ranked 13th and the least reading material being picked by male students when they have time.

Table 3 shows the frequency distribution and percentage of reading interest of the respondents in terms of their preferred format/ medium used in reading.

Table 3

**Frequency and Percentage Distribution of Pupils' Reading Interest
In terms of format/ medium used in reading**

No.	Items	Frequency	Percentage (%)	Rank
1	Digital/ online	39	48.75	1
2	Printed	36	45	2
3	Read by the teacher	5	6.25	3

N= 80

TOTAL= 100

From the table, it can be said that in this generation of computers, the younger generation would prefer to read from the internet because it's more accessible to them. There are more electronic devices at home than books.

Table 4 shows the frequency and percentage distribution of reading interest of the respondents in terms of their influences in reading.

Table 4

**Frequency and Percentage Distribution of the Pupils' Reading Interest
In terms of influences in reading**

No.	Items	Frequency	Percentage (%)	Rank
1	Peer/ Friends	8	10	5
2	Parents	24	30	2
3	Teachers	9	11.25	4
4	No one; I just love reading.	10	12.5	3
5	No one; I don't like reading.	29	36.25	1

N=80 TOTAL=100

It can be interpreted that grade 5 pupils are not inclined into reading though the respondents belong to higher sections. However, parents are chosen as next to their influencers to read.

Part II. Level of interest of the respondents in reading and in poetry

Table 5 shows the frequency distribution and the weighted mean of level of reading interest of the respondents.

Table 5

Frequency Distribution and Descriptive Measures of the Pupils' Level of Interest In Reading

No.	Items	Frequency					Mean	Descriptive Interpretation
		1	2	3	4	5		
1	I read even if I am not told to do so.	2	15	44	13	6	3.08	Low
2	I feel excited if I get a reading task.	1	10	20	34	15	3.65	High
3	I choose reading over other activities such as watching TV or playing.	8	29	26	13	4	2.70	Average
4	I do reading activity every day.	4	27	33	12	4	2.81	Average
5	I make special time to read.	8	13	28	20	11	3.16	Average
6	I read after classes are through.	16	5	24	12	3	2.51	Low
7	I read to learn and acquire new things.	0	4	18	32	26	4.00	High
8	I repeat the reading when I find the material difficult to understand.	3	7	16	19	35	3.95	High
9	I believe that reading improves my skills like writing.	4	6	15	27	28	3.86	High
10	Books and other reading materials influence or have impact on my behavior and attitude.	3	6	25	24	22	3.70	High
	Weighted Mean						3.34	Average

Overall, the pupils' level of interest in reading is 'Average' with 3.34 weighted mean. This reveals that there is a bit satisfying picture of pupils' reading interest. From the findings, it is evident that they recognized the importance of what reading can provide them, but they can't offer or spend so much time in reading as shown in items 1 and 6.

Table 6 shows frequency distribution and weighted mean of the respondents' level of interest in poetry.

Table 6
Frequency Distribution and Descriptive Measures of the Pupils' Level of Interest In Poetry

No.	Items	Frequency					Mean	Descriptive Interpretation
		1	2	3	4	5		
1	I read poems even if I'm not told to do so.	10	20	26	17	7	2.89	Average
2	I feel excited if the lesson is poetry.	10	13	32	14	11	3.04	Average
3	I choose reading poems over other genres of literature like short stories.	16	13	27	17	7	2.83	Average
4	I read poems every day.	20	24	26	7	3	2.36	Low
5	I make special time to read poems.	15	22	20	14	9	2.75	Average
6	I read poems after classes are through.	23	24	22	7	4	2.31	Low
7	I find it enjoyable to read poems.	7	18	19	16	20	3.30	Average
8	I find it easy to understand poems.	9	19	27	15	10	2.98	Average
9	I read poems because it develops my skills like speaking and writing.	1	11	18	28	22	3.74	High
10	Reading poems influence or has impact in my life.	4	16	18	20	22	3.50	High
Weighted Mean							2.67	Average

It can be inferred that most of them acknowledged the benefits of reading poems. Generally, the pupils' level of interest in reading poems is 'Average' with 2.67 weighted mean. It reveals that pupils' interest in poetry coincides with their interest in reading as a whole. It shows that poem reading is not as interesting to them as shown in items 4 and 6 which are about the effort and time they put into reading poems. But apparently, they recognize the importance of what reading poems can provide them.

The findings reveal that pupils are not into reading poems. Since they recognize the importance of poems, it can be used as motivation for them to give themselves time to read poems even once a day. More exposure should also be done through the teachers' initiative in using poems in their lessons more often since there are less available books of poems in the library and at home.

Part III. How interest of the respondents in poetry be stimulated

Table 7 shows the frequency distribution and percentage of the respondents' choice of poetry devices.

Table 7

Frequency and Percentage Distribution of Pupils' Choice of Poetry Devices

No.	Items	Frequency	Percentage (%)	Rank
1	Poems with rhymes	50	62.5	1
2	Poems without rhymes	8	10	3
3	Neither	22	27.5	2
		N=80	100	

It can be inferred that grade 5 pupils are more interested in reading poems if they have rhymes. It means that they show no interest if poems have no rhyming words. For them, rhymes are pleasing to the ears, and they can easily memorize a poem if it contains rhymes.

Table 8 shows the frequency distribution and percentage of the respondents preferred content/ theme of poem.

Table 8

Frequency and Percentage Distribution of the Pupils' Preferred Content/ Theme of Poem

No.	Items	Frequency	Percentage (%)	Rank
1	Nature	17	21.25	3
2	Love	7	8.75	4
3	Humor	0	0	10
4	Friendship	18	22.5	2
5	Special Occasion	6	7.5	5
6	School experiences	3	3.75	7.5
7	Nationalism	2	2.5	9
8	Food	3	3.75	7.5
9	Animal	4	5	6
10	Fantasy	20	25	1
		N=80	TOTAL= 100	

It can be drawn that the top five favorite themes/ content of poems Grade 5 pupils like to read were those about fantasy, friendship, nature, love, and special occasions. This means that Grade 5 pupils prefer these themes/ contents of a poem specially fantasy because young children love to read something they are fascinated with and can relate to.

Table 9 shows the frequency distribution and percentage of the respondents' preferred strategy to be used by the teacher in teaching poetry.

Table 9

Frequency and Percentage Distribution of the Pupils' Preferred Strategies Used by the Teacher in Teaching Poetry

No.	Items	Frequency	Percentage (%)	Rank
1	Read Aloud	21	26.25	1.5
2	Use of Creative Movements	10	12.5	3.5
3	Transforming Poem to Song	5	6.25	6
4	Reader's Theater	0	0	9
5	Silent Reading	21	26.25	1.5
6	Pictures	3	3.75	7
7	Using video/ PowerPoint	10	12.5	3.5
8	Using drawing to illustrate meaning	9	11.25	5
9	None	1	1.25	8
		N=80	TOTAL= 100	

It can be inferred that the pupils' preference when it comes to the strategy used by the teacher in teaching poetry is silent reading because according to the respondents, they want to read a poem silently so they can easily understand what they are reading while for those who selected reading aloud, they said that they want the teacher to read first and model the proper way of reading a poem. Other strategies the pupils wanted to be used by the teacher are use of creative movements/ actions, use of video/ power point, and the use of drawing/ illustration to explain the meaning of a poem.

Table 10 shows the frequency and percentage distribution of the respondents' reasons for not reading poems.

Table 10

Frequency and Percentage Distribution of the Pupils' Reasons for Not Reading Poems

No.	Items	Frequency	Percentage (%)	Rank
1	It's boring./ No fun	2	2.5	6
2	Too busy/ No time	18	22.5	2
3	No available/ Limited poems	15	18.75	3
4	I can't relate to what I'm reading.	14	17.5	4
5	Words are difficult to understand	24	30	1
6	I just don't like reading.	7	8.75	5
		N=80	TOTAL= 100	

It can be inferred that grade 5 pupils dislike reading poems because they hardly understand the meaning due to the difficult words the poems contain. This means that they easily lose interest if they find the material complex to them.

Interview with Teachers

The questions focused on the teachers' perception in teaching poetry and the strategies or approaches they used in teaching poetry.

When asked about how they find poetry easy or difficult to teach, their answers vary on the level or section of the pupils they teach. They said it's easy if they teach in higher sections because there is no problem with their ability to comprehend, especially if it is a poem. One teacher said that it is quite difficult because most of her pupils belong to lower sections. Only one teacher said it is easy because he enjoys reading and reciting poems.

With regards to the strategy they used, the majority of the teacher-respondents mentioned that they read the poem aloud in order for the pupils to know how the poem is read. Then most of them simply ask their pupils to identify the structure of the poem like rhyming words, stanza, and lines. Haiku is also introduced as early as Grade 3. In Grade 4, the teacher focuses on simply reciting and discussing the poem but not on writing because according to the teacher, they can hardly compose yet. One teacher in Grade 5 said that relatable poems should be introduced to the pupils for them to appreciate the poems. One teacher also focuses on explaining figurative languages because it is what pupils have difficulty with.

One teacher also shared that she used actions when she presented the poem "Trees" by Joyce Kilmer. According to her, when she just read the poem aloud, the pupils seemed not to listen, but when she did actions while reading, the pupils became interested in listening.

In terms of how they feel about teaching poetry, whether they enjoy it or not, all of them said that they enjoy it even if it is hard to teach because of the kind of pupils they handle. For them, one cannot teach something well if he/she doesn't enjoy what he/she is doing. That enjoyment then transfers to the learners aside from the skills acquired. According to them, pupils also enjoy it especially if the topic interests them. This is very important to know because teachers are one of the biggest influences on the pupils.

Finally, when asked about how often they teach poetry in a week, the majority of the teachers teach poetry once a week only, some twice a week. With that note, it can be said that pupils are less exposed but according to them, they just follow the curriculum guide in which less poems are included.

Based on the gathered responses, it can be inferred that pupils are not exposed to poetry that much because it is only being taught once a week or when it is included in the syllabus or curriculum guide.

In conclusion, it can be viewed that teachers play a big role in influencing learners to like and love poetry. Teachers also need to strategize appropriate teaching methods to heighten the students' reception of poetry. A variety of poems should also be provided. In short, it mostly depends on the quality of experiences the teachers provide their pupils in the classroom. It should be noted that there is a link between the teacher and student who display love or distaste towards poetry. It is likely that teachers who show reluctance to teach poetry will, in return, produce students who will also develop distaste for poetry. On the other hand, a teacher who shows enthusiasm towards poetry can influence the learners with the same interest.

Part IV. Manual on Ways to Improve Poetry Instruction

As revealed from the results of this study, the pupils' interest in reading and in poetry both fell under "Average" level. This means that their inclination to reading and to poetry seem moderate and there is still a little need to push the pupils more to offer time and effort for them to be more interested and have a permanent desire to read. The appreciation of the importance of reading and of poetry is already present in them and that is a very good foundation to ignite such interest.

And so, a manual was developed for teachers of English in the intermediate level to use in their poetry classes that will surely make the learners become interested in reading poems because they would discover that analyzing poems is not difficult using a tool called SLAM. It can be modified considering the level and capacity of the learners. It can also be used for other literary genres, not just poetry. Before the tool could be used, the teacher should have discussed lessons on figurative languages, inferring mood of the characters, inferring tone of a selection, rhymes and rhyme scheme, and other needed skills for this tool to become effective. This tool was modified by the researcher through the inclusion of theories like the metacognitive theory as mentioned in this study.

The tool is of great help to teachers of English on how they could teach poetry in a simple yet meaningful way. As revealed, pupil-respondents are discouraged from reading poems because of their complexity. With that, teaching poems should not be done with complexity but with ease. In that way, pupils would not be afraid and would not feel pressured every time they have a poetry lesson. Through that confidence, they would learn to appreciate poems and eventually, develop in them that intrinsic desire towards poetry. If that is the case, they would also feel the same way about other reading materials or literary genres which are quite easier than poems. As observed and disclosed from this study, young learners become more interested in learning when they understand the lesson or activity. Therefore, as used by the researcher in poem analysis, he preferred the SLAM approach which according to the pupils, analyzing poems became easier and chronological.

It is noteworthy to say that if the interest is already established and permanent, it is easier now to teach more complex reading tasks. To achieve this, teachers should provide reading materials that are relatable, on the level of their grasp, and within their interest. In that way, they will not feel pressured by what they read but instead, there is enjoyment.

DISCUSSION

1. How may the reading interest of the respondents be determined in terms of:

1.1 Length of time spent in reading. Based on the findings, it showed that more pupil-respondents read English reading materials less than three days a week. In contrast, only five pupils liked to read English reading materials every day.

1.2 Reading preferences. Based on the results, it revealed that 48 pupils preferred story books to read compared with other reading materials like poems and comics which were only favored by nine pupils respectively. While five pupils chose to read academic books and newspapers. Besides, only two pupils picked encyclopedia while only one pupil preferred magazines. Finally, there was one pupil who did not prefer any of the reading materials to be read.

1.3 Format/ medium used in reading. From the findings, it was found that 39 pupils preferred to read from the internet (digital/ online) but the gap was not that significant to the number of pupils who chose printed materials as their preferred format/ medium in reading with 36 pupils. Meanwhile there were only five pupils who chose reading materials to be read by the teacher.

1.4 Influences in reading. From the findings, it showed that out of 80 pupils, 29 pupils said that no one influenced them to read because they were not into reading in the first place. While

24 pupils responded that their parents influenced them. On the other hand, ten pupils said that no one influenced them because they just love reading. However, nine pupils chose their teachers as their influencers and eight pupils for peers/ friends.

2. What is the level of interest of the respondents in the following areas?

2.1 Reading. Based on the pupils' responses regarding their level of interest in reading, it was revealed that they have 'Average' level with 3.34 weighted general mean.

2.2 Poetry. With regards to the pupils' level of interest in poetry, it showed that pupils' level of interest in reading poems is 'Average' with 2.67 weighted general mean.

3. How may the interest of respondents in poetry be stimulated through:

3.1 poetry devices. Based on the findings, 50 pupils were interested in reading poems with rhymes while 22 pupils said they do not prefer reading poem whether they have rhymes nor have none. On the other hand, only eight pupils still chose to read poems even without rhymes.

3.2 content. Based on the findings, the top 5 content/ themes of poem mostly preferred by the pupils are: fantasy, friendship, nature, love, and special occasions.

3.3 strategies used by the teachers of English. As revealed, most pupils preferred silent reading and reading aloud as the strategies they want their teachers to teach poetry. They were followed using creative movements and videos/ PowerPoint, using drawing or illustrations to interpret a poem, transforming a poem to a song, and using of pictures.

4. What discourage pupil-respondents to read poems?

Based on the findings, the following reasons were revealed: difficulty of understanding them, no time to read poems because they are busy with other school tasks, no available poems at home and in school, no interest at all in reading poems, and poems are boring to read.

5. How may a supplementary material (Manual for Poetry Instruction) help in teaching and learning poetry?

As gleaned from the results of this study, pupils' level of interest in poetry is 'Average'. It also revealed that they are discouraged to read poems because of the difficulty of understanding them; thus, they lack interest. The researcher believes that interest has a big impact on student's learning and performance. As mentioned in the study of Sarmiento (2016), when interest is high, students read materials that are above their proficiency level. Books that are high in level may be rated as appropriate in difficulty when these are above the students' reading levels. When the interest is low, students often rate books as too hard even when they are below their reading levels. To note, poetry analysis is a highly level activity that requires higher level of thinking skills.

In this present study, the researcher preferred the SLAM tool to ease the task in poem analysis which according to the pupils, analyzing poems became easier and chronological yet meaningful because it was anchored on the metacognitive strategies like predicting, taking down notes, getting meaning through context clues, using prior knowledge, listening, paraphrasing,

and summarizing which are here employed to reach the ultimate goal which is comprehension.

Consequently, a manual is developed for teachers of English in the intermediate level to use in their poetry classes that would surely make the learners become interested in reading poems because they would discover that analyzing poems is not difficult through of course the use of the SLAM tool. It can be modified considering the level and capacity of the learners. It can also be used for other literary genres not just poetry. Before the tool could be used, the teacher should have discussed lessons on figurative languages, inferring mood of the characters, inferring tone of a selection, rhymes and rhyme scheme, and other needed skills for this tool to become effective.

The tool is of great help to teachers of English on how they could teach poetry in a simple yet meaningful way. Teaching it should not be done with complexity but with ease. In that way, pupils would not be afraid and would not feel pressured every time they have a poetry lesson. Through that confidence, they would learn to appreciate poems and eventually, develop in them that intrinsic desire towards poetry. If that is the case, they would also feel the same way towards other reading materials or literary genres which are quite easier than poems. As observed and disclosed from this study, young learners become more interested to learn when they understand the lesson or activity.

It is noteworthy to say that if the interest is already established and permanent, it is easier to teach more complex reading tasks. To achieve this, teachers should provide reading materials that are relatable, on the level of their grasp, and of their interest. In that way, they will not feel pressured by what they read but instead, there is enjoyment.

Conclusions

Based on the data gathered, presented, and interpreted, the following conclusions are drawn by the researcher.

1. The results of this study provided evidence that Grade 5 pupils are not that inclined into reading. Moreover, poems belong to the least reading materials they would pick during their leisure time. One major reason of their hesitance to read poems is the complexity or difficulty of understanding them. On the other hand, they recognize the importance of poems into their studies and lives. It can be assumed that when provided with the right material which they have interest in, comprehension will take place.
2. When pupils are interested in reading, they will perform better on comprehension and read more. Anything of interest to the learners brings satisfaction, and when satisfied, they tend to repeat it. If the interest in reading is already established and permanent, it is easier to teach more complex reading tasks like poem analysis. That could be achieved by considering the

preferences of the learners and providing them with materials that are at their level of understanding without sacrificing the depth of the reading task.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are presented:

1. Reading teachers may provide the students with more opportunities for reading. Students should be exposed to books and other reading materials. Mini-libraries inside each classroom should really be imposed and made functional.
2. Teachers should provide a wide selection of easy reading materials which pupils enjoy reading particularly those with pictures. They should, likewise, also offer a variety of reading materials to heighten reading interests and hone reading skills. Teachers should be resourceful in gathering and using materials other than those found in the prescribed textbooks such as inclusion of poem selections in language lesson packages. SLAM tool can be used for a stress-free and chronological comprehension and analysis of poem. Enrichment activities should also be done in the classroom to enhance the lesson as well as generate interest in reading. Teachers should also adjust reading materials to the need and level of the pupils.
3. Pupils' recommendation of a book, story, poem, or any other reading material should also be considered because they are also part of the learning process and besides, it carries more weight than the recommendation of the teachers. Give children the opportunity to share a story or a poem they read to the rest of the class to inspire others.
4. Teachers should teach poetry more than once a week so pupils will get familiarized and be exposed to this genre in a simplified form that jives with level of the pupils.
5. The school must enrich existing programs like Read-a-Thon and Summer Reading Classes and think and implement other programs to address the needs and preferences of the pupils for better appreciation and learning.
6. Parents not teachers, have the most important role to play in the reading habits of their children as revealed in this study. They may also avail and buy books to be acquired for home use and for their children to read during weekends or long vacations.

Compliance with Ethical Standards

There are several ethical considerations that should be taken into account upon the conduct of this study. This includes:

Informed consent: The researcher obtained informed consent from participants and their parents or guardians, explaining the purpose of the study, the nature of their involvement, and any potential risks or benefits.

Anonymity and confidentiality: Participants' identities are kept confidential, and their names are not used in any reports or publications. Additionally, all data are kept secure and confidential.

Respect for participants: The researcher treated participants with respect and dignity and ensure that their rights are protected. This includes ensuring that participants are not coerced or

pressured into participating in the study, and that they are free to withdraw at any time.

By addressing these ethical considerations, the researcher can ensure that the study is conducted in a responsible and respectful manner, and that the rights and well-being of participants are protected.

Acknowledgments

The researcher wishes to express his profound appreciation and heartfelt gratitude to those who shared their valuable knowledge, time, effort, love, and concern in helping him finish this study. These have given him the strength and motivation to accomplish this scholarly endeavor.

Mr. Renato N. Felipe, Jr., Public Schools District Supervisor (PSDS)-in-charge of Research of the Schools Division of Manila; Dr. Araceli T. Bondoc, Principal of Antonio J. Villegas Vocational High School; and Jenny M. Mappala, Master Teacher II-English of Felipe G. Calderon Elementary School, for sharing their expertise in the validation of the questionnaire survey for this research. Without their passionate participation and input, the validation survey could not have been successfully conducted.

Karen Grace Nogal, Master Teacher I, AC Herrera Elementary School, Andrian S. Umpad, Master Teacher I, Felipe G. Calderon High School, and again Mr. Renato N. Felipe, Jr, PSDS, Schools Division of Manila, for exerting time, effort, and expertise in evaluating the module as output of this research.

Violeta S. Labang, his supportive principal, and the Schools Division of Manila for allowing him to conduct his study in Felipe G. Calderon Elementary School.

Jonathan de Guzman, for offering his time and expertise in numbers to check and ensure the researcher's statistical treatment.

To the respondents for their worthy support and cooperation that made this study in fruition.

Most of all, to Lord God Almighty, for giving the researcher wisdom, patience, and positive outlook that made him pursue and finish his study; and for surrounding him with people whom he counted on.

REFERENCES

- Akanda, A.K.M.E.A., Hoq, K.M.G., & Hasan, N. (2013). Reading habit of students in social sciences and arts: A case study of Rajshahi University. *Chinese Librarianship: an International Electronic Journal*, 35, 60-71. Retrieved from <http://www.whiteclouds.com/iclc/cliej/cl35AHH.pdf>
- Aydın, G. & Ayrancı B. B. (2018). Reading Preferences of Middle School Students. Vol. 8, No. 2; 2018. Retrieved from <https://doi.org/10.5430/wje.v8n2p127>
- Cambria, J. & Guthrie, J. T. (2010). Motivating and engaging students in reading. *The NERA Journal*, 46, (1), 16-29. Retrieved from <http://www.literacyconnects.org/img/2013/03/Motivating-and-engaging-students-in-reading-Cambria-Guthrie.pdf>
- DeGarmo, Charles. (2009). Interest and Education. New York: The Macmillan Company.
- Dodsworth, M. (2010). "On Teaching Modern Poetry." *English*. 1975; 24: 85, *Oxford*

- journals.org Web. 9 April 2010.
- Issa, A.O., Aliyu, M.B., Akangbe, R.B. & Adedeji, F. (2012). Reading interests and habits of the Federal Polytechnic, OFFA, *Students. International Journal of Learning & Development*, 2, (1), 470-486. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.684.5214&rep=rep1&type=pdf>
- Khairuddin, Z. (2013). A Study of Students' Reading Interests in a Second Language. *International Education Studies*, 6 (11). Retrieved from <http://dx.doi.org/10.5539/ies.v6n11p160>
- Loan, F.A. (2011a). Reading and library usage habits of the college students. *International Journal of Information Research*, 1(1), 1-13. Retrieved from <http://www.spoars.org/journal/sites/default/files/v1n1p7.pdf>
- Loan F. A. and Shah R. (2017). Survey of the Literature Reading Habits and Preferences of Adolescents: A Study of a Public School in India volume 27, issue 2, pages 80-96 (2017) 80 <http://booksphilippines.gov.ph/archives/7451> retrieved Feb. 17, 2020.
- Miranda, T., Williams-Ross, D., Johnson, K., & McKenzie, N. (2011). Reluctant readers in middle school: Successful engagement with text using the e-reader. *International Journal of Applied Science and Technology*, 1, (6), 81-91. Retrieved from http://www.ijastnet.com/journals/Vol_1_No_6_November_2011/9.pdf
- Muliati, Chitra (2017). The Students' Motivation in Reading and Reading Interest of the Fifth Semester Students of IAIN Palangka Raya. Thesis, Department of Language Education, Faculty of Teacher Training and Education, State Islamic Institute of Palangka Raya.
- Noortyani, R. (2018). An Exploratory Study on Students' Reading Interest Development through Independent Reading-Retelling Activity. *Arab World English Journal (AWEJ)* Volume 9. Number 2. June 2018 Pp. 108 -117 DOI: <https://dx.doi.org/10.24093/awej/vol9no2.7>
- Owusu-Acheaw, M. (2014). Reading habits among students and its effect on academic performance: A study of students of Koforidua Polytechnic. *Library Philosophy and Practice (e-journal)*, 1130, 1-22. Retrieved from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2908&context=libphilprac>
- Pardede, P. (2008). A Review on Reading Theories and Its Implication to the Teaching of Reading. retrieved from <https://www.researchgate.net/publication/321228081>
- Quezon III, M.L., (2009). We, the people: as readers. Philippine Inquirer Online. Retrieved from <http://blogs.inquirer.net/current/2009/05/12/we-the-people-as-readers/>
- Robinson, H.M. (2018). "An Exploratory Study on Students' Reading Interest Development through Arab", *World English Journal (AWEJ)* Volume 9. Number 2. June 2018 Pp. 108 -117 DOI: <https://dx.doi.org/10.24093/awej/vol9no2.7>
- Vaezi, S. "Theories of reading". Assistant professor, University of Science and Technology, Iran Retrieved on Oct. 12, 2019.
- von Glasersfeld E (1984). An introduction to radical constructivism. Retrieved from www.trainingshare.com/resources/doo2.htm
- Wang, Xiaomin (2013). Professional Development Module on Teaching Techniques (http://www.texascollaborative.org/teaching_module.htm)
-



LIVED EXPERIENCES OF UNIVERSITY STUDENTS IN LEARNING ENGLISH ONLINE DURING THE COVID-19 PANDEMIC

Gary Ambito Torremucha¹, Dr. Virgilio Kim²

¹RSU English Language Institute, Rangsit University, Pathumthani, Thailand

²Graduate School of Education, Far Eastern University Roosevelt, Cainta, Rizal, Philippines

DOI: 10.5281/zenodo.10002226

ABSTRACT

This phenomenological study, titled "Lived Experiences of University Students in Learning Online During the Covid-19 Pandemic," aimed to explore the significant challenges faced by students in learning English and the coping mechanisms they employed when in-person learning was strictly limited. The study employed purposive sampling to select 12 respondents and utilized in-depth interviews and focus group discussions as the primary data collection methods. To interpret the results, the six-step process developed by Braun and Clarke (2006) was used. Thematic analysis revealed that learning English online during the Covid-19 pandemic, respondents encountered challenges such as incompatibility of learning devices, unstable internet connectivity, inappropriate places of study, too much homework from teachers, teacher's lack of preparation, mental and physical health problems. To cope with these difficulties, the respondents employed various strategies to adapt to the new learning environment. These strategies included upgrading their mobile devices, maintaining frequent communication with teachers and classmates, requesting extensions for assignment due dates, participating in group study sessions, improving self-discipline, and finding suitable study locations.

Keywords: Covid-19 pandemic, Lived experiences, Online learning

INTRODUCTION

English holds a significant position in contemporary society and education, particularly in tertiary education across various countries, including Thailand. It serves as a vital tool for students to access scientific knowledge in their respective fields of study. When completing assignments, research, and projects, students rely on English resources and data to acquire the necessary information. In addition, when students opt for pursuing degree programs overseas, English is commonly selected as the primary language of instruction in foreign universities. Proficiency in English also enhances graduates' prospects of securing desirable employment opportunities in reputable companies. This proficiency enables them to efficiently access information from international sources, utilize foreign websites, engage in business activities, and communicate with other foreign companies (Al-Khalil, 2015).

English language instruction is constantly evolving in the 21st century, especially in conjunction with technological advancements. The rise of mobile technology and widespread use of smartphones has allowed individuals to access the internet and a wide range of mobile applications wherever they go. This accessibility to apps benefits language learners as well. Furthermore, teachers can enhance their teaching knowledge and skills by engaging with podcasts, webinars, and recorded videos of talks delivered by other educators. Teachers utilize social media platforms to establish communication channels that extend beyond the traditional classroom setting. Moreover, the ability to engage in face-to-face online interactions with students has created a new market for online classes, presenting additional opportunities for teachers (Chong, 2016).

Online learning possesses distinctive attributes, including convenience and flexibility, and incorporates various technological tools that can empower students to engage in independent learning. According to Bali and Liu (2018), students express satisfaction with online learning due to technological advancements. Skillful utilization of technology greatly enhances learners' ability to access educational resources and information autonomously, reducing their reliance on external assistance. Technology plays a crucial role in facilitating learners' access to a wide range of resources related to their desired topics of study (Chalermnirundorn, 2020).

Independent learning in the 21st century necessitates the utilization of technology to foster problem-solving abilities, decision-making skills, creativity, risk-taking, and interpersonal skills. By effectively harnessing technology, barriers to learning can be overcome, making the learning process enjoyable and accessible, thereby boosting academic achievement. Thai universities have been on the right track in embracing the advancement of educational technology.

Background of the Study

With the World Health Organization (WHO) officially declaring the outbreak of the novel coronavirus (Covid-19) as a global pandemic in 2020, in-person learning faced severe

restrictions or complete bans. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2021) highlighted the disruptive impact of the COVID-19 pandemic on education systems worldwide. The report noted that vulnerable learners were disproportionately affected, leading to increased inequalities and worsening an already existing education crisis. Furthermore, school closures have varied greatly, ranging from no closures in a few countries to extended periods exceeding an entire school year. Unfortunately, educational sectors were often perceived as non-priority during the pandemic, with the primary focus being on front-line workers, caregivers, and the elderly. The disruption of academic routines caused by lockdown measures had a detrimental impact on the mental well-being of many students. The challenges associated with completing projects, graduation delays, and fears of contracting the virus significantly affected their mental health (Pan et al., 2020). Prior to the Covid-19 pandemic, students were already facing challenges related to mental health (Kaushik et al., 2016). In Thailand specifically, depression rates among university students ranged from 19% to 50%, while anxiety rates ranged from 26% to 69% (Boonvisudhi & Kuladee, 2017). These psychological issues further intensified and worsened during the Covid-19 pandemic (Charatcharoenwittaya & Niltwat, 2022). Consequently, Thai educational institutions faced additional hurdles in providing students with effective online learning environments.

Before the Covid-19 pandemic, online learning was not widely utilized in Thailand. However, with the outbreak, the entire country was compelled to rely on online education, affecting all levels of educational institutions, from kindergarten to graduate programs. Government-imposed prevention and control measures had a significant impact on millions of students. Educational institutions swiftly transitioned to online platforms and implemented synchronous and asynchronous learning approaches to adhere to social distancing guidelines. Nevertheless, the online classes delivered through these platforms were perceived as monotonous or lacking engagement. According to Wangkiat (2021), both students and teachers expressed their dissatisfaction with the challenging process of adapting to online learning. Parents also found it difficult to motivate their children to study from home. Despite the initial promise of online learning providing equal opportunities for accessing knowledge and information, the reality turned out to be unsatisfactory. Technical issues were not the only problem, as students experienced stress and anxiety. Overwhelming homework assignments, a lack of interaction with peers and teachers, and extended periods of screen time contributed to their loss of motivation (Thanavisuth, 2021). The sudden transition to online English learning during the Covid-19 pandemic posed significant learning challenges for students, to the extent that some even joined online protests advocating for education reform.

This research study aimed to explore the lived experiences of students who studied one of the English foundation online courses in the university. Although many studies have investigated this area, limited information was available regarding the challenges and strategies students employ to adapt to their new learning environment.

Learning with Technology

The field of English language education is experiencing rapid transformation. Traditional concepts of education are being replaced by novel and innovative perspectives on learning, teaching, and knowledge acquisition. Technologically proficient students have access to a wealth of resources and information readily available. They recognize that the contemporary job market demands more than just numerical or cognitive abilities. Proficiency in another language, such as English, has become a valuable skill that can contribute to securing meaningful employment or advancing in one's career.

In the 21st century, learners possess a strong awareness of the internet and various technological advancements. Consequently, traditional teacher-centered and authoritative approaches are being replaced by collaborative methods. Traditional methods of assessing language acquisition are deemed insufficient in today's world (Pappamihel and Walser, 2009). As a result, individualized and learner-centered approaches are gaining popularity as they emphasize learner autonomy and cooperative learning (Jacobs and Farrell, 2001). Nowadays, individualized instruction is becoming the norm, with learning becoming increasingly student-centered. Moreover, there is a growing trend of student participation in shaping learning outcomes (Pauk, 2007).

Language education extends beyond the confines of the classroom and should continue even after learners leave the educational setting. The current trends in language learning empower students to communicate with individuals worldwide in real time. Technological devices play a crucial role in this process and should be consistently utilized by both students and teachers. Internet connections and mobile devices are particularly popular and valuable tools for facilitating interactions between language learners and instructors, as well as promoting peer-to-peer communication. The field of web-based language teaching and learning activities is continuously evolving and offers exciting opportunities for educators. Teachers can easily create web-based language activities, taking advantage of the available technology in educational institutions. These technological advancements, such as the web, internet, and mobile devices, have significantly reduced the barriers of distance, connecting people from different parts of the world (Sarica & Cavus, 2008). Web-based technologies and robust internet connections open up new possibilities for the advancement of educational technology.

Education in the New Normal

The outbreak of COVID-19 resulted in a swift shift for most universities, transitioning from in-person teaching to online learning environments. Fortunately, a few universities already had established online or blended courses in place prior to the pandemic. However, the majority of institutions were unprepared for this sudden switch to online delivery, leaving little time to redesign course delivery for the new virtual setting. There is a lack of research examining the engagement of students with online learning tools, particularly for those

who were unexpectedly forced to transition from face-to-face to online learning, which may not have been their preferred learning style initially (Millar et al., 2021). Many universities utilize Learning Management Systems (LMS), presenting an opportunity to investigate student engagement through their online learning behaviors. LMS refers to software packages that facilitate online learning, assessment, and collaborative learning. As stated by Lonn and Teasley (2009), LMS are web-based systems that enable teachers and students to share materials, submit and return assignments, and communicate online. Here are some very popular LMSs that were used in teaching and learning during the Covid-19 pandemic as follows:

Google Classroom

Introduced in 2014, Google Classroom offers a blended learning approach that has gained popularity in education. As part of Google Apps for Education, it provides teachers with a platform to create and organize assignments efficiently, offer feedback effectively, and facilitate communication with their classes. By integrating Google Docs, Drive, and Gmail, this system enables teachers to generate and collect assignments digitally, reducing the need for paper-based materials—a crucial aspect of modern learning strategies. This paperless approach helps students maintain better organization of their files and reduces the amount of physical storage required, as highlighted by Shaharane et al. (2016). Teachers can easily track completion status, provide real-time feedback to individual students, and enhance class communication. The platform allows teachers to make announcements, pose questions, and engage in discussions with students in real time, thereby fostering communication both inside and outside the classroom. Furthermore, Google Classroom automatically creates Drive folders for each assignment and student, enabling students to easily access and keep track of their upcoming tasks on the Assignments page (Chrome Google, 2021).

Canvas

Canvas has emerged as a popular choice in higher education, offering a user-friendly interface and native web hosting. Drawing inspiration from Blackboard and Moodle, Canvas aims to address some of the gaps found in these leading platforms, as noted by Software Testing Help (2022). One of its key strengths lies in facilitating seamless and efficient communication between educators and learners. Setting up Canvas is a straightforward process, and it provides educators with a comprehensive dashboard for offering feedback, integrating different educational channels, and monitoring students' progress. Notable features of Canvas include open API, customizable user profiles, LTI integrations, and collaborative workspaces. Students benefit from the ability to submit assignments and access learning materials through mobile devices, as well as the option to connect their Canvas LMS account with their social media accounts. Importantly, Canvas offers extensive support for third-party integrations. While Canvas is competitively priced compared to Blackboard, it is not considered inexpensive. However, an intriguing

aspect is that Canvas also offers a free, open-source alternative. The open-source version possesses similar capabilities to the hosted version, with the exception of a few paid services.

Moodle

Moodle is a learning platform that offers a comprehensive and integrated system for creating personalized learning environments. It provides educators, administrators, and learners with a secure and robust solution. The software can be downloaded and installed on your own web server. The Moodle project is supported by a network of over 80 Moodle Partner service companies worldwide, ensuring its financial stability (Moodle). Moodle is versatile, supporting both blended and online courses, and offers apps for iOS, Android, and Windows Phone. Similar to other Learning Management Systems (LMS), Moodle allows administrators to upload SCORM packages as course content. However, if you want to include Learning Tools Interoperability (LTI) standard compliant resources, you need to utilize an external tool. Notably, Moodle excels in assessment, tracking, and reporting capabilities. Administrators have a range of roles to choose from, including site administrator, manager, course creator, teacher, or non-editing teacher. With over 1,300 plugins available to extend its functionality and a global network of partners, Moodle can be customized to meet specific LMS requirements. However, it is important to note that Moodle, like any free software, has certain limitations, such as not being turn-key and assuming that administrators prefer hosting the LMS independently. In summary, Moodle is a rapidly evolving open-source alternative that offers significant value and flexibility.

Online Learning Approaches

The unexpected arrival of the COVID-19 pandemic posed a significant challenge to the digital preparedness of educators and students worldwide. In response, universities made efforts to swiftly adapt and offer online teaching and learning environments that could effectively facilitate quality education. As a result, a diverse range of approaches emerged, including synchronous and asynchronous online settings for teaching and learning. Some courses adopted a combination of both, while others focused primarily on either synchronous or asynchronous methods.

Asynchronous

Asynchronous learning environments offer temporal and geographical independence, allowing students to learn at their own pace and in an individualized manner, with less reliance on instructors (Xie et al., 2018). This approach aims to alleviate the constraints of fixed schedules and provides learning opportunities through recorded videos, webinars, podcasts, and online training courses. It promotes self-discipline and self-regulation among students, empowering them to take control of their learning process and derive benefits from it. Additionally, asynchronous learning is cost-effective and does not necessitate daily teacher involvement (Lawless, 2020). Since it is a self-guided module,

students can engage with the course materials independently and at a minimal cost. However, there are a few drawbacks to asynchronous learning. Students may feel less connected to instructors and experience a sense of isolation due to limited interactions with peers and teachers. This lack of supervision can lead to procrastination among students, necessitating gentle reminders from teachers to complete and submit their work for evaluation.

Synchronous

In synchronous learning, students participate in virtual class sessions at scheduled times alongside their instructor and peers. These sessions are fixed commitments that cannot be rescheduled. The key benefits of synchronous learning include the ability to ask questions, receive immediate feedback, and engage in real-time discussions, allowing for the sharing of opinions and ideas. However, there are a few drawbacks to consider. Synchronous learning can be stressful due to the rigid schedule, as students are required to be present at specific times. Additionally, it may involve extended periods of continuous computer usage, which can be tiring for students (Perveen, 2016).

Synchronous learning can face challenges due to factors like poor network connectivity and unstable Internet connections, which may disrupt the learning experience and hinder continuous learning. The teacher determines the learning path, but this may not always align with the students' individual expectations or circumstances. Particularly during a pandemic, students may face personal issues that prevent them from participating in online classes according to the prescribed schedule. Therefore, engaging in synchronous learning requires time commitment and coordination between students and teachers. It is worth noting that synchronous learning lacks flexibility in certain situations (Perveen, 2016).

Online Meeting Platforms

The adoption of synchronous and asynchronous learning methods has transformed traditional in-person learning into online and virtual learning. Online meeting applications have emerged as a convenient option for students and teachers to achieve their learning objectives without the need for physical classrooms. These applications come in various types, catering to different needs and interests. Given their widespread use by the global population, online meeting and video conferencing applications have become essential tools for virtual classrooms. The success of virtual classes relies on the availability of software and hardware devices that facilitate connectivity between teachers and students during online learning (Pratama et al., 2020). The necessary hardware equipment for online learning includes computers, CPUs, laptops, webcams, microphones, and internet networks. In addition to the hardware, teachers and students also need to possess the necessary knowledge to effectively use online learning support applications, such as teleconferencing or video call applications like Zoom, Microsoft Teams, and others. Video conferencing technology enables users from different locations to participate in virtual

meetings without the need for physical presence or travel. This technology offers convenience and practicality, particularly in real-time learning scenarios. By eliminating the need for travel, it saves time and allows individuals to safely engage in their work or studies from the comfort of their homes, even during a pandemic. Some of the most popular video conferencing apps used by universities are Zoom, Google Meet, Microsoft Teams, and Webex.

Cisco Webex Meetings

Webex provides a convenient and flexible platform for teaching, learning, and collaborative administration regardless of location or time. Utilizing a software-as-a-service (SaaS) model through the Cisco Webex Cloud, this tool enables video conferencing with support for up to 100 users and incorporates a comprehensive security system. With real-time communication capabilities encompassing video, audio, and data exchange, participants can engage without the need to travel, saving both time and expenses. The scheduling of lectures in advance is also possible, ensuring efficient planning. The platform ensures meeting and lecture security through attendee identification and offers flexible video conferencing clarity options, including Full-HD resolution. Additionally, the versatility of Webex extends beyond education, as it can be employed in various applications such as classroom training, virtual services, remote support, and more. Accessing Webex is straightforward, requiring the installation of a web browser plug-in for internet connectivity only (Chaimeebon and Namee, K., 2017).

Zoom

Zoom is a versatile meeting solution that operates on multiple platforms and utilizes a cloud-based platform for conducting video and audio conferences, collaborative sessions, chats, and webinars. It can be accessed on various devices such as computers (desktops, laptops), mobile devices, and telephones. Zoom offers a range of features, including chat functionality, screen sharing, annotation tools, a virtual whiteboard, polling, breakout rooms, the ability to raise hands, and participant management. These features make it well-suited for creating interactive virtual classrooms and facilitating collaboration on projects. The free version of Zoom allows for meetings with a duration of up to 40 minutes, and users also have the option to record their sessions for later reference (Reimers et al., 2020).

Microsoft Teams

Microsoft has recently launched Microsoft Teams, a collaboration app that is integrated into Office 365. This app enhances the functionality of Microsoft SharePoint by providing a simplified user interface and introducing group chat capabilities. It is available as a standalone app for iOS and Android devices, as well as being accessible through a web browser or dedicated app on Windows and Mac computers. Microsoft Teams is included in the educational license of Office 365, which is commonly offered at many universities.

It stands out as a unique and user-friendly virtual learning platform, similar to others in its category, as it is designed to be appealing to students and can be accessed on various devices such as computers, tablets, and mobile phones (Nemec et al., 2020).

Microsoft Teams provides an interactive learning environment that offers various opportunities for collaborative group work, discussions, and assignment management (Janes & Carter, 2020). Its features, including audio, video, chat, and content sharing, make it convenient for students to complete homework assignments, participate in quizzes, collaborate on group projects, and record lectures. By facilitating interactive learning and promoting effective discussions, Microsoft Teams encourages interaction and engagement among students and instructors, fostering a peer learning culture (Jodie, 2020).

Google Meet

The Google Meet application is widely utilized for teaching and learning activities. It prioritizes safety and ensures user data remains private by implementing secure foundations and built-in protection features by default (St John, 2020). Its numerous benefits as a video conferencing application have made it popular among individuals in the business and education sectors. The user base of Google Meet has experienced significant growth due to its user-friendly interface, creating a positive perception of the platform (Purwanto & Tannady, 2020).

Summary of Review of Literature

The field of English language education is evolving due to technological advancements, with a focus on learner-centered approaches and the use of technology for real-time communication and access to resources. However, the COVID-19 pandemic necessitated a quick transition to online teaching, which posed challenges for many universities. Limited research exists on student engagement in online learning, particularly for those transitioning from in-person to online formats. Aside from utilizing synchronous and asynchronous methods to ensure continued education, Learning Management Systems (LMS) have been widely adopted by universities, providing an opportunity for student engagement. Popular LMS platforms used during the pandemic include Google Classroom, Canvas, and Moodle. In addition, online meeting applications have become crucial for virtual classrooms, providing convenience and connectivity. Hardware devices like computers, webcams, and microphones, as well as reliable internet networks, are essential for successful virtual classes. Teachers and students need to be familiar with online learning support applications like Zoom and Microsoft Teams. Video conferencing technology enables real-time communication and eliminates the need for physical presence. Popular video conferencing apps used by universities include Zoom, Microsoft Teams, and Webex.

Theoretical Framework

The theoretical framework adapted for this study was based on Husserl's (1997) phenomenological framework. Phenomenology, as a philosophy and an approach to research, is all about Understanding. According to Polkinghorne (2007), the term "Understanding" with a capital "U" denotes a particular kind of comprehension. It allows us to deeply connect with the essence of a subject, enabling teachers to respond with insight and compassion when developing policies, initiating change, and fulfilling their roles as educators and individuals.

The phenomenological approach enables individuals to describe and understand their perceptions of the world. In the context of this study, the primary objective of using the phenomenological framework is to investigate the perspectives of students who are encountering specific phenomena in their online learning. By delving into the subjective experiences of these individuals, we can gain valuable insights into their firsthand understanding of the phenomena (Husserl, 1997). The researcher will focus on understanding the meanings that respondents say about the phenomenon being studied and creates knowledge through interaction between the researcher using dialogue and reasoning as the primary methods of investigation.

Phenomenology aims to comprehend the real-life experiences of individuals. The concept of "lived experience" refers to the personal knowledge, firsthand encounters, and direct involvement in daily life situations related to a particular phenomenon (Eskandari et al., 2016). For instance, Rosetti and Henderson (2013) conducted a study that examined the lived experiences of adolescents with learning disabilities (LD) from their own perspectives.

Four individuals who had personal experience with learning disabilities (LD) were purposefully selected for the study. Through purposive sampling, the researchers ensured that the participants had direct knowledge and encounters related to the LD phenomenon. The researchers conducted interviews with the participants, utilizing open-ended questions based on an interview protocol. The interview questions covered various important aspects, including school experiences, identity, self-advocacy, and peer support, among others (Rosetti & Henderson, 2013). The interviews were audio-recorded using a digital recorder and later transcribed for analysis.

Rosetti and Henderson (2013) conducted interviews that resulted in a substantial amount of transcript material, totaling 163 pages. The researchers employed the Interpretive Phenomenological Analysis (IPA) framework to analyze the data. IPA is a method used to gain insights into how individuals perceive and interpret their lived experiences (Smith et al., 2009). Therefore, the study conducted by Rosetti and Henderson (2013) holds significance as it establishes a framework that will be utilized in the present phenomenological research.

Research Questions

In this study, the researcher discovered the key challenges of students in learning English and their coping mechanisms towards difficulties during the Covid-19 pandemic. This study answered the following research questions:

1. What were students' lived experiences of learning English online during the Covid-19 pandemic?
2. What were the learning challenges students faced during the Covid-19 pandemic?
3. How did students cope with the difficulties encountered in attending online classes during the Covid-19 pandemic?
4. What intervention program can be recommended based on the findings of this study?

Scope and Delimitation of the Study

This study explored students' lived experiences of learning English online in a private university in Thailand. The participants were students from various faculties and programs registered in an English course in the academic year 2022-2023. The researcher sought to limit the study by gathering data from the participants' experiences and the knowledge they gained from these experiences. This study used the purposive sampling technique and was further discussed in Chapter 3 Research Methodology.

METHODOLOGY

Research Design

To explore the lived experiences of university students in learning English online, the researcher employed the phenomenological approach. The purpose of doing phenomenology is to closely examine the phenomena of interest and delve into the intricate realm of lived experiences, as perceived by the individuals who directly encounter them (Qutoshi, 2018). In-depth interviews serve as the primary means of gathering data in phenomenological research. In the early 1900s, German philosopher Edmond Husserl pioneered phenomenology as an approach to investigating the conscious understanding of human lived experiences (Wojnar & Swanson, 2007). In this form of qualitative study, the researcher used an instrument that suited in describing the structures of experiences and exploring students' lived experiences in learning English online.

Locale of the Study

The participating university was a Thai private university located in Pathum Thani province on the outskirts of Bangkok, Thailand. The university was established in 1985, with a total of 138 programs: 94 undergraduate programs; 34 master's degree programs;

and 9 doctorate programs. This participating university is where the researcher and the target participants presently located which provided convenience to conduct actual research activities.

This study was conducted to explore the lived experiences of university students in learning English online during the covid-19 pandemic (academic year 2021-2022). The English course is offered by the university's language institute as part of the General Education program. The course aims to improve the communication skills of students to enable them engage effectively and appropriately in international/intercultural communications. During the pandemic, the university utilized the following virtual learning platforms to facilitate the online learning both in synchronous and asynchronous modes: Google Classroom, Microsoft teams, Google Meet, LMS Moodle, Zoom, and Webex.

Participants

Criterion purposive sampling was used in selecting the respondents in this study. The sampling technique, also known as judgmental, selective, or subjective sampling, is a form of probability sampling in which researchers rely on their own judgment when choosing members of the population to participate in the study based on the characteristics of a population and the objective of the study. Purposeful sampling is a commonly employed method in qualitative research to strategically choose cases or individuals that possess valuable information within the given resource constraints (Patton, 2002). It entails the identification and selection of individuals or groups who have significant knowledge or experience related to a specific phenomenon of interest (Cresswell & Plano Clark, 2011).

Using the technique, the researcher selected 12 respondents from one of the English courses registered in semester 2 of the academic year 2022. As much as this study desired a bigger sample size, the university imposed limitations following the COVID-19 protocol. The respondents were from the Faculty of Business Administration, Faculty of Liberal Arts, College of Digital Innovation, College of Social Innovation, and from the College of Tourism, Hospitality, and Sports. The respondents in the study had an age bracket ranging from 19-21 with mixed gender and mixed level of English language proficiency.

Instruments of the Study

To come up and arrive at an accurate, reliable, and valuable interpretation of data to be gathered from the respondents, the study utilized a validated interview guide questions constructed by the researcher that entailed open-ended or probing questions allowing respondents to express the nature of the experience they had concerning the statements of the problem of this study. These interview sessions were conducted to bring forth the respondents' awareness of the phenomenon under investigation. Respondents were provided with information about the aim of the study prior to the interviews. These

interviews helped better understand respondents' opinions and experiences. The guide questions used in the interview of respondents were constructed by the researcher. These questions were reviewed, evaluated, and validated by three experts in the field of language and educational management. The researcher designed the questions to facilitate the easy, organized, and systematized collection of significant data. The suggestions or recommendations of the validators were incorporated into the final interview questions.

Data Gathering Procedure

Before gathering the data for this study, the researcher requested the permission of the head of the language institute. Then, each respondent was informed about the details of the research procedures and the required proof of Covid-19 test to adhere to health and safety protocols. The researcher conducted the interview in face-to-face manner and following the time that was convenient for the respondents. All interview data were recorded and saved as electronic file. The recordings were transcribed for data analysis.

Data Analysis

The collected interview data was analyzed using thematic analysis, which involved systematically examining and interpreting patterns of meaning across the datasets to identify common themes. Thematic analysis follows a six-step process originally developed for psychology research, including familiarization, coding, generating themes, reviewing themes, defining and naming themes, and reporting (Braun & Clark, 2006). Through this process, codes, sub-themes, and major themes were identified based on the data provided by the participants. To ensure the validity of the themes, the researcher sought recommendations and suggestions from an expert. Triangulation is a qualitative research method that enhances the credibility and validity of data by combining information from multiple sources (Patton, 2002). In addition to conducting in-depth interviews (IDIs), researchers utilized focus group discussions (FGDs) and documentation as additional sources of data to triangulate the findings. In the FGDs, the researcher shared the initial findings from the IDIs with the group and solicited their input and feedback to validate and reinforce the results. Furthermore, respondents provided documents or other materials to substantiate their responses to the interview questions.

RESULTS

Table 4.1: Respondents Demographic Data

Respondent	Gender	Faculty	Major	Years of Study	Age
R1	Male	Faculty of Business Administration	Logistics and Supply Chain Management	1 st Year	21
R2	Male	College of Tourism, Hospitality, and Sports	Culinary Arts and Technology	1 st Year	19
R3	Female	Faculty of Liberal Arts	English	1 st Year	19
R4	Female	Faculty of Business Administration	Digital Business	1 st Year	19
R5	Female	Faculty of Business Administration	General Management	1 st Year	20
R6	Female	Faculty of Business Administration	Digital Business	1 st Year	20
R7	Female	Faculty of Business Administration	General Management	1 st Year	20
R8	Female	College of Social Innovation	Leadership in Society, Business, and Politics	1 st Year	19
R9	Male	College of Digital Innovation Technology	Digital Innovation	1 st Year	20
R10	Male	Faculty of Business Administration	Digital Business	1 st Year	19
R11	Male	Faculty of Business Administration	Finance and Investment	1 st Year	20
R12	Male	Faculty of Business Administration	International Business Administration	1 st Year	19

Table 4.2: Training Schedule of Activities

NEW ROLES OF TEACHERS IN THE NEW NORMAL OF EDUCATION			
TIME	DAY 1	DAY 2	DAY 3
8.30 - 9.00	Registration	Registration	Registration
9.00 – 12.00	Topic 1: Teaching and Learning Strategies <i>Flipped Classroom</i> <i>Project-Based Learning</i> <i>Collaborative Learning</i> <i>Game-based Learning</i>	Topic 3: Evaluation and Assessment <i>Interviews</i> <i>Portfolios</i> <i>Journals</i> <i>Demonstrations</i> <i>Performance Tasks</i>	Workshop on Lesson Planning for Digital Education <i>Participants apply what they learn from 4 topics by designing a class activity for online learning</i>
12.00 – 1.00	Lunch Break	Lunch Break	Lunch Break
1.00 – 4.00	Topic 2: Interactive Material Development	Topic 4: Learning Management System	Presentation <i>Participants present their</i>
	<i>Slideshows</i> <i>Multimedia Storytelling</i> <i>Video/Audio Recording</i> <i>Creating Animated Pictures</i>	<i>Creating Quizzes</i> <i>Tracking Data</i> <i>Uploading /Downloading Materials</i> <i>Grading System</i>	<i>lesson activities and materials</i>
4.00 – 5.00	Discussion / Reflection	Discussion / Reflection	Closing Program

Table 4.3: Training Action Plan

ACTION PLAN NEW ROLES OF TEACHERS IN THE NEW NORMAL OF EDUCATION						
Program	Objectives	Strategies	Time Frame	Person Involve	Materials/ Equipment	Success Indicator s
Teaching and Learning Strategies	To teach using one of the approaches used in digital education.	Teach a group of participants using one of strategies.	August 2023	Head of the Department	Computers	Participants were able to teach with confidence and able to engaged other participants
Instructional Material Development	To develop a lesson that has interactive class activities.	Create instructional materials using multimedia.	September 2023	Course Developers	Computers	Participants were able to create different learning activities with the use of video, audio, and images.

Evaluation and Assessment	To apply a method of assessment according to the task.	Assess a learning task to achieve educational outcomes.	October 2023	Course Managers	Computers	Participants were able to use appropriate assessment based on the activities.
Learning Management System	To create an online lesson and quizzes	Upload and organize all materials to the learning management system	November 2023	System Administrators	Computers	Participants were able to create an online course with quizzes.

DISCUSSION

Table 4.1 displays the demographic information of the 12 respondents. The respondents consist of 6 females and 6 males, with ages ranging from 19 to 21 years old. All respondents are first-year undergraduate students from various faculties and colleges. They were all registered for the same English course during the same academic term and year.

Out of 12 respondents, 8 are from the Faculty of Business Administration (majoring in Logistics and Supply Chain Management, Finance and Investment, Digital Business, General Management, and International Business Administration). 1 respondent is from the College of Tourism and Hospitality, 1 respondent from the Faculty of Liberal Arts, 1 respondent from the College of Social Innovation, and 1 respondent from the College of Digital Innovation Technology.

All respondents had attended or participated in online learning classes before the Covid-19 pandemic, either as a short course, a supplementary learning activity, or a test tutorial. None of them had studied a full-online course. All respondents expressed satisfaction with their overall intermittent online learning experience, describing it as convenient, interactive, interesting, motivating, and relaxed.

Research Question 1: What were students lived lived experiences of learning English online during the Covid-19 pandemic?

Theme: Description of the Learning Experiences

The COVID-19 pandemic caused an abrupt shift from in-person to online education in order to control the transmission of the virus. This shift disrupted the learning system, as students had to suddenly transition to studying all subjects through a virtual platform. Despite having prior experience with e-learning, the sudden shift to online education affected their motivation to learn.

Difficult

R1- “During the covid, it was very difficult for me to contact my friends especially when we worked in groups. Teachers were also very hard to contact. It seemed that everybody became busier.”

R11- “I had some difficulties maybe because I was not used to learning online. In the past, I only did it as a short course.”

R12- “I had a very bad experience and you could see that in my grades last year. My grades were so low.”

Respondents also described the classes as uninteresting. The previously fun and engaging English classes they experienced became dull and monotonous.

Boring

R2- “I think Covid made learning English online boring. I don't know...maybe teachers and students were stressed out by the pandemic.”

R7- “Learning online during the pandemic ruined my positive expectations. I don't know.... I felt everything was so dry and dull.”

The classes during the COVID-19 pandemic became overwhelming for the respondents. The longer lecture sessions conducted online restricted the movement of students, resulting in physical inactivity.

Overwhelmed

R4- “During the covid, I learned every subject online. I think I was a bit overwhelmed. I stayed in front of the computer or my phone for the whole day. This style of learning demotivated me a lot.”

R10- “My experience was good but not very good. I think I was very tired of studying for a long time in front of the computer.”

Though learning at home provided students with the safest environment during the pandemic, respondents experienced social isolation. They felt that the place where they studied did not have the right atmosphere to motivate them to learn.

Demotivated

R3- "I felt safe while learning at home but the learning was a bit dull. Maybe because I was isolated at home for a very long time."

R9- "During the pandemic, my learning experience online was not that good. I thought that something was missing in the class atmosphere."

Respondents pointed out that learning at home for a long time affected their discipline. Aside from becoming more of a passive learner, they became inactive and sluggish.

Undisciplined

R5- "I lost my self-discipline. I became very lazy. Sometimes, I did not want to get up to join the class, especially in the morning."

All respondents had high expectations for online learning based on their previous positive experiences. They believed that studying alone at home would provide them with the opportunity to be more focused. However, during the pandemic, they experienced a loss of interest and concentration in their studies.

Unfocused

R6- "At first, I thought learning at home would make me more focussed on study. What happened was completely the opposite. I did not pay attention to almost all my classes. I did other things and did not focus on listening to the lecture."

R8- "It's bad because I could not have full concentration. I started to lack interest in studies."

Analysis and Interpretation

The thematic analysis conducted for the research question on the lived experiences of university students in learning English during the Covid-19 pandemic revealed that respondents had negative experiences with online English learning during this time. The researcher identified codes and meanings such as difficulty, feeling overwhelmed, boredom, lack of focus, lack of discipline, and demotivation. These findings are consistent with the study conducted by Thanavisut (2021), which highlighted the major drawbacks of online learning during the pandemic, including the lack of face-to-face interactions with

friends and teachers. The sudden transition to fully online classes also posed challenges for students, affecting their grades. Respondents expressed that it was particularly difficult to collaborate with other students on group tasks. Despite the potential advantages of online learning, respondents felt that their experiences during the pandemic were significantly different. They mentioned that communication with friends or teachers became burdensome, especially during collaborative work.

Research Question 2: What were the learning challenges students faced during the Covid-19 pandemic?

Theme: Description of the Learning Challenges

The restriction of in-person learning during the pandemic had a significant impact on education, leading to the closure of learning institutions to prevent the spread of the virus. All teaching and learning activities were transitioned to virtual mode. Both teachers and students encountered various challenges during this process.

Nearly all respondents faced issues with their learning devices. The most commonly used devices for virtual learning were smartphones, desktop and laptop computers, and tablets. The majority of respondents preferred using smartphones or tablets due to their portability and familiarity. A few respondents only had access to a computer or laptop. However, those using smartphones or computers reported that their devices malfunctioned during class. Additionally, some of the activities or learning materials provided by teachers were not compatible with their gadgets.

Learning Device

R1: "Sometimes, my computer broke down in the middle of the class."

R9: "I didn't have any gadgets needed to complete the tasks. For instance, there were some activities like reading passages or tests that were too small to read on my smartphone. Some websites were also not compatible with smartphones. Sometimes, the teachers wanted students to do the test while the phone camera was also on."

R12: "I used a PC at home but it did not have a camera, so I bought an additional webcam to be able to learn and do the tests online."

In the virtual mode of teaching and learning, having a reliable and stable internet connection is crucial. During the Covid-19 outbreak, it was not surprising that the internet connection became unstable, as all students in various locations were using the same broadband network. This connectivity issue was experienced not only by students but also by teachers.

Internet Connectivity

R2: "I did not have any problems with gadgets but my internet connection was not stable. Sometimes, it was strong, sometimes, it was weak. It affected my concentration to learn."

R4: "My internet and the internet connection of the teacher were very unstable, so most of the time, the classes were interrupted."

R6: "I used a smartphone and iPad but my internet connection at home was very slow. It affected the result of my test because the test was timed."

R8: "Most of the time, I had problems with the internet connection during the class because I was not the only one who was studying but also my siblings."

R10: "The websites or applications that teachers used were not very reliable. Maybe because of the internet connection. It was very difficult for students to navigate. Sometimes, the teacher's internet was also having disruptions so it was very difficult to focus on learning."

The study environment plays a crucial role in learning, as it can either motivate or demotivate students. One of the challenges faced by respondents during the pandemic was the learning environment. Although all respondents had their own designated learning space at home, it did not make them feel more comfortable or relaxed. Learning at home often made them feel sleepy, particularly when studying in their bedrooms. Respondents mentioned that learning at home made them busy, not with their studies but with other household chores. Room temperature, presence of pets, and interactions with other family members also caused learning inconveniences at home.

Place to Study

R2: "There were a lot of people in my home, so it was difficult for me to concentrate."

R3: "Learning at home was ok but sometimes my parents would ask me to do something. Because I studied at home with my parents, I lost a lot of time attending to my family matters."

R4: "I have many pets at home so during the class they came near me and my classmates and teachers would see them in the camera."

R7: "I have my own room. But sometimes my folks were talking loudly. Sometimes, they entered my room without knocking on the door so they would appear on my screen."

R8: "I studied in my room where our house pets had easy access. Sometimes, they jumped in front of the computer screen."

R11: "Learning at home was very inconvenient because it was too hot in my room. At school, the classrooms were all air-conditioned."

To reduce lecture time, teachers assigned work or tasks as requirements during or after the class. These assignments could be in-class activities or after-class activities. Teachers often used these assignments as the basis for formative and summative assessments. Respondents emphasized that teachers assigned a significantly higher amount of work compared to regular in-person classes. Furthermore, these assignments were often given with minimal scoring value and had to be completed within a limited timeframe.

Too Much Work from Teachers

R3: "I think the class work was a lot compared to onsite classes."

R4: "Teachers gave tasks to do every class meeting and the due date was the following day. There was too much class work compared to onsite classes. Most of the time, I sleep late just to finish all the homework."

R9: "There was lots of homework but the scores remained the same."

R12: "Some teachers gave a lot of work. Maybe they forgot that students have other subjects to learn. Every class meeting, there was additional work and most of the students could not finish on time."

For online learning to be effective, it requires full attention from students. It was believed that if students were learning independently, they would be fully engaged in the class. However, respondents described their learning engagement as very passive. Due to the restrictions imposed during the pandemic, traveling from one place to another was limited, leading to most respondents staying at home. This lack of mobility resulted in a lack of physical activity among students. Respondents admitted that they became inactive, with some even being too lazy to get out of bed and prepare for class or actively participate in class activities. Furthermore, the lack of attention and supervision from teachers also contributed to respondents not being fully engaged in the class.

Laziness

R3: "I felt very idle. Most of the time, I fell asleep during the class."

R4: "I became inactive. My score became so low because I forgot to send my work on time."

R5: "I lost my interest in listening to the lecture or doing any group work. I just turned my camera but not actually listening."

R7: "I became less-focus. I felt I was lazy because I thought that there was nobody looking at me anyway."

R9: "I think I became lazy because I did not have to wake up early in the morning or dress up for the class."

Teachers played a significant role in online education. Students relied on their expertise in providing educational content, offering guidance, and conducting evaluations during the pandemic. However, the shift to online learning exposed the ineffectiveness of teachers in terms of educational technology. It became evident that teachers lacked training in digital education. Respondents described that teachers were unfamiliar with the platforms used and encountered compatibility issues with certain activities. The grading criteria were also deemed irrelevant to online learning activities. Most importantly, teachers did not maintain open communication with students for consultations, whether during class meetings or outside of class time.

Teacher's incompetence

R3: "I think the teacher was not fully prepared. Some teachers did not even know how to share their presentation."

R2: "It was hard to contact one another. I needed to wait for 3 days for the teacher to respond to my inquiries."

R5: "My teacher was so strict. I had to turn on my camera all the time. If not, the teacher would deduct points. The criteria was also very strict. I think teachers thought that we stayed at home so we had a lot of time to do what they wanted us to do."

R6: "The teaching style of the teacher was a bit dominant in the class. I was afraid to ask questions unlike in classes held onsite. The teacher also did not ask if anybody had any questions. The class attendance became strict. If you were absent, you won't be allowed to take the test anymore."

R8: "Teachers did not pay attention to my concerns. The teacher just taught non-stop without asking the student if we understood."

R10: "The course management lacked interaction among students. I wanted to have some work where I could meet and talk with my friends."

R12: "Some activities were not designed for online learning. The tests were too long. The camera should be on all the time. Online learning must be flexible and not horrible like this."

Interactions and collaborative activities are essential components of in-person classes, as they support the mental and physical well-being of students. However, during the Covid-19 pandemic, respondents noted that their health was significantly impacted. Their schedules for physical activities such as sleeping, eating, and exercising were altered or adjusted due to the workload assigned by teachers. Respondents described their mental health as poor, as they experienced feelings of loneliness and isolation due to the lack of activities that promote interactions with other students.

Mental and physical problem

R2: "I missed the interaction with my friends because doing group work online was a bit difficult. I did not move a lot. It affected my mental and physical health."

R4: "There was too much class work compared to onsite classes. Most of the time, I slept late just to finish all the homework."

R8: "I had to adjust my time to finish all the work. I lost my time to sleep or to exercise."

R11: "I think my learning discipline was affected. When I studied on-site, I had to get up early and travel to school. But with online learning, I became lazy. My health was also affected."

Analysis and Interpretation

The thematic analysis conducted for the research question on the challenges faced by university students in learning English during the Covid-19 pandemic revealed that respondents encountered various challenges in online English learning during this time. Based on the aforementioned statements, the researcher identified codes and meanings such as learning device, internet connectivity, study environment, workload from teachers, laziness, teacher's incompetence, and mental and physical health problems. These findings are supported by the study conducted by Charatcharoenwittaya and Niltwat (2022), which showed that the closure of schools and public spaces, social isolation, loneliness, lack of engagement, and boredom have had detrimental effects on adolescents' physical and mental health.

These challenges had a significant impact on students' perception of online learning. All respondents expressed that their perception shifted from positive to negative after experiencing online learning during the pandemic. This finding aligns with the study conducted by Nasution and Amad (2020), which revealed that students' perception of online learning was not favorable due to issues related to internet access and teaching style. Respondents also highlighted the lack of interaction with friends and an unfavorable learning environment as factors that contributed to their feelings of laziness or inactivity.

These experiences were also reflected in the study conducted by Khan et al. (2020) with university students in Bangladesh. The analysis revealed that internet connectivity issues and teachers' lack of competence were significant challenges in online education. Despite Thailand being ranked at the top in terms of internet speed in the region, respondents still faced connectivity issues during online classes. The lack of familiarity among teachers with digital pedagogy may have contributed to the stress experienced by students, as highlighted in the findings of this analysis.

Research Question 3: How did students cope with the difficulties encountered in attending online classes during the Covid-19 pandemic?

Theme 3: Description of Coping Mechanisms

The education disruption caused by the Covid-19 pandemic worsened the pre-existing education issues in Thailand. As mentioned in the analysis above, respondents identified the challenges they encountered in fulfilling their academic requirements, which added to their existing stress and health concerns. Consequently, respondents developed strategies to mitigate the negative impacts on their mental and physical health, as well as their academic performance.

During the pandemic, mobile learning devices and access to a strong internet connection became more essential than traditional books and paper. The use of smartphones, tablets, and the internet increased to adapt to the remote learning mode of education. However, many students experienced challenges with unstable internet connections and incompatible learning devices. The instability of the internet often disrupted their learning experience. In order to actively participate in online classes, all respondents felt the need to purchase new or additional learning devices or upgrade their internet packages to ensure fast and stable connections.

Upgrade of mobile device or internet subscription

R1: "I had to buy a new computer and bought an additional internet package. I was lucky because computer shops offered discounts for students."

R4: "I subscribed to another internet package so whenever the connection was weak, I had a spare one."

R6: "I asked my parents to upgrade the internet package to make it strong and fast."

R8: "I had no choice but to upgrade my internet package at home to have a better internet connection."

Regular communication with teachers is fundamental for a strong teacher-student relationship and to improve academic performance. However, learning on a virtual platform made some students hesitant to ask questions or voice their concerns. Respondents found it necessary to use personal messaging apps to contact their teachers when they had immediate concerns. This is not common in the Thai context, as most teachers prefer not to be disturbed outside of class. Typically, teachers allocate time for consultation during or after the class.

Communicating with teacher

R6: "Whenever I have questions about the lesson, I would ask the teacher after the class through a personal messaging app. I talked to the teacher via personal messenger about the reason I was absent. Then, I would ask for a make-up test."

R7: "When I was absent, I talked to the teacher and asked for a make-up test with fewer points."

R8: "I had to talk to the teacher to clarify the instructions."

R9: "I had to explain to the teacher that it would be impossible to do testing while my camera was on because I was using only one gadget. I had to ask more questions or clarify the instructions after the class."

Another strategy that respondents adopted was creating virtual group study sessions. Typically, group study sessions are organized by students on campus for revision or collaborative work. Despite the physical isolation imposed by the pandemic, respondents shared that they were able to join or create virtual group study sessions during this time to motivate themselves.

Joining a Group Study

R1: "I joined the study group after class to motivate myself."

R2: "I did not schedule a group meeting the day after or the following week. I talked with my classmates immediately after the class."

One of the challenges faced by students in online education is the learning environment. Some respondents described their study places at home as unsuitable. They often experienced distractions such as noise from adjacent rooms, weak internet signals, or their own pets. Respondents shared that they had to frequently relocate to different places in order to obtain a stronger internet connection, improve their focus, or minimize distractions.

Finding the best place in the house

R5: "I moved to the upper floor to get better reception."

R8: ".I had to put a leash on my pets to restrain them during my class."

R9: "To have a better atmosphere at home, I informed my parents that I learn online. I also used the room away from the living room where my family usually gathered."

During the pandemic, teachers were under increased pressure to accommodate the needs of their students. In addition to their regular teaching responsibilities of lesson delivery, exercise checking, and listening to presentations, teachers also had to address student inquiries. This additional workload added to the challenges of being a teacher during the pandemic. As some teachers were unable to attend to all individual student concerns, respondents turned to their classmates for help. This strategy was particularly used by students who felt hesitant to directly approach their teachers.

Asking help from classmates

R2: "If my teacher is slow to respond to my inquiries, I would ask my classmates first (while waiting for my teacher's response)."

R10: "Whenever I was cut off from the class because of the internet. I consulted my classmates after the class and asked them to explain the things I missed. I could not just talk to the teacher because the teacher also did not know how to fix the learning system."

R11: "I usually asked my friends for information for the things I missed."

Internet instability was one of the challenges encountered in online learning. Unstable internet connections not only disrupted the completion of class activities but also caused inconvenience to the respondents. Some respondents had to request extensions for assignment due dates because they could only work on tasks during late evenings or early mornings when there were fewer people using the internet. This allowed them to have better internet access and complete their tasks with minimal disruptions.

Requesting due date extension of assignments, projects, etc.

R5: "If the work needed more time to finish, my friends and I would talk to the teacher to either adjust the activities or adjust the time."

R10: "I had to inform the teacher that the internet connection disrupted some activities. I requested that the teacher give us another chance to re-do those exercises. Sometimes, I had to do the tasks late at night when the internet connection was strong."

R11: "I talked to the teacher to give us more time to finish the tasks."

Students' motivation to learn was the greatest challenge encountered in online learning during the pandemic. Learning from home in front of a small computer screen meant that teachers had limited supervision of students' activities behind the camera. Respondents admitted that finding the motivation to attend or actively participate in class outside of the traditional classroom setting was a daunting task. However, respondents were also aware that maintaining discipline was crucial for online education. They took various steps to improve their physical and mental engagement. Some respondents cleared their surroundings of distractions, allocated extra time for reviewing lessons, adjusted their sleep schedules, and even created a reward system for themselves upon completing tasks.

Improving Learning Discipline

R1: "I started to challenge myself and created a reward whenever I finished my work."

R4: "I removed all the things that attracted my attention away from the class. I turned off my smartphone so I could keep myself away from social media."

R6: "I spent extra time on self-learning to catch up. I tried to get up early in the morning to make myself ready for the class."

R9: "When I noticed that my scores were dropping, I started to manage my time and made up for the loss scores. After the class, I spared extra time to finish all the work. I spent extra time to finish the extra work given by the teacher".

R10: "To keep myself active, I started to get up earlier and made sure that I was mentally prepared before the class".

R12: “I tried to motivate myself by paying more attention to the class. I tried to listen actively and engaged myself to discussion.”

Analysis and Interpretation

The thematic analysis conducted on the coping mechanisms used by university students in dealing with difficulties in attending online classes during the Covid-19 pandemic revealed that respondents who encountered challenges were able to adapt to the new learning environment. The researcher identified various coping strategies, such as upgrading learning devices and internet connectivity, maintaining communication with teachers, seeking help from classmates, joining study groups, finding suitable study spaces at home, requesting assignment deadline extensions, and enhancing learning discipline. These findings are supported by studies conducted in Ukraine by Tenreko and Ogienko (2020), which highlighted the difficulties faced during the transition to distance education but also emphasized students' ability to adapt. It is worth noting that none of the respondents in this study mentioned using avoidance strategies, contrary to the findings of a study conducted in Uganda by Ojilong et al. (2022), where avoidance strategies were more prevalent among students coping with anxieties during the pandemic. The analysis of this study demonstrated that the respondents actively employed coping strategies to manage academic stress and maintain engagement in online learning activities. Additionally, none of the respondents mentioned financial difficulties in supporting their education, and they recognized the importance of self-discipline in sustaining their interest and motivation.

This analysis revealed that learning at home in isolation provided an opportunity for students to engage in self-reflection. The challenges they faced during the pandemic motivated respondents to reassess their approach to learning. They recognized the need to adapt quickly to the new normal of education in order to keep up with the lessons and successfully complete their courses. This realization influenced the strategies they implemented, such as purchasing new computers and smartphones, upgrading their internet subscriptions, enhancing communication with teachers and classmates, redefining their responsibilities as individual learners, and reevaluating their role as group members.

Research Question 4: What intervention program can be recommended based on the findings of this study?

Recommended Intervention Program

In the light of the findings of the study, it is recommended to organize an intervention program to immediately address the challenges encountered by learners while learning English online. Since the challenges were mostly caused by the teachers' unfamiliarity with digital pedagogy, the recommended training program will focus on teacher training

consisting of 4 topics or themes as follows: Teaching and Learning Strategies, Evaluation and Assessment, Developing Interactive Materials, and Learning Management System.

The recommended intervention program is titled “New Roles of Teachers in the New Normal of Education” and its schedule of activities and action plan are described in Table 4.2 and Table 4.3.

Training Rationale

The global outbreak of Covid-19 introduced a ‘new normal’ in education. The teaching and learning was heavily adjusted with the utilization of various educational technologies and the adaptation of synchronous and asynchronous learning approaches. These abrupt changes have made traditional ways of teaching, learning, and assessing language acquisition inadequate. Thus, this training is organized to address the challenges encountered by learners while learning English online during the pandemic.

Training Objectives

1. To enable participants to learn innovative approaches to teaching and learning.
2. To enable participants to create engaging and interactive digital materials.
3. To enable participants to understand online assessment methods to achieve educational outcomes in digital education.
4. To enable participants to utilize the functionalities of learning management systems and other virtual learning platforms.

Summary of Findings

The statements given by the respondents in response to research questions were carefully analyzed using the thematic pattern of Braun and Clark. Thematic analysis is a method of analyzing qualitative data. In this study, the researcher used an in-depth interview to obtain responses. After transcribing the responses, codes or meanings and themes were identified.

1. The findings revealed that university students' lived experiences of learning English online during the Covid-19 pandemic were characterized as difficult, boring, overwhelming, demotivating, lacking discipline, and lacking focus. These findings were supported by a study conducted by Thanavisut (2021), which found that the absence of face-to-face interaction with teachers and peers was a major drawback of online learning during the pandemic. Moreover, the sudden transition to fully online classes posed challenges for students in adapting quickly, resulting in an impact on their academic performance. Collaborating with peers for group tasks also proved to be a challenging endeavor. Despite the potential advantages

of online learning, the respondents perceived their experiences during the pandemic as markedly different. They expressed that communication with friends and teachers during classes became burdensome, particularly when engaging in collaborative work.

2. The study revealed that these negative experiences were directly caused by the challenges encountered by the students, including the use of incompatible learning devices, unstable internet connection, inappropriate study environments, excessive workload from teachers, lack of motivation, teacher incompetence, and mental and physical health issues. These findings were supported by Wangkiat's (2021) study, which emphasized the difficulties faced by students in learning online from home. Similarly, Charatcharoenwittaya and Niltwat (2022) found that students' mental health deteriorated during the pandemic, significantly affecting their perception of online learning. The respondents in the current study expressed that their experiences during online learning in the pandemic led to a shift from a previously positive perception to a negative one.

This finding aligns with the study conducted by Nasution and Amad (2020), which indicated that students' perception of online learning was negatively impacted by issues related to internet access and teaching style. The lack of interaction with peers and an appropriate learning environment also contributed to feelings of laziness and inactivity, as reported by the respondents. These experiences were also reflected in Khan et al.'s (2020) study with university students in Bangladesh, which identified internet connectivity and teacher incompetence as significant challenges in online education. Despite Thailand's high ranking for internet speed in the region, respondents in the current study still encountered connectivity issues during online classes. The lack of teachers' familiarity with digital pedagogy may have contributed to this stress, as highlighted in the analysis. Although all respondents described their experiences as unsatisfactory due to these challenges, not all of them changed their views on online learning. Despite the difficulties they faced, some respondents still maintained a positive outlook, hoping to find ways to cope with the challenges.

3. The study findings indicate that respondents were able to successfully adapt to the new teaching and learning methods. The analysis emphasizes that learning at home in isolation presented an opportunity for students to engage in self-reflection. Rather than avoiding the challenges, respondents learned how to effectively address them, allowing them to regain their focus and ultimately successfully complete the course.

The study identified various coping mechanisms that respondents used to address their learning difficulties. These included upgrading their mobile devices and internet subscription, engaging in frequent communication with teachers, joining study groups, finding suitable study locations, seeking help from classmates, and

requesting extensions for assignment due dates. Supporting evidence for these coping mechanisms can be found in Tenreko and Ogienko's (2020) studies, which highlighted the challenges and adaptability of students in transitioning to distance education. It is worth noting that all respondents in the current study did not rely on avoidance strategies, in contrast to the findings of Ojilong et al.'s (2022) study conducted in Uganda. In that study, avoidance strategies were commonly used by students to cope with pandemic-related anxieties. In the present study, all respondents employed various coping strategies to manage academic stress and maintain engagement in online learning activities. None of the respondents reported experiencing financial difficulties in supporting their education. However, they acknowledged the importance of improving discipline to sustain their interest and motivation in the online learning environment.

4. Based on the findings of this study, it is recommended to implement an intervention program that addresses the challenges students face in learning English online. The main challenge identified was the teachers' lack of familiarity with digital pedagogy. Therefore, the recommended training program should prioritize teacher training and focus on four key areas: Teaching and Learning Strategies, Evaluation and Assessment, Developing Interactive Materials, and Learning Management System. The training program aims to provide participants with innovative teaching and learning approaches, equip them with the skills to create engaging and interactive digital materials, help them understand online assessment methods to achieve educational outcomes in the digital education context, and enable them to effectively utilize learning management systems and other virtual learning platforms. By providing teachers with the necessary training and support in these areas, it is anticipated that they will be better equipped to navigate the challenges of online teaching and create a more engaging and effective learning experience for students in the online environment.

Conclusions

This phenomenological study successfully achieved its goal of uncovering the key challenges faced by students in learning English during the pandemic, as well as their coping strategies in the new classroom environment. Through in-depth interviews conducted with 12 selected respondents, this study obtained valuable data for thematic analysis. Based on the findings, the following conclusions can be drawn:

1. The Covid-19 pandemic has necessitated a shift to online learning, but the experiences of the 12 respondents in this study revealed a negative perception of learning English online during this time. These negative experiences had a detrimental impact on their academic performance. In addition to technical issues and inadequate learning environments, the lack of expertise among teachers in digital pedagogy emerged as a significant demotivating factor.

2. The challenges faced by university students during online learning had a profound influence on their experiences and perceptions of the learning process. These challenges encompassed issues such as the use of incompatible devices, unreliable internet connections, unsuitable study environments, overwhelming workloads from teachers, lack of motivation, teacher incompetence, and mental and physical health issues. As a result of these challenges, the respondents underwent a shift in their perception of online learning, transitioning from a previously positive outlook to a more negative one. This shift in perception highlights the significant impact these challenges had on their overall learning experiences.

3. Despite the multitude of challenges posed by online learning during the Covid-19 pandemic, the respondents showcased remarkable resilience and adaptability by employing coping mechanisms to effectively navigate these obstacles. They successfully acclimated to the new learning environment and actively engaged in self-reflection. Rather than shying away from challenges, the respondents demonstrated resourcefulness by utilizing diverse coping strategies to effectively manage academic stress and maintain their active participation in online learning activities. It is noteworthy that none of the respondents mentioned experiencing financial difficulties in supporting their education. However, they did recognize the importance of enhancing their discipline in order to sustain their motivation and interest in online learning.

4. The study highlights the significance of providing teacher training in digital pedagogy as a means to tackle the challenges encountered by students. The implementation of the suggested training program is essential for equipping teachers with innovative teaching approaches, enabling them to create captivating and interactive digital materials, familiarizing them with online assessment methods, and empowering them to effectively utilize learning management systems and other virtual learning platforms. By embracing this intervention program, the quality of online English language education can be enhanced, ensuring the success of students in this new normal of education.

Recommendations

This study represents an initial step in understanding the lived experiences of university students in learning English online during the Covid-19 pandemic. However, it is important to exercise caution when interpreting the results due to the small sample size. To obtain more robust and reliable data, future research should consider a larger sample size with a greater diversity of participants to capture a wider range of perspectives. Furthermore, investigating the effects of stress on the mental and physical health of students would contribute to a comprehensive understanding of the challenges they faced during this time. Lastly, exploring the lived experiences of teachers themselves during the pandemic would provide valuable insights into their perspectives, challenges, and coping strategies. Understanding the experiences of teachers is crucial for developing effective strategies

to support them in delivering online education. Conducting such studies would contribute to a more comprehensive understanding of the overall impact of the pandemic on both students and teachers in the educational setting.

The findings of this study has offered fresh insights into creating educational methodologies that facilitate successful acquisition of English language proficiency in an online setting, especially in the new normal. Based on the conclusions drawn from this study, the following recommendations are proposed:

1. The administrators who play a pivotal role in promoting online education, should provide teachers with enough support to implement the necessary instructional changes. With ample support from administrators, teachers can create instructional materials tailored to the students' needs, allowing them to learn synchronously or asynchronously and adapt to innovative learning techniques, resulting in higher satisfaction and achievement levels.

2. Course developers are recommended to develop courses that will teach students a range of skills and knowledge to thrive in an increasingly digital and uncertain world. Students need to be proficient in using various digital tools and platforms. This includes basic computer skills, as well as knowledge of how to use productivity software, collaboration tools, and learning management systems.

3. Academic programs must include contents about resilience and digital literacy. Students should be encouraged to develop their resilience by building a growth mindset, cultivating positive coping strategies, and practicing self-care. The pandemic has shown us that the future is unpredictable and that we need to be able to adapt quickly to changing circumstances.

4. A teacher training program in digital pedagogy is recommended to be organized in short-term, medium-term, and long-term programs, conducted either online or offline. Short-term programs can provide basic knowledge and skills, while medium-term and long-term programs can provide more in-depth training. By providing regular training to teachers, they can gain the necessary skills and knowledge to effectively teach and engage students in online learning environments. This can ultimately improve the quality of education and positively impact students' academic performance.

Compliance with Ethical Standards

The researcher honored and put into account the different sources of information especially the compilation of the interview data. All data obtained in this study was kept in strict confidentiality.

Acknowledgements

A very special gratitude to Dr Virgilio Kim for his valuable support that keep me going to finish this study. I would also like to thank Dr Victor Tabuzo, Dr Crisanta Buri, and Prof Elizabeth Veridiano, Assoc Prof Suchada Nimmanit, for their insightful comments.

REFERENCES

- Al- Khalil, E. A. (2015) . The Role of English in Present- Day Higher Education. (Online) www.researchgate.net/publication, November 10, 2018.
- Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-toface learning courses. *Journal of Physics: Conference Series*, 1108(1) , 012094. <https://doi.org/10.1088/1742-6596/1108/1/012094>
- Boonvisudhi, T. , & Kuladee, S. (2017) Association between Internet addiction and depression in Thai medical students at Faculty of Medicine, Ramathibodi Hospital. *PloS ONE*, 12(3), e0174209. <https://doi.org/10.1371/journal.pone.0174209>
- Braun, V., & Clarke, V. (2006). Thematic Analysis: Providing Accessible guidance on Doing and Understanding. *Qualitative Research in Psychology*. 392): 77-101
- Chalermnirundorn, N. (2020). The development of online instructional media for independent learning of English in tertiary level education. *Phranakhon Rajabhat Research Journal*, Vol. 15, No. 1
- Charatcharoenwittaya, K., & Niltwat, S. (2022). The Impact of Lockdown during COVID-19 Pandemic on Physical and Mental Health of Adolescents. *Siriraj Medical Journal*. Vol. 74, No. 12
- Chong, S.C. (2016). Innovation in ELT. British Council. (Online) www.britishcouncil.org/voices-magazine, 5 May 2022.
- Chrome Google. (2022). Chrome Web Store. (Online) chrome.google.com/webstore/detail/google-classroom, May 5, 2022.
- Cresswell, JW, Plano Clark, VL. (2011). *Designing and conducting mixed method research*. 2nd Sage; Thousand Oaks, CA: 2011.
- Dong, L., and Bouey, J. (2020). Public mental health crisis during COVID-19 pandemic, China. *Emerging Infectious Diseases*, 26(7), 1616. <https://dx.doi.org/10.3201/eid2607.200407>
- Eskandari, N., Simbar, M., Vadadhir, A. A. and Baghestani, A. R. (2016). ‘Exploring the Lived Experience, Meaning and Imperatives of Fatherhood: An Interpretative Phenomenological Analysis’, *Global Journal of Health Science*, Vol. 8, No. 9
- Husserl, E. (1997). Analysis of the Reorientation from the Psychological Attitude into the Transcendental Attitude – Psychology ‘Before’ and ‘After’ the Phenomenological Reduction (The problem of ‘flowing in’), *The Crisis of European Sciences and Transcendental Phenomenology*, USA: Northwestern University Press, 9 th Edition, Pp 208 – 210

- Jacobs, G. M., and Farrell, T. S. C. (2001). Paradigm Shift: Understanding and Implementing Change in Second Language Education. TESL-EJ. (Online) <http://www.tesl-ej.org/ej17/a1.html>, May 19, 2022.
- Jodie, L. T. H. L. (2020). Creating a Peer Learning Culture with Microsoft Teams (MS Teams) and the Community of Inquiry (CoI) Framework. Retrieved from <https://blog.nus.edu.sg/teachingconnections/2020/04/07/peer-learning-culture-ms-teams-coi/>
- Kaushik, A., Kostaki, E., & Kyriakopoulos, M. (2016). The stigma of mental illness in children and adolescents: A systematic review. *Psychiatry Research*, 243, 469-494. <https://doi.org/10.1016/j.psychres.2016.04.042>
- Khan, AH., Sultana, MS., Hossain, S., Hasan, MT., Ahmed, HU., and Sikder MT. (2020). The impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students: a cross-sectional pilot study. *J Affect Disord.* (2020) 277:121–8. doi: 10.1016/j.jad.2020.07.135
- Lawless, C. (2020), “*Synchronous vs. Asynchronous learning: which is right for your learners?*”, available at: <https://www.learnupon.com/blog/synchronous-learning-asynchronous-learning/>.
- Lonn, S., and Teasley, S. (2009). Saving time or innovating practice: investigating perceptions and uses of learning management systems. *Computers & Education*, 53, 686-694.
- Millar, M., Spencer, K., Stewart, T., Dong, M. (2021) learning Curve in COvid-19: Student Strategies in the new normal. *Frontiers in Education*. <https://doi.org/10.3389/feduc.2021.641262>
- Moodle. (2022). About Moodle. (Online) <https://docs.moodle.org>, May 8, 2022
- Nasution, A., and Ahmad, N. (2020). Students Perception of Online Learning During the Covid-19 Pandemic. *Jurnal As-Salam*, Vol. 4 No. 2 July-December 2020.
- Nemec, R., Berkova, A. J., & Hubalovsky, S. (2020). Identification Elements Symmetry in Teaching Informatics in Czech Secondary School during the Covid-19 Outbreak from the Perspective of Students. *Symmetry*, 12,1768. <https://doi.org/10.3390/sym12111768>
- Ojilong, D., Kanyike, A., Nakawuki, A., Lutwama, D., Nakanwagi, D., & Nekaka, R. (2022). Anxiety and Coping Strategies during the Covid-19 Pandemic among Students at a Multi- Campus University in Uganda. *National Institute of Health*. doi: 10.21203/rs.3.rs-1446865/v1
- Pan, X., Chen, D., Xia, Y., Wu, X., Li, T., Ou, X., Zhou, L., & Liu, J. (2020). Asymptomatic cases in a family cluster with SARS-CoV-2 infection. *The Lancet Infectious Diseases*, 20(4), 410-411. [https://doi.org/10.1016/S1473-3099\(20\)30114-6](https://doi.org/10.1016/S1473-3099(20)30114-6)

- Pappamihel, N. E., and Walser, T. M. (2009). English Language Learners and Complexity Theory: Why Current Accountability Systems Do Not Measure Up. *Educational Forum*. 73(2) 133-140.
- Patton, MQ. (2002). *Qualitative research and evaluation methods*. 3rd Sage Publications; Thousand Oaks, CA: 2002.
- Pauk, B. (2007) . Student participation in developing outcomes: A survey of students majoring in European Languages. *Proceedings of the 16th Annual Teaching Learning Forum* (Perth ed. , Vol. 16, pp. <http://lsn.curtin.edu.au/tlf/tlf2007/refereed/pauk.html>). Perth: The University of Western Australia: UWA.
- Perveen, A. (2016), “*Synchronous and asynchronous E-language learning: a case study of virtual university of Pakistan*”, *Open Praxis*, Vol. 8 No. 1, pp. 21-39, doi: 10.5944/openpraxis.8.1.212.
- Polkinghorne, D. (2007). Validity issues in narrative research. *Qualitative Inquiry*, 13(4), 471–486. <https://doi.org/10.1177/1077800406297670>.
- Pratama, H., Azman, M., Kassymova, G., Duisenbayeva, S. (2020). The Trend in Using Online Meeting Applications for Learning During the Period of Pandemic COVID-19: A Literature Review. *Journal of Innovation in Educational and Cultural Research*, 192, 58-68
- Purwanto, E., & Tannady, H. (2020). The Factors Affecting Intention to Use Google Meet Amid Online Meeting Platforms Competition in Indonesia. *Technology Reports of Kansai University*, 62(06), 2829–2838.
- Qutoshi, S., (2018). Phenomenology: A Philosophy and Method of Inquiry. *Journal of Education and Educational Development*, Vol. 5 No. 1
- Reimers, F., Schleicher, A., Saavedra, J., & Tuominen, S. (2020). Supporting the continuation of teaching and learning during the COVID-19 Pandemic. *Annotated resources for online learning*. OECD 2020, 1–38.
- Rosetti, C.W. and Henderson, S. J. (2013). ‘Lived Experiences of Adolescents with Learning Disabilities’, *The Qualitative Report*, Vol. 18, Article 47, Pp1-17
- Sarica, G. and Cavus, N. , (2008) . Web based English language learning, The 8th International Educational Technology Conference, Anadolu University, 6-9 May, Eskişehir, Turkey.
- Shaharane, J. M. Jamil, and S. S. M. Rodzi, 2016. The Application of Google Classroom as a Tool for Teaching and Learning, vol. 8, no. 10, pp. 5-8, 2016.
- Software Testing Help. (2022). An Overview of popular Learning Management Systems for Higher Education. (Online) <https://www.softwaretestinghelp.com/learning-management-system/>, May 15, 2022.
- St John, A. (2020). It's not just Zoom. Google Meet, Microsoft Teams, and Webex have privacy issues too. *Consumer Reports*, 3.

- Terenko, O and Ogienko, O. (2020). How to teach pedagogy courses online at University in COVID-19 pandemic: search for answers. *Revista Romaneasca Pentru Educatie Multidimensionala*. (2020) 12:173-9. doi: 10.18662/rrm/12.1sup2/261
- Thanavisut, C. (2021). Perception of Online Learning During the COVID-19 Pandemic: A Study of undergraduate Student from an International University, Thailand, *Au Virtual Conference 2021, Entrepreneurship and Sustainability in the Digital Era*. 10 October 2021.
- UNESCO. (2021) Education: from Disruption to Recovery. Retrieve from <https://en.unesco.org/covid19/educationresponse#schoolclosures>
- Wangkiat, P. (2021). Online learning falls short in Covid era. *Bangkokpost*. <https://www.bangkokpost.com/opinion/opinion/2180675/online-learning-falls-short-in-covid-era>. 13 September 2021.
- Wojnar, D. & Swanson, K. (2007). Phenomenology: An exploration. *Journal of Holistic Nursing*, 25(3), 172-180.
- Xie, H., Liu, W., Bhairma, J., and Shim, E. (2018). Analysis of synchronous and asynchronous E-learning environments, *2018 3rd Joint International Information Technology, Mechanical and Electronic Engineering Conference (JIMEC 2018)*, ed. B. Xu (Paris: Atlantis Press).



MULTIPLE INTELLIGENCES ASSESSMENT: A KEY IN ALIGNING DIFFERENTIATED ACTIVITIES

Renilo D. Tatoy, Zaldy B. Fellazar, Francis Howard Q. Napigkit

Department of Education, Tampilisan National High School, Zamboanga del Norte, Philippines

DOI: 10.5281/zenodo.10002286

ABSTRACT

This study sought to assess the Multiple Intelligences of the Grade 7 students of Tampilisan National High School and to align teachers' classroom activities to the needs, interests and strength of the learners. Thus, this study employed a Descriptive Quantitative type of research and used standardized assessment tool in gathering data. Based on results of the study, it was found out that female respondents have the larger number compared to male respondents. And both male and female respondents dominate *Naturalistic Intelligence*. On the other hand, section Gumamela has the highest number of respondents when data is grouped according to section. Moreover, *Naturalistic Intelligence* dominates in all section except section SSP which dominates *Interpersonal Intelligence*. The result declares that most of the grade 7 students of Tampilisan National High School were interested in classes and activities with more involvement with surroundings and environment. Apart from that, *Musical Intelligence* got the lowest rank in both section Daisy & Cattleya, *Visual/Spatial Intelligence* in both section Gumamela & Vanda and *Intrapersonal Intelligence* in both section SSP & STVEP. Henceforth, classroom facilitators are encouraged to prepare exercises according to the needs, interests, strength, and intelligences of the learners to align differentiated activities. Moreover, classroom activities must conform to the strong intelligences of the learners to address diversity.

Keywords: *Multiple Intelligences, Differentiated Activities, Assessment, Learning Style*

INTRODUCTION

Every student has their own ability and learning styles in coping with the teaching and learning process. Some other students tend to answer activities in a different way and some other students opt to answer activities. This observation manifests that learner diverse from each other.

Finding strategies to meet diverse learners' needs and learning styles is a challenge for many teachers. In turn, this enables each child to study in a way that is related to his or her abilities, resolving the age-old conundrum of how to accommodate individual student variances (Nolen 2003).

On the other hand, teachers are looking for a different pedagogy in teaching that suits the needs of the learners and to achieve the intended learning outcomes in pursuing quality Education. Thus, every classroom activity should anchor on the necessary needs of the learners as being observed the Learner-Centered Classroom. The Learner-Centered is an approach that place the students at the center. This further means that most of the work and activities are done by the students and the teacher will act as the facilitator inside the classroom.

In a third-year pharmacotherapy course, the learner-centered approach was successful in boosting several areas of motivation and learning strategies. Particularly, it appears that the learner-centered approach enhances students' attitudes, intrinsic motivation, and critical-thinking skills. Additionally, students stated that the learner-centered strategy improved their learning (Cheang 2009).

Moreover, the Department of Education encouraged all the teachers to prepare and deliver classroom activities in different ways or the so-called differentiated Activity. This differentiated activity purposely designed to address the needs of the students particularly in manifesting collaborative and participative attitude but sadly teachers may face difficult in preparing activities that will really suit the needs and interest of the learners.

Anent to this, classroom teachers hardly identify and determine the differences of the learners specifically in classroom participation and collaboration. Differentiated were given, but teachers don not have knowledge if the differentiated activities were suit to the needs of the learners. In so, diversity of the learners should be determined based on the theory of Howard Gardner's Multiple Intelligences.

The seven intelligences are present in every person at birth. All kids will nevertheless enter the classroom with various combinations of developed intelligences. Each child will therefore have an own set of intellectual talents and shortcomings. These sets indicate whether a student will find it simple (or difficult) to learn material when it is presented in a specific way. This is referred to as a learning style in most contexts.

Thus, this study was conducted to assess the learners' intelligences prior to the giving of differentiated activities to address learner's diversity.

This literature review investigates the necessity for "differentiated" or academically relevant instruction. It provides theoretical and empirical support for customizing instruction in mixed-ability classroom settings based on a paradigm of addressing student preparation, interest, and learning profile (Tomlinson et al. 2003).

Research Questions

This study aimed to assess the Multiple Intelligences of the Grade 7 learners of Tampilisan National High School in aligning the Differentiated activities amid Pandemic.

Specifically, it seeks to answer the following questions:

1. What is the profile of the Grade 7 Students of Tampilisan National High School in terms of;
 - a. Sex,
 - b. Section?
2. What are the dominant Multiple Intelligences of the Grade 7 students of Tampilisan National High School in terms of;
 - a. Sex,
 - b. Section?
3. Based on the result, what differentiated activities shall be given to the Grade 7 students of Tampilisan National High School in terms of;
 - a. Section?
4. Based on the result, what school program/strategy shall be proposed to align the differentiated activities to the needs and interest of the Learner?

METHODOLOGY

Research Design

This study employed Descriptive Quantitative Research with the aid of the standardized Assessment for the students. To determine the abilities, interests, strength, weaknesses, and intelligences of the learners. The Assessment/Questionnaire is standardized from Multiple Intelligences Test for Children by Tara Kunesh. This design is appropriate since the study aimed to assess the intelligences of the learners and described its interests to properly aligned differentiated classroom activities.

Research Participants

The Respondents of this study were the Grade 7 students of Tampilisan National High School, School year 2022-2023. On the other hand, a total enumeration or One hundred percent (100%) of the students was used. Tampilisan National high School compses of 6 sections. (1) Cattleya with 39 respondents, (2) Daisy with 52, (3) Gumamela with 53, (4) SSP with 51 respondents (5) section STVEP with 51 and (6) Vanda with 39 respondents. To sum up, there were 285 Grade 7 students participated in the study, 134 were male respondents and 151 were female respondents. Moreover,

Research Instrument

The Multiple Intelligences Test for Children by Tara Kunesh was administered by the Researcher to the respondents. Thus, the assessment tool was translated in Filipino to be more understandable to the respondents. Thus, the translated assessment was submitted to the panel who are experts in language for validity and promptness of the translation.

On the other hand, the assessment/Questionnaire checklist was composed of two (2) parts. The first part was the profile of the respondents particular on the sex assigned by birth and the section. And the second part was the Multiple Intelligences Worksheet which composes of eight

(8) sections comprises the eight Multiple Intelligences of Howard Gardner. Aside from that, a scoring table was also used in determining the result on the abilities of the respondents.

Data Gathering Procedure

This study follows the ethical standard of research. An approval sheet was submitted to the School Principal for approval and another letter was given to the Class Adviser for the schedule of gathering data. Aside from that, a research form prescribed by the Department of Education was accomplished by the researchers prior to the administration of the study. Lastly, the responses of the respondents were treated with utmost confidentiality.

Data Analysis

After gathering, the researchers tally the gathered data and the result of the scoring table. Frequency count, percentage distribution, was used to come up with an apt analysis and interpretation of the data gathered. Apart from that, a frequency distribution graph was also used in presenting data result.

RESULTS

Figure 1. Demographic Profile of the Respondents According to Sex

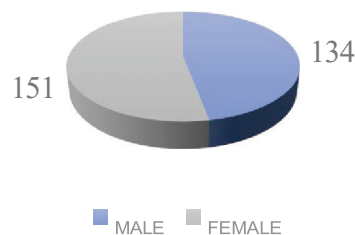
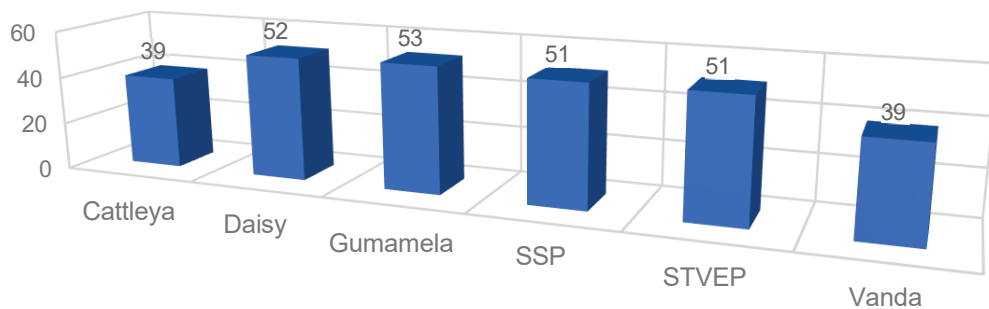


Figure 2 Profile of The Respondents According to Section



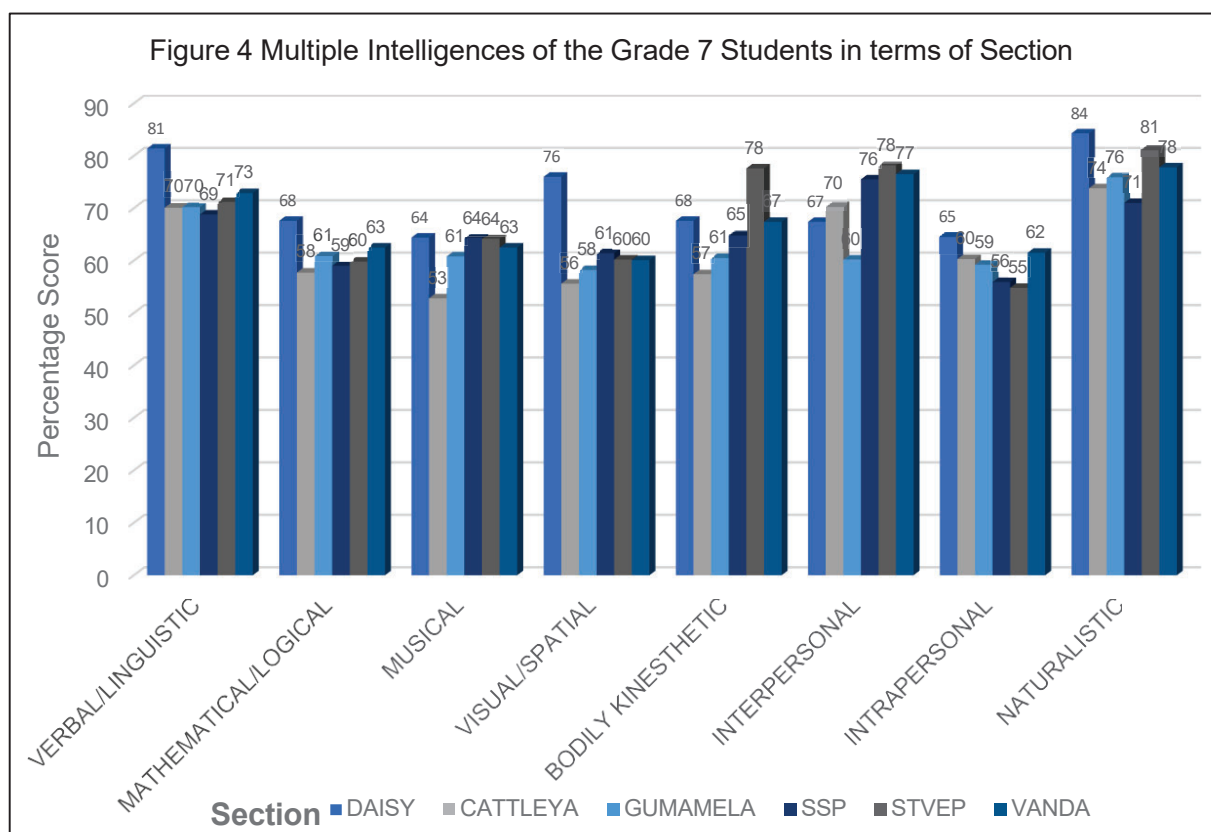
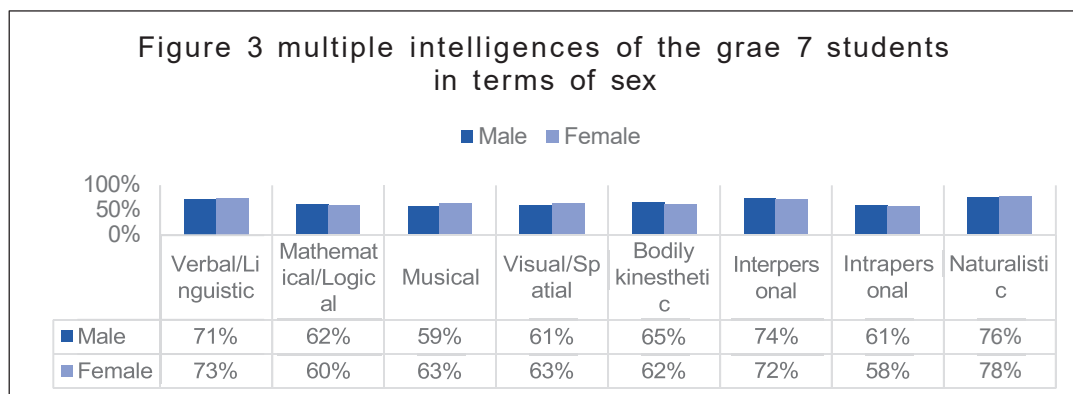


Table 1: Suggested Differentiated Activities of the Grade 7 learners according to section.

Section	Strong Activities <i>Based on the highest 3 dominant Multiple Intelligences</i>	Weak Activities <i>Based on the Lowest dominant Multiple Intelligences</i>
Daisy	- Cleaning activities in community areas - Walks in natural environments	- Listen to musical pieces - Music appreciation activities

	• Show videos, films or documentaries related to nature • Story reading • Oral presentations • Speech competitions (speeches in 3 minutes) • Use of concept maps • Activities that involve the use of maps • Pictionary game • Activities using Minecraft	• Play instruments • Create songs and rhythms • Measure the musical time using the metronome • Create melodies to learn concepts • Provide classroom spaces for individual study • Activities related to the theme of self-esteem • Self-taught readings Application of learning centre's
Cattleya	• Story reading • Oral presentations • Speech competitions (speeches in 3 minutes) • Reflective diaries writing • Perform podcasts on studied topics	• Listen to musical pieces • Music appreciation activities • Play instruments • Use of concept maps • Activities that involve the use of maps • Pictionary game
Gumamela	Use pets or plants during discussion • Make orchards or gardens • Cleaning activities in community areas • Listen to musical pieces • Music appreciation activities • Play instruments • Create songs and rhythms • Story reading • Oral presentations • Speech competitions (speeches in 3 minutes)	• Use of concept maps • Activities that involve the use of maps • Pictionary game • Use of 1 minute reflection period • Activities that integrate the independent study • Provide classroom spaces for individual study • Self-taught readings
SSP	• Use of board games • Roleplay activities • Peer tutoring • Creation of academic clubs • Community support activities • Use pets or plants during discussion • Make orchards or gardens • Cleaning activities in community areas • Walks in natural environments • Story reading • Oral presentations • Speech competitions	• Use of 1 minute reflection period • Activities that integrate the independent study • Use of puzzles • Solution of verbal problems • Use of the scientific method
STVEP	• Use pets or plants during discussion • Make orchards or gardens	• Use of 1 minute reflection period • Activities that integrate the independent study • Use of puzzles

	• Cleaning activities in community areas • Walks in natural environments • Craft use • Learning by discovery • Use of Legos • Body movement activities (dance, pantomime, role play, acting) • Use of board games • Roleplay activities • Peer tutoring	• Solution of verbal problems • Use of the scientific method • Use of Socratic questions (maieutic)
Vanda	• Use pets or plants during discussion • Make orchards or gardens • Cleaning activities in community areas • Walks in natural environments • Roleplay activities • Peer tutoring • Creation of academic clubs	• Use of concept maps • Activities that involve the use of maps • Pictionary game • Use of 1 minute reflection period • Activities that integrate the independent study

DISCUSSION

Profile of the respondents according to sex. Figure 1 presents the Demographic Profile of the respondents according to Sex. It can be seen in the graph that Female respondents has the larger number which consist of One Hundred fifty-one (151) learners while the Male respondents composes of One Hundred thirty-four (134) learners with a total respondent of Two Hundred eighty-five (285). This data signifies that the students enrolled in Grade 7 year level slightly equal and further signifies that the institution is a Gender and Development compliant.

Profile of the respondents in terms of Section. Figure 2 shows the demographic profile of the respondents according to section. As illustrated by the graph it is clear that section Gumamela has the highest number of learners which consist of fifty-three (53) learners and both section Vanda and Cattleya got the lowest number of learners with thirty-nine (39) students. On the other hand, sections SSP and STVEP both with qualifying exams has the same number of students which composes of fifty-one (51) learners. This group of data dramatically vary based on the enrolment processes including General Average of the students, reading assessment, qualifying exams and other.

Multiple Intelligences of the Grade 7 students in terms of sex. Figure 3 depicts the Multiple Intelligences of the Grade 7 students of Tampilisan National High School Academic Year 2022-2023. The line graph is moderately the same in pattern based on the data. As is shown by the graph, the dominant Multiple Intelligences of the Grade 7 Students is "Naturalistic Intelligence" in which both Male and Female respondents got the highest percentage score of seventy-six (76%) and seventy-eight (78%) percent respectively. On the other side, "Musical Intelligence" got the lowest percentage score for Male respondents which obtained a fifty-nine percent (59%) and "Intrapersonal Intelligence" for female Respondents which obtained a fifty-eight percent (58%).

The result manifests that Grade 7 students of Tampilisan National High School has more interests in activities that involves nurturing and exploring environment and other species.

The result is refuting the study of Tirri and Nokelainen (2012) which states that Naturalistic intelligence is one of the most important multiple intelligences that have to be developed, but in reality, its development is still lacking and not measured adequately in the learning process.

Multiple Intelligences of the Grade 7 students in terms of Section. Figure 4 illustrates the Multiple Intelligences of the Grade 7 Students of Tampilisan National High School School year 2022-2023 in terms of Section. As shown in the graph the data were steadily similar within the group of variables. Generally, the Grade 7 students is diverse from each other.

As is given in the diagram, “Naturalistic Intelligence” dominates in all section except SSP. Thus, Section Daisy obtained Eighty-four percent (84%), Cattleya obtained seventy-four percent (74%), Section Gumamela got seventy-six percent (76%), STVEP obtained Eighty-one percent (81%) and Vanda got seventy-eight percent (78%). While section SSP got the highest percentage of seventy-six percent (76%) in “Interpersonal Intelligence”.

The data declares that most of the grade 7 students of Tampilisan National High School were interested in classes and activities with more involvement with surroundings and environment.

Apart from that, “Musical Intelligence” got the lowest percentage score in both section Daisy and Cattleya which obtained sixty-four percent (64%) and fifty-three percent (53%) respectively, while “Visual/Spatial Intelligence” ranked as lowest in both section Gumamela and Vanda which obtained fifty-eight percent (58%) and sixty percent (60%) and “Intrapersonal Intelligence” ranked as lowest also in both section SSP and STVEP with a percentage score of fifty-six percent (56%) and fifty-five percent (55%) respectively.

This result concludes that individual is unique and differs from each other. Learners have their own strengths, weaknesses, interests, and motivational needs that classroom facilitator must look into. In addition, teacher facilitators should be aware on the behaviour and intelligences of the learners to prepare and deliver teaching and learning process that is conformable to the interests and needs of the learners.

Further, this result corroborates the study of Gardner (2006) cited by Ahvan and Pour (2016,2) individuals are truly human beings due to the Multiple Intelligences. Each has a unique profile of intelligences of varying strengths. Although no intelligence was considered to be superior to other types. Thus, all intelligence is required for an individual, in order to participate, act purposefully and creatively in the society.

Moreover, this result is consonance to the study of Kubat (2018,1) that says Teachers must be aware of aspects such as physical traits, intelligence, perception, gender, ability, and learning styles, which are individual variances among students. By taking into account the students' unique variations, an effective and productive learning-teaching process may be planned.

Suggested Differentiated Activities. Table 1 presents the suggested differentiated activities to be used in a teaching process. The table composes of three (3) columns; the first (1) column is the section of Grade 7 learners, second (2) column indicates the “Strong Activities” based on the highest three dominant multiple intelligences. These activities are highly “recommended” in all

subject areas to align with the learners' differences and interests. On the other hand, the third (3) column consist of "Weak Activities" based on the lowest Multiple Intelligences. These activities are gently "discouraged" in all subject areas.

CONCLUSIONS

After presenting and analyzing the data, it is safe to conclude the following statements.
(1) Grade 7 students of Tampilisan National High School were different in Multiple Intelligences.
(2) Most of the Grade 7 students were interested in classes and activities with more involvement with surroundings and environment. (3) Musical, Visual/Spatial and Intrapersonal Intelligences were considered as weak intelligences of the respondents.

RECOMMENDATIONS

On the other hand, based on the result of the study, the following are highly recommended;
(1) Classroom Facilitator should prepare activities based on the intelligences of the learners. (2) Classroom Facilitator are discouraged to prepare activities based on the weak multiple intelligences of the learners such as Musical, Visual/Spatial and Intrapersonal. (3) It is also recommended to use determine first the interest, strength and intelligences before administering classroom activities. (4) Make this study as reference to the future researchers with the same concept in different school to align classroom activities to the needs of the learners.

COMPLIANCE WITH ETHICAL STANDARDS

This study complied to the ethical standards of research. An Approval letter was submitted to the School principal, Grade level Coordinator in gathering data. Aside from that a letter of consent was also given to the respondents prior to the administration of the questionnaire. Thus, all gathered data were treated with utmost confidentiality.

ACKNOWLEDGEMENTS

First and foremost, Praises and Thanks to God for his showers of Blessings throughout the completion of this research.

The researchers would like also to express their deep and sincere gratitude to the following individual who contributed and helped in fulfilment of this study.

Ms. Loida G. Gimang, Principal In-Charge of the District (PICD) for giving the opportunity and permit to allow researchers to conduct and gather data that would significantly help the learners and teachers in delivering efficient and effective teaching.

Mr. Marciano C. Cababat, Secondary School Principal for supporting and approving the permit of the researchers to conduct and gather data for the success of the study.

Ms. Jessa Mae C. Mapula, Grade level Coordinator for allowing the researchers to conduct and gather data from the respondents.

All Grade 7 Advisers, for the time allocation, accommodation, and patience in collecting assessment tool for data analysis and interpretation.

To the researcher's family for the full support from the proposal, data gathering up to the completion of this study.

Thank you very much! God Bless!

REFERENCES

- Adisendjaja, Y. H., Abdi, M. M. K., Amprasto, A., & Fardhani, I. (2019). The Influence of Field Trip on Junior High School Studentsâ€™ Naturalistic Intelligence and Problem-Solving Skill in Ecosystem Subject. *Jurnal Pendidikan IPA Indonesia*, 8(3), 339-346.
- Ahvan, Y. R., & Pour, H. Z. (2016). The correlation of multiple intelligences for the achievements of secondary students. *Educational Research and Reviews*, 11(4), 141-145.
- Carlín, R. E. T., Salazar, M. D. C. C., & Cortés, S. V. (2013). A Mexican study of multiple intelligences for pre-service teachers of English as a foreign language. *HOW Journal*, 20(1), 170-189.
- Cheang, K. I. (2009). Effect of learner-centered teaching on motivation and learning strategies in a third-year pharmacotherapy course. *American journal of pharmaceutical education*, 73(3).
- Dolati, Z., & Tahriri, A. (2017). EFL teachers' multiple intelligences and their classroom practice. *SAGE Open*, 7(3), 2158244017722582.
- Gardner, H. (2006). *Changing Minds: The Art and Science of Changing Our Own and Other People's Minds*. Harvard Business Review Press.
- Gardner, H., & Hatch, T. (1989). Educational Implications of the Theory of Multiple Intelligences. *Educational Researcher*, 18(8), 4–10. <https://doi.org/10.3102/0013189X018008004>
- Kubat, U. (2018). Identifying the individual differences among students during learning and teaching process by science teachers. *International Journal of Research in Education and Science*, 4(1), 30-38.
- Kunesh, T. Multiple Intelligences Test for Children [https://kids.lovetoknow.com/wiki/Multiple Intelligence Test for Children](https://kids.lovetoknow.com/wiki/Multiple_Intelligence_Test_for_Children)
- McClellan, J. A., & Conti, G. J. (2008). Identifying the multiple intelligences of your students. *Journal of Adult Education*, 37(1), 13-32.
- Nolen, Jennifer L. "MULTIPLE INTELLIGENCES IN THE CLASSROOM." *Education* 124.1 (2003).
- Sadiku, M. N., & Musa, S. M. (2021). Naturalistic intelligence. In *A Primer on Multiple Intelligences* (pp. 31-42). Springer, Cham.
- Tirri, K., & Nokelainen, P. (2012). *Measuring multiple intelligences and moral sensitivities in education* (Vol. 5). Springer Science & Business Media.
- Yalmanci, S. G., & Gozum, A. I. C. (2013). The effects of multiple intelligence theory-based teaching on students' achievement and retention of knowledge (example of the enzymes subject). *International journal on new trends in education and their implications*, 4(3), 27-36



PROJECT TALIMANSI: A PRELIMINARY STUDY ON THE EFFECTS OF PARENTAL INVOLVEMENT IN *ALALAY SA PAGBASA* AT TALIPAPA ELEMENTARY SCHOOL

Rene Boy E. Abiva, MA-Malikhaing Pagsulat (C)¹, Josefina O. Aranel, MAEd-Fil.²,
Maria Victoria Victa, RSW³

¹ *Institute of Teacher Education, Manuel V. Gallego Foundation Colleges, Cabanatuan City, Nueva Ecija, Philippines*

² *Institute of Teacher Education, Manuel V. Gallego Foundation Colleges, Cabanatuan City, Nueva Ecija, Philippines*

³ *Office of the Community Extension and Outreach Program, Manuel V. Gallego Foundation Colleges, Cabanatuan City, Nueva Ecija, Philippines*

DOI: 10.5281/zenodo.10005876

ABSTRACT

It is the responsibility of every academic institution to integrate all their programs to promote social relevance. Through the Office of Community Extension and Outreach Program (CEOP) of Manuel V. Gallego Foundation Colleges (MVGFC), this was concretely realized through the *Alalay sa Pagbasa* (ASP) of the Institute of Teacher Education (ITE) one year ago. The central theme of this paper is to examine the preliminary effects of Project Talimansi on the quality of life of parents at Talipapa Elementary School (TES) who are participants in ASP. ASP is a program of CEOP in Barangay Talipapa that aims to address the learning gap caused by the Covid-19 pandemic. To address this concern, MVGFC gathered the parents of non-readers from TES students and implemented the ASP. To provide tangible and effective support to the parents, MVGFC launched a livelihood training that resulted in the creation of Talimansi Dishwashing Liquid.

This research aimed to answer the following comparative questions: socio-demographic characteristics of respondents based on age, gender, livelihood, and others; their previous situation; current situation; the impact of Talimansi on themselves, family, community, income, relationship with children, and relationship with spouse; and suggestions to further improve the Talimansi project. The researchers utilized qualitative methods through interviews following the interview guide and focus group discussions to gather data.

The Project Talimansi has had a significant impact on the economy of the four parents who participated in the Alalay sa Pagbasa in Talipapa Elementary School. With the help of the project, they have acquired additional income ranging from P500.00 to P1,500.00 within two to three days. Their earnings depend on the amount of Talimansi they can sell. For instance, if they sell 30 liters, they earn P500.00, but if they sell all 50 liters, their income reaches P1,500.00. It is noteworthy that within a week, their lowest earnings can reach P1,000.00 and their highest can reach P3,000.00. The desire for higher earnings inspires and motivates the parents to continue striving in making Talimansi.

To broaden the scope of the findings, future studies may include additional questions and analyses to gain a deeper and more comprehensive understanding of the experiences of parents under the ASP project. The insights from this research can serve as a basis for future changes and improvements in the integration of academia, community, and extension programs.

Keywords: *Community Extension and Outreach Program; Non-Readers; Alalay sa Pagbasa; Livelihood Program; Academic Integration*

INTRODUCTION

Development is about people, about expanding their choices to lead lives they value, about enlarging opportunities for a full life which can only be guaranteed by empowering people, especially empowering the poor, distressed, deprived, destitute, and marginalized people in all fronts (Barkat et al, 2016). Therefore, to achieve this, Higher Education Institutions or HEIs have been given the mandate and responsibility not only to provide quality education but also to contribute to the improvement of society through community extension services or CES. Hence, CES should be integrated into the mission and vision of all HEIs as it strengthens their teaching and research programs in collaboration with the community.

Community extension services play a vital role in the development of communities, including aspects of teaching and learning. It serves as a bridge between the institution and the community, facilitating the transfer of knowledge, skills, and technology from the academic sector to the community. The aim of extension work is to enhance the capabilities and advancement of individuals and communities by providing them with necessary opportunities, tools, and resources to become more empowered and resilient.

The impact on people's lives and the communities they serve is the true measure of the effectiveness of CES. The primary determinant of CES success is whether those in leadership positions are willing to accept and support the community's needs at the expected time of implementation. The foundation of CES usually consists of the following: values, scholars, and services that respond to the genuine needs of the community they serve, using knowledge from various disciplines with the spirit of collaboration and voluntarism; and extension research focused on the health, education, and employment status of each individual as well as their family and community, through the utilization of various disciplines and fields of existing knowledge. Thus, the effectiveness of any CES can only be achieved through collective action.

On July 11, 2019, Barangay Talipapa officially became the adopted barangay of MVGFC through a Memorandum of Agreement (MOA). Then, on August 6, 2022, MVGFC held a meeting attended by members of the Barangay Council, Sangguniang Kabataan, barangay workers such

as Day Care advocates, Barangay Nutrition Scholars (BNS), Barangay Peace and Order (BPO) personnel, and leaders from different zones (purok), as well as representatives from various sectors including PTA, Senior Citizens, Persons with Disabilities (PWDs), Parents Committee, and Barangay Pastoral Council. The main objectives of the meeting were to identify needs and challenges, recommend projects and potential solutions, and recognize available resources and capabilities to collectively address these issues.

During the needs assessment process in this conscientization initiative, the organizers followed a critical pedagogy approach, which has been a subject of interest for education researchers and practitioners for the past fifty years due to its potential to promote more equitable, democratic, and student-centered education, while also contributing to a more just world (Parkhouse, 2016). This approach involves dividing the participants into four groups based on their specific sectoral needs, ensuring that their voices and perspectives are heard and considered. The method used in this gathering facilitated a productive workshop where, after an hour of discussions, the participants collectively identified three key issues that required attention: livelihood, waste management, and educational deficiencies, particularly concerning reading skills, which were further exacerbated by the challenges posed by the Covid-19 pandemic.

The inclusion of Melo's perspective, which highlights how those living in poverty and violence are especially susceptible to vulnerabilities that hinder their social mobility and perpetuate exclusion (Melo, 2018), sheds light on the importance of addressing these issues in a comprehensive manner. By integrating various methodologies such as critical pedagogy and participatory needs assessment, this initiative can take a more holistic and inclusive approach to find solutions for the identified problems and work towards building a more just and equitable community. Other methodologies related to critical pedagogy and participatory research could also be employed to gain deeper insights into the root causes of the identified issues and to foster greater community involvement and empowerment in finding sustainable solutions.

In response, MVGFC initiated a series of activities to address the challenges, one of which is the Alalay sa Pagbasa program focused on parents. According to a study, the implementation of adult education programs has been evaluated, and the findings show some successes (Keja-Kaereho et al, 2016). MVGFC also organized a seminar-workshop on Selling Process and Livelihood Opportunities in collaboration with the Institute of Business Management (IBM) and the Junior Marketing Association (JMA). This event took place on November 4, 2022, at the church in Talipapa. The objective of the gathering was to provide essential knowledge to participants about the selling process and microfinance, as well as practical steps on how to enhance livelihood opportunities. This was immediately followed by a training day on December 13, 2022, about using CANVA with the assistance of faculty members from the Institute of Information and Communication Technology and Institute of Teacher Education. During this session, parents first learned how to use Zoom and other contemporary technologies, resulting in their own brand design for their Talimansi product.

On the other hand, the significant decrease in the number of parents of non-readers in TES was noticed. To support the MVGFC High School Department, which has been advocating for the Alalay sa Pagbasa, a training on making dishwashing liquid from calamansi was conducted on March 23, with the aim of maintaining the participation of the four participants until the end of the program and helping them in the aspect of livelihood that does not require a large capital. The Project Talimansi has made a significant impact on the economy of four parents participating in the Alalay sa Pagbasa at Talipapa Elementary School. Through the project, they have gained

extra income, ranging from P500.00 to P1,500.00 within a span of two to three days. Their earnings are directly related to the quantity of Talimansi they manage to sell. For example, selling 30 liters yields P500.00, but if they manage to sell all 50 liters, their income increases to P1,500.00. Notably, their weekly earnings can range from a minimum of P1,000.00 to a maximum of P3,000.00. As a result of their aspiration for higher earnings, the parents are motivated and inspired to continue their efforts in producing Talimansi.

Why did MVGFC undertake this initiative? The place of empowering people includes services related to health, psycho-education programs, media, and literacy. Socio-economic development can be achieved through seminars on small businesses, entrepreneurship training, and livelihood programs (FEU CEOP, 2020). Additionally, Humanization is the ultimate vocation and destiny of man. This can be achieved through the process of conscientization, a process of becoming aware of the contradictions existing within oneself and in society, and of gradually being able to bring about personal and social transformations (Freire, 1975). The focus of this paper is to study the preliminary effects of Talimansi on the quality of life of parents from TES who are participants in Alalay sa Pagbasa (ASP). In general, it aims to address the following questions: socio-demographic characteristics of respondents based on age, gender, and government-acquired training; their previous situation; their current situation; the outcomes of Project Talimansi on themselves, family, community, income, relationship with children, and relationship with spouse; and recommendations to improve Project Talimansi.

Through this study, community leaders can develop policies and programs that respond to educational, and livelihood needs in their respective areas. The knowledge about the problems faced by students and their parents can also be utilized by the current administration to address challenges or weaknesses resulting from the learning gap in a school or institution. This paper highlights the importance of academic integration in extension activities. It will also raise awareness among teachers about the status of students and their parents. In this way, teachers can address the needs of students within the school setting. It will also help parents understand the steps they can take to address their children's reading weaknesses by improving their inherent abilities. On the other hand, students will better understand the importance of reading, the significance of having a close relationship with their parents as their first teachers, and their teachers as their second parents. Lastly, this will be beneficial to current researchers and serve as a basis for future studies. Future researchers are encouraged to conduct additional inquiries to further deepen the study on the effects of Project Talimansi.

Research Questions

1. What is the socio-demographic profile of the respondents?
2. What are the social-assistance acquired from the government?
3. What is their previous situation and their current situation?
4. What are the outcomes of Project Talimansi on themselves, family, community, income, relationship with children, and relationship with spouse?
5. What are the recommendations to improve Project Talimansi?

METHODOLOGY

This research involved four parents who participated in Alalay sa Pagbasa at Talipapa Elementary School, Barangay Talipapa, Cabanatuan City, Nueva Ecija, during the Academic Year 2022-2023. It utilized a qualitative form of research, specifically employing an interview guide and focus group discussion. These methods were chosen to gather reflective, perceptual, and comparative information regarding the effects of Project Talimansi on the participating parents. From these responses, a comparative analysis was conducted, seeking common answers based on the thematic content of the questions. The gathered data was analysed and interpreted using the analytical and perceptual skills of the researchers, based on the reflections of the respondents.

RESULTS

Table 1. Socio-Demographic Profile of the Respondents

Profile	Categories	Frequency
Age	30 – 45 Years Old	4
Education	Elementary	1
	High School	0
	College	3
Marital Status	Married	2
	Live-in	2
Number of Children	1 Child	0
	2 children	1
	3 children	0
	4 children	3
Government Assistance Received	4Ps	1
	In-kind assistance	3
Job/ Source of Income	Others (Farming, Carpentry, Mechanic)	4
Daily Family Income	P400 – P500	4

Table 2. Talimansi production, marketing, and income per household

Capital	Production Period	Output	Market Price	Selling Period	Total Sales	Less Capital	Net Income	Projected Monthly Income
P200.00	30-40 minutes	35liters	P 35.00	2-3 days	P1,225.00	P200.00	P 1,025.00	P 10,250.00
P250.00	1 hour	50 liters	P35.00	2-3 days	P1,750.00	P250.00	P1,500.00	P 15,000.00

Table 3. Economic Effect of the Talimansi Project

	Before The Project	After the Project
Addition source of income	Laundry Work Snail and Frog Collecting	Talimansi Dishwashing Liquid
Income within 2-3 days	P50.00- P300.00	P500.00- P1, 500.00

DISCUSSION

Based on the results of the interviews, it appears that the age of the four parents ranges from 30 to 45 years old. Three of them have completed college education, while one has only finished elementary school. Two of them are married in church ceremonies, while the other two are living together. The four of them have no regular source of income. The interviews also revealed that their breadwinners have other sources of income, such as being a mechanic, farmer, and carpenter, earning around P400.00 to P500.00 per day. Among the four parents, three of them have four children, while one has only two. Regarding the government aid and training they received, one of them is a beneficiary of the Pantawid Pamilyang Pilipino Program (4Ps), while the other three received in-kind assistance from the government once a year.

The interviews further revealed that their previous situation involved being unemployed and doing laundry work at home. According to them, "I only do laundry for two to three days, and I earn P150.00." They mostly rely on their spouses, especially for the budget needed to meet their daily needs such as electricity bills and expenses for their children's education. However, despite their efforts, they still struggle to support their children's education. One parent mentioned, "My child only brings bananas and water for lunch. Sometimes, they don't attend school because their classmates make fun of them, calling them 'monkey'." Due to their similar socio-economic situations, all four parents were forced to involve their children in farming activities such as collecting snails and catching frogs and tadpoles to sell in the market along Kapitan Pepe and Vergara Highway. "My child asked why they need to study if they can already earn P50.00 to P150.00 from collecting snails," added one parent.

With the introduction of Talimansi Dishwashing Liquid the four parents have become more financially comfortable to some extent. They are no longer solely dependent on their spouses' income and laundry work. According to one parent, "I can now provide some allowance for my child. It's like I've become more diligent." Another parent added, "I can now even buy lipstick." Table shows the simple Benefit Cost Analysis (BCA) of the project. They mentioned that they are able to sell 34 to 50 liters of Talimansi every week at a price of P35.00 per liter. The capital required to produce 34 to 50 liters is only P200.00 to P250.00.

According to the interviews, it is evident that their lives have improved since Project Talimansi became a part of their lives. "Before, I couldn't afford to get a proper haircut because we had to tighten our belts," one of the interviewees said. They also commonly mentioned that they have realized they can run a business on their own. "Before, I could only dream of becoming a business owner, but now it has come true because of MVGFC," another parent testified. Aside from improving their personal well-being, they can now purchase household items like an electric fan and a refrigerator. Two out of the four parent participants were even able to acquire installment tricycles from RUSI, which they now use for their livelihood and delivering Talimansi

Dishwashing Liquid to Gapan and Jaen. Additionally, their children now have new pencils, rulers, erasers, notebooks, bags, shoes, and socks for the upcoming school year. Reflecting on their experiences, one parent said, "This is what it's like when you have even a small income. It turns out that being able to buy small necessities is already satisfying."

As for the impact of Project Talimansi on their families, the four parents are now more financially capable of handling their daily expenses. One of them jokingly said, "I am no longer just a laundry worker." The interviews also revealed that they can now afford to eat three meals a day. They no longer rely solely on jute leaves, moringa, and sardines for their meals, but they can now enjoy pork or chicken meat two to three times a week. A significant discovery after the interviews is that, apart from having enough food, their families are now eating at the right time.

Regarding the project's effect on their community, it appears that they are no longer engaged in unnecessary gossip and rumors. If there are conversations among their fellow parents, it now revolves around how they make their Talimansi Dishwashing Liquid. "Some people even ask me to teach them, but I tell them I have to ask permission from MGVFC first," explained one parent. The interviews also revealed that their regular customers are their own neighbors.

The Project Talimansi has had a significant impact on the economy of the four parents who participated in the Alalay sa Pagbasa in Talipapa Elementary School. With the help of the project, they have acquired additional income ranging from P500.00 to P1,500.00 within two to three days. Their earnings depend on the amount of Talimansi they can sell. For instance, if they sell 30 liters, they earn P500.00, but if they sell all 50 liters, their income reaches P1,500.00. It is noteworthy that within a week, their lowest earnings can reach P1,000.00 and their highest can reach P3,000.00. The desire for higher earnings inspires and motivates the parents to continue striving in making Talimansi.

According to their statements, making Talimansi is not difficult, and it can be completed in 30 to 40 minutes if we are only talking about the mixing process. When transferred to plastic bottles, it may take longer, around an hour.

The interviews also revealed that their relationship with their children has improved. Aside from serving as a bonding activity, they also teach their children how to make Talimansi. On Saturdays and Sundays, their children are also their partners in delivering the product orders. "The arrival of Talimansi was good because my child is no longer just using the cellphone," explained one parent. "My child also became like that when he started selling. I gave him all the earnings he made. He was so happy, and since then, he always helps me on Saturdays and Sundays. He also became more diligent in his studies," added another parent.

When it comes to their relationship with their spouses, it appears to have improved because they have become partners in supporting the entire family, and there are fewer fights and misunderstandings that are often rooted in financial problems. "My partner even invited me to get married, but I said it's still early. Let's save up first, and it'll be just right for the town wedding in February 2024 at Mayor's office," explained one participant who has a partner. Additionally, the interviews revealed that two parents are also partners with their husbands in delivering Talimansi to Gapan and Jaen, while the other two parents are partners with their husbands in delivering Talimansi to Barangay Ibabao Bana and Barangay Palagay.

The result also validates the process of conscientization, a process of becoming aware of the contradictions existing within oneself and in society, and of gradually being able to bring about personal and social transformations (Freire, 1975).

Conclusions

The study on the effects of Project Talimansi on the lives of the four parents who participated in Alalay sa Pagbasa at Talipapa Elementary School showed significant results. First and foremost, positive changes in the participants' conditions were clearly observed. Because of Project Talimansi, their knowledge and skills in livelihood have improved, and they were assisted in growing their livelihoods.

Secondly, the study also successfully demonstrated that Project Talimansi is effective in various aspects of their lives. It contributed to strengthening their families and communities, resulting in an increase in their income. Moreover, the study revealed that the participants had better relationships with their children and spouses, owing to the additional knowledge and understanding of various aspects of their lives.

Lastly, it is important to note that the participants expressed a strong desire to continue and make Project Talimansi a long-term endeavor. They demonstrated their support and trust in the project by sharing their recommendations. They wish to expand the number of beneficiaries and further enhance the programs and services it provides to the community.

Overall, this study confirms the importance and impact of Project Talimansi on the participants. It has shown the potential for positive changes in the lives of the parents who were part of Alalay sa Pagbasa. Based on the findings, continuous support and development of the project will be crucial to further amplify its significance in society.

Recommendations

Here are the gathered recommendations from the researchers regarding this study to strengthen and expand Project Talimansi further:

1. To ensure the successful implementation of Project Talimansi and to specifically cater to the parents of non-reader pupils at Talipapa Elementary School, it is essential for the Local Government of Cabanatuan and MVGFC to establish a comprehensive General Memorandum of Agreement (GMOA). This GMOA will serve as the foundation for a deepened relationship and enhanced cooperation between the two parties, focusing on empowering and supporting the parents in their efforts to improve their children's reading abilities.
2. To ensure the successful implementation of Project Talimansi, it is recommended to have a General Memorandum of Agreement (GMOA) that includes the City Social Welfare Department (CSWD), Department of Trade and Industry (DTI), and MVGFC. The GMOA will create a clear system and linkage between agencies from the level of livelihood assistance to marketing. This will uplift local workers and farmers, ensure appropriate government support, and execute the project with adequate knowledge and coordination. The goal is to guarantee the project's development and success, resulting in broader benefits for beneficiaries and the entire community.

3. These agreements should also incorporate systematic training to strengthen and expand the quality and quantity of Project Talimansi. The agreement should include identifying training needs, creating courses, and implementing programs aimed at enhancing the skills and knowledge of the beneficiaries and project personnel. This will make the project more effective and successful, promoting further livelihood and progress within the local community.

To ensure the quality of education during and after the pandemic, continuous study and response to the recommendations are crucial. Advancing meaningful changes and broader support from the government and institutions will contribute to the successful education of students. With the help of their parents and appropriate support, the challenges can be alleviated, and their education will become more joyful and successful.

For future researchers conducting studies, they may focus on incorporating other aspects, such as the impact of technology on education or the implications of the pandemic on students' mental health. It is also beneficial to carefully study different contexts and conditions of respondents, including students from various educational levels, cultures, and economic backgrounds. This way, their findings will be more comprehensive and insightful, aiding in shaping more effective steps for the future of education.

Compliance with Ethical Standards

The study was supported by the Office of Community Extension and Outreach Program of the Manuel V. Gallego Foundation Colleges. This work was carried out under research program of the Institute of Teacher Education of the Manuel V. Gallego Foundation Colleges. The authors declare that they have no conflicts of interest. The research does not contain any studies involving animals performed by any of the authors. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants involved in the study. Plagiarism was strictly avoided, there was no bias in the interpretation of the findings, and that the results was used purely for research.

Acknowledgments

The research is not possible without the following individuals: Dr. Joseph L. Gallego, Dr. Catalina P. Paez, Mayor Myca Elizabeth R. Vergara, Dr. Federico Perez, Mrs. Erminda SJ Esteban, Dr. Ingrid F. Calanno, Ms. Estenily M. Peralta, Mr. Harron Dave Antonio, Mrs. Racquel D. Samson, and Dr. Ruth C. Alfonso.

REFERENCES

DEVELOPMENT AS CONSCIENTIZATION The Case of Nijera Kori in Bangladesh. (n.d.). Retrieved July 20, 2023, from <http://nijerakori.org/wp-content/uploads/2016/03/Development-as-Conscientization-Chap-1-and-2.pdf>

- Keja-Kaereho, C., Shalyefu, R. K., & Kanyimba, A. T. (2016). The Perceptions of the Beneficiaries of the Adult Education Programmes about Livelihood Improvement in Selected Informal Settlements of Windhoek. *Creative Education*, 07(16), 2532–2546. <https://doi.org/10.4236/ce.2016.716240>
- Rong, X., Bolick, C., Boyd, A., Gullledge, S., Hilburn, J., & Noblit, G. (n.d.). <https://core.ac.uk/download/pdf/210600234.pdf>
- Skills and Literacy Training for Better Livelihoods*. (n.d.). TEXT. Retrieved July 20, 2023, from <https://www.dvv-international.de/en/adult-education-and-development/editions/aed-582002/literacy-and-livelihoods/skills-and-literacy-training-for-better-livelihoods>
- Social Dimension of Education (Answer) - ISABELA STATE UNIVERSITY SAN MATEO CAMPUS COURSE AUDIT - Studocu*. (n.d.). Studocu. Retrieved July 20, 2023, from <https://www.studocu.com/ph/document/isabela-state-university/bachelor-of-technology-livelihood-education/social-dimension-of-education-answer/32649606>
- UNIVERSITY OF CALIFORNIA Los Angeles *Pathways of Hope for the Favela Youth: A Case Study of Emancipatory Education as a Tool for Individual and Community Transformation*. (2018). https://escholarship.org/content/qt08f0k91k/qt08f0k91k_noSplash_8ae4243e073b5f152ce4aec16f6de51a.pdf



SUCCESS AND FAILURE IN PHYSICAL SCIENCE PEDAGOGY: REFLECTIONS FROM TEACHERS AND STUDENTS IN RURAL CONTEXT

Arnold T. Baldevia ¹ Marife S. Magpantay ²

¹ Science Department, Pagsangahan National High School, San Francisco, Quezon, Philippines

² Science Department, Southern Luzon State University, Lucban, Quezon, Philippines

DOI: 10.5281/zenodo.10002257

ABSTRACT

This qualitative study aimed to explore the factors affecting the success and failures of physical science pedagogy in rural contexts and determine how teachers and students retain success and overcome failures in physical science pedagogy. Data were collected through interviews with teachers and students. Thematic analysis identified nine themes that included challenges in teaching and learning physical science, strategies for enhancing physical science pedagogy, environmental and resource limitations, personal and social factors, pedagogical and instructional factors, technology and information limitations, challenges, and coping mechanisms, and importance of improving teaching strategies and resources. The study revealed that teachers in rural areas face challenges such as limited access to resources, inadequate training, and low student interest in physical science. The results highlight the need for tailored teacher training programs (i.e., learning action cells), providing adequate resources, and creating engaging and relevant science curricula to enhance student learning outcomes. This also revealed that environmental and resource limitations, personal and social factors, pedagogical and instructional factors affect the success and failure of physical science pedagogy in rural settings. A Learning Action Cell Plan was developed to address the challenges and opportunities in teaching and learning physical science in rural settings. This emphasizes the importance of collaboration among teachers, school administrators, and stakeholders to develop innovative teaching methods. Hence, this study provides insights into the factors affecting physical science pedagogy in rural settings and emphasizes the need for tailored teacher training programs and adequate resources to improve student learning outcomes.

Keywords: *instructional materials; learning action cell; physical science pedagogy; , rural areas; teaching strategies*

INTRODUCTION

Physical Science is a subject that requires well-thought-out instruction. The rationale for this is that Physical Science fundamental competences are connected to a wide range of fields, including Physics, Chemistry, and Earth Science. This leads to the conclusion that the subject itself is somewhat scary to teach, especially for non-specialists. Shirke (2021) said that “teachers and students are affected by the pedagogy connected to the sciences since pedagogy is a two-way process sometimes referred to as the teaching and learning process. In the current study, two pedagogies were studied: teaching pedagogy and learning pedagogy”.

According to Power School (2022), “teaching pedagogy can be categorized into two approaches: teacher-centered and student-centered, as well as low-tech and high-tech methods. In teacher-centered learning, the focus is on the teacher delivering lectures and transmitting knowledge directly to the students. Teacher-centered assessments are used to evaluate students' retention of knowledge. Low-tech and high-tech methods refer to the use of digital tools in education, with high-tech approaches involving technologies like learning management systems (LMS) and low-tech strategies relying more on paper-based resources like handouts and worksheets”.

On the other hand, learning pedagogy explores the various ways in which students absorb knowledge and is equally important in understanding and supporting every learner. Teachers recognize that each student is unique, so understanding their preferred learning styles can help customize teaching methods. “Reflections on the teaching and learning process, from both teachers and students, can provide insights into challenges in rural areas. These reflections include both successful and unsuccessful pedagogical approaches”. This aligns with DepEd Order No. 11, s. 2015, which identified Constructivist, Collaborative, Integrative, Reflective, and Inquiry-Based Learning as the five key methods (2C-2I-1R).

Physical science comprises two subjects: physics and chemistry. Physics focuses on studying matter and energy, forming the foundation for various other scientific fields like chemistry, biology, geology, astronomy, medicine, and environmental science. Physics progresses alongside advancements in other sciences, and its unbiased nature allows it to provide a tool for promoting equity. To achieve this, science education can be utilized to bridge socioeconomic gaps and challenge biases based on gender, caste, religion, or geography.

Moreover, on teacher-related indicators, Orleans (2020) suggested “a lack of academic qualifications, a lack of ongoing professional involvements, a significant amount of physics teaching experience, and a good licensure status in regard to this idea”. The number of physics classes per teacher is manageable, however, the size of the individual classes was disclosed by academic environment indexes. “The results also revealed a lack of technologies and instructional resources, a distaste for professional mentoring, and favorable library and internet access”. These conclusions led to the identification of difficulties in increasing the number of qualified physics teachers and providing schools with pertinent teaching tools.

The research indicated above is investigating challenges related to instructional delivery, environment, and personal elements of students. They are focusing on how the environment of a particular teaching-learning process, such as the relationship between workplace elements, influences the students' learning. This has been made worse by the lack of facilities and instructional materials, which hinders pupils' learning. However, the gap between the studies may be seen in how events and outcomes might change if the issues occurred in a rural setting. These are the ideas that the researcher would want to investigate.

Diate et al. (2021) identified key challenges faced by Physical science teachers, including literacy, numeracy, lack of physical facilities, and limited real-life application. “The availability of instruments for teaching Physical science was emphasized as crucial for a successful

classroom, but acquiring them locally posed significant difficulties for teachers, particularly in public schools". These challenges, along with literacy and numeracy issues and the lack of physical facilities, greatly hindered effective Physical science instruction in public schools. If not addressed, these problems will continue to negatively impact the quality of science education in the country. It is noteworthy that the teachers' ideal classroom aligns with the challenges they face due to inadequate government support in terms of technological resources, laboratory materials, learning spaces, and teaching aids. The study also revealed an interesting finding: the skills that teachers deem necessary for their students, such as critical thinking, numeracy, and comprehension, are the same skills they struggle to develop in their classroom instruction.

When compared to what occurred in the San Francisco District before, during, and after the pandemic's effects, teaching and studying physical science have faced different difficulties. This can be demonstrated in instances where teachers are attempting to impart science competences despite a lack of resources and learning environments related to the community's and municipality's nature. The 12 national high schools are situated in an area with no working signals. These are other factors that contribute to the difficulty in teaching at the 12 National High schools in the area. The ability of teachers and students to investigate and understand physical science is constrained by these rural environments mixed with other external variables.

It is therefore evident in the discipline's low MPS. One of the present study's objectives is to look at Physical Science education in relation to personal, family, and environmental issues. The method to be executed in this study focused on characteristics such as self-efficacy, relationships, and the educational environment or atmosphere in which Physical Science is taught and learned. The researcher is open to new findings with a concentration and point of view on Physical Science pedagogy in rural settings, far from the standards of the urban environment.

Physical science pedagogy is best understood when both views, both teachers and students, are considered. Despite the continued COVID-19 pandemic, teachers were forced to continue teaching and providing learning assistance despite significant, inevitable changes to the educational landscape and mental health issues among educators. In addition, schools and institutions modified their teaching and learning methods to satisfy the educational requirements. "Although some schools lacked learning management systems, they used commercial online platforms such as Zoom and Moodle, as well as Microsoft Teams. These systems were used by teachers to deliver both asynchronous and synchronous teaching. Other schools employ social media networks not just to aid and reach out to remote students, but also as platforms for teaching and learning" (Aduba and Mayowa-Adebara, 2022). "As a result, several teachers recognized that their COVID-19 pandemic teaching experience was informative and included it in their professional development efforts (Ulla and Perales, 2021).

Even before the epidemic, most science pedagogy in the Philippines supported the Enhanced Basic Education Act of 2013 (Republic Act No. 10533), which stated that the curriculum should incorporate constructivist, inquiry-based, reflective, collaborative, and integrative pedagogical techniques. A research vacuum exists since most educational research has focused on the teacher's point of view (Herodotou et. al., 2019). Learning pedagogy will include complex issues and the whole development of the individual, with an emphasis on shared prosperity, sustainability, and well-being. Well-being is regarded as "inclusive growth" with equitable access to "quality of life, covering health, civic activity, social connections, education, security, life satisfaction, and the environment". To achieve this goal, students will need a wide variety of abilities and competences that will allow them to function as "change agents" who can have a positive influence on their surroundings by fostering empathy and predicting the outcomes of their actions. Numerous frameworks explaining the distinctive talents and competences of future citizens have been established throughout the years. "Critical thinking, problem solving, collaboration, communication, and negotiation skills are included in these

frameworks, as are literacy, multilingualism, STEM, digital, personal, social, and "learning to learn" competences, citizenship, entrepreneurship, and cultural awareness" (Trilling and Fadel, 2009; Council of the European Union, 2018).

This prior research has highlighted these ideas on the learning in relation to the learners' performance. Similar to the contention made by (Trilling and Fadel, 2009; Council of the European Union, 2018) that "a variety of external factors, including the learners' social connections and security, which are all essential in establishing an individual's well-being, comprise the learners' environment and have a significant impact on how learning is delivered". This gives the researcher the inspiration to investigate how the learning situation affects academic performance. These ideas concerning the influence of outside circumstances on students' academic achievement are extremely evident in the MPS of the Physical Science students. The three consecutive school years' average MPS for the San Francisco District ranges from 49% in 2020–2021, 45% in 2021–2022, and 48% in 2022–2023—lower below the Department of Education's MPS criteria. The study also noted that the MPS for physical science is the lowest on the list of MPS under the Core subject. This serves to highlight the necessity for further research into this field to address its problems.

Being a science teacher, the researcher wants to investigate the causes of the Physical Science Pedagogy issues that are troubling the San Francisco District. Given that it has been demonstrated that environment has a substantial impact on pedagogy, this study looked at the problems and challenges posed by teaching physical science in rural areas. There are other arguments that may be made to support the status of physical science pedagogy since the San Francisco District is a prime example of a rural setting. It consists of twelve National High Schools dispersed throughout numerous barangays. Six groups were created from these twelve National High Schools. San Francisco I and II each have six national high schools. Examining the factors that contribute to the success and failure of physical science pedagogy in this setting would provide new information and a solid foundation for creating physical science curricula. In order to identify the root causes of the physical science pedagogy issue in this district, 1 teacher and 1 student from each National High School will take part in this study.

According to this viewpoint, the researcher acknowledges that there is still much to learn about the successes and failures of physical science pedagogy, especially when mixed with the milieu or environment's influence, especially in a rural context. Since the researcher teaches physical science in senior high school, she is familiar with the subject's difficulties in terms of the teaching and learning process. The researcher plans to utilize a qualitative approach to look into the advantages and disadvantages of teaching physical science in rural areas, particularly in the district where he is currently stationed. Exploring and understanding the factors that contribute to success and failure in physical science pedagogy can help students, instructors, administrators, and curriculum designers come up with new ideas for designing a curriculum program that will work in a rural setting. By doing this, the obstacles, and difficulties that teachers and students will face in having to follow the rules set forth in that discipline will be minimized. Considering this, the causes of obstacles and difficulties in physical science pedagogy will be discussed. This will eventually assist teachers and students in remote areas in teaching and mastering the competences associated with the field of physical science. The findings of this study can also be used by curriculum designers and school administrators to create programs in the field that are more flexible and adaptable in rural locations.

Research Questions

The study generally aims to explore the success and failure of Physical Science pedagogy in a specific district in San Francisco, Quezon to develop a district learning action cell (LAC). This

LAC will address challenges and opportunities in teaching and learning physical science in rural settings. This study sought to answer the following questions:

1. What insights can be gained about the nature of Physical Science in a rural context based on the reflections of teachers and students in San Francisco 2?
2. What are the factors that influence the success and failures of Physical Science Pedagogy in a rural context?
3. How do teachers and students retain success and overcome failures in Physical Science Pedagogy in a rural context?
4. How can a Learning Action Cell Plan be designed to address the challenges faced by Science Teachers in rural areas in the specific district in San Francisco, Quezon?

METHODOLOGY

Locale of the Study

The location of this research study is a District in San Francisco, Quezon. The researcher discovered that both teachers and students demonstrate the strengths and limitations of the Physical Science teaching and learning process. In three consecutive school years' average MPS for the San Francisco District ranges from 49 percent in 2020–2021, 45% in 2021–2022, and 48 percent in 2022–2023—lower below the Department of Education's MPS criteria. The study also noted that the MPS for physical science is the lowest on the list of MPS under the Core subject. As a result, to address the issues, the researcher plans to create a localized learning action cell to assist Physical Science teachers in the rural setting.

Research Design

The study used a qualitative research design to explore the experiences and perspectives of students and teachers (Kaur, 2015). Phenomenological methodology was chosen to uncover the meaning behind these experiences and the factors influencing success or failure. “Phenomenology helps understand what is real without requiring deep understanding. Qualitative research methods focus on collecting and analyzing qualitative data (Wardale, Cameron & Li, 2015)”. The study aimed to gather detailed descriptions through non-structural techniques, analyze the data orally, and interpret the findings conceptually (Devetak, 2009). It sought to understand participants' lived experiences (Zara, 2022) and address the status and challenges of physical science pedagogy in rural areas. The research findings will inform the development of a program to tackle these issues.

Respondents

The respondents were selected through criterion sampling to represent Physical Science teachers and Grade 12 students who had taken up Physical Science in the First Semester of School Year 2022-2023. The said school and respondent teachers and students were selected because they were the ones who had experiences in the teaching and learning delivery of Physical Science subjects in the rural context. The main principle of criterion sampling was to study all situations which corresponded to the major intention of the study. The respondents

were informed about the purpose of the research and were allowed to withdraw if they decided to do so. The sample of this study consisted of 12 Senior High School Teachers coming from 12 National High Schools in San Francisco District who were handling Physical Science subjects and 12 Grade 12 Senior High School Students coming from 12 Senior High Schools of the mentioned district.

Research Instrument

The following research tool was used to reflect on the success and failure of Physical Science teaching from the viewpoints of teachers and students. It guaranteed the quality and dependability of data collection and subsequent qualitative analysis.

Interview Guide. The interview protocol was adopted and modified from the semi-structured interview protocol used in the study conducted by Muhtarom, Juniati, and Siswono (2019) and Wankasi (2022). The questions focused on teachers' and students' perceptions of Physical Science teaching and learning. The interview guide consisted of nine questions for teachers and seven questions for students. The changes made included the addition of essential questions related to the factors that influenced Physical Science Pedagogy in terms of personal, family, and environmental aspects.

To ensure the validity of the instrument, a validation process was implemented. The process involved several steps. First, the interview guide was reviewed by a panel of experts in the field of Physical Science education to assess its content validity. The experts examined the questions to ensure that they adequately captured the desired information and were relevant to the research objectives.

Next, a pilot test was conducted with a small group of teachers and students who were not part of the main study. The participants were asked to provide feedback on the clarity, relevance, and comprehensiveness of the interview questions. Based on their feedback, necessary revisions were made to further improve the interview guide.

After the revisions, the final version of the interview guide was used in the main study. The data collected through the interviews were analyzed to examine the teachers' and students' perceptions of Physical Science teaching and learning, as well as the factors that influenced Physical Science Pedagogy in terms of personal, family, and environmental aspects. The validation process ensured that the interview guide was a reliable and effective tool for gathering information from the teacher and student respondents. By adopting and modifying the protocol from previous studies and incorporating additional essential questions, the interview guide provided a comprehensive and in-depth exploration of the topic at hand.

Data Collection

The data collection procedure consisted of two parts and was aligned with the data collection process: a qualitative data collection phase and a qualitative data analysis part. To ensure participant security and confidentiality, the researcher followed ethical norms based on research ethics. Before the structured interview, participants were asked to sign an informed consent form after the aim of the study was described. In addition, consent to record the interview was requested. Participants were informed that researcher respected their right to withhold their thoughts on topics or decline to answer questions.

Firstly, qualitative data collection phase was composed of securing the permission from District office to conduct the research study with selected Physical Science teachers and Grade 12 students from participant schools. The researcher conducted interviews with the respondents. Ethical considerations were observed throughout data collection phase.

Secondly, data analysis involved an accessible, systematic, and rigorous approach to identify and analyze the central theme, which was adopted from Bahl (2017). Step one involved familiarizing oneself with available facts. The researcher immersed themselves in the data to understand the breadth and depth of the subject matter. Immersion entailed regular and proficient data reading. To ensure codes were not missed out in the first read-through, the researcher went back to the data set to search for additional codes, which led to the formulation of concepts and patterns. The second step was known as "creating initial codes." In this step, the researcher generated first codes from the qualitative data. These codes identified components of the data that appealed to the researcher and were described as "the most fundamental aspects of the data, evaluated in a meaningful way regarding the phenomena," e.g., Physical Science Pedagogy. Coded data was different from units of analysis or themes, which were typically bigger concepts or claims.

The third step was called "searching for themes." In this phase, the emphasis was placed on the analysis of themes rather than codes. This step involved classifying the various codes into probable themes. Additionally, all relevant coded data extracts were compiled into labeled themes.

Step 4 was classified as "theme review." This procedure entailed an examination of the candidate themes discovered in phase 3. Consequently, some of these potential topics may not have been themes, others may have been subdivided to accommodate many themes, and others may have been combined to form a single overarching theme (Bahl, 2017). It was essential to keep in mind that themes should implicitly relate to one another while maintaining distinct and recognizable contrasts.

The fifth step involved defining and naming themes. In addition to defining and refining themes for analysis, this section analyzed data inside them. Each theme demanded a thorough examination. It was critical to identify the "narrative" that each theme conveyed and analyze how it fit into the larger "story" that the researcher was telling about the data. This process coincided with the study questions to ensure that themes did not overlap excessively. Themes were evaluated alone and in relation to other themes. Identifying whether or not a theme contained any subthemes constituted refinement. Sub-themes were subsets of larger theme or simply themes within a theme. They were valuable for providing structure and substance to a complex topic and for demonstrating a hierarchy of meaning in a collection of data.

The sixth step was producing the report. The purpose of writing thematic analysis was to convey a complicated narrative of data in a manner that persuaded the reader of the quality and validity of the analysis. The article provided a concise, cohesive, logical, non-repetitive, and engaging summary of the plot, both within and between themes. It also included sufficient instances or excerpts to illustrate the data's themes. The data extract had to be readily identifiable as a manifestation of the subject. The excerpts supported the research's analytic narrative. Having a comparable argument to the research questions was also advantageous.

Scope and Limitations

The study aimed to conduct a qualitative analysis of the success and failure of physical science pedagogy in rural areas. It sought to comprehend pedagogy from the perspectives of both students and teachers. In order to achieve the research aim, a district in San Francisco, Quezon province, was purposefully chosen. Structured interviews were conducted with selected Grade 12 students and Physical Science teachers for the school year 2022-2023. Throughout the procedure, research ethics were followed. The researcher attempted to determine the elements that influenced Physical Science teaching and learning in terms of personal, family, and environmental issues. The study observed a reflective teaching and learning process.

The findings of the study would serve as inputs to a localized learning action cell aimed at addressing the challenges of teaching in rural areas. The research focused on structured interviews and theme analysis to comprehend and reflect upon the success and failure of Physical Science instruction. However, it was limited to developing the localized learning action cell and did not evaluate its success in improving Physical Science teaching and learning. The responses obtained might also have focused entirely on the experiences of rural teachers and students throughout the pandemic. No comparisons were made between urban science pedagogy and rural science pedagogy.

RESULTS

From the interpretations and analysis of the collected data, the following themes and results are presented:

1. The results show that the teaching and learning of Physical Science in rural areas are affected by several factors, including limited resources, lack of equipment and facilities, poor internet connectivity, and environmental challenges. Moreover, the study found that the students in the rural areas have limited access to learning opportunities and are less interested in Physical Science compared to urban students. However, the study also identified some opportunities for improvement, such as the support of parents and the presence of motivated teachers who are willing to go beyond the required curriculum to engage and motivate their students. Overall, the research findings highlight the need for a more innovative and collaborative approach to teaching Physical Science in rural areas.
2. The responses indicate that there are several factors that affect the success and failures of physical science pedagogy in the rural context. These factors include environmental and resource limitations, personal and social factors, pedagogical and instructional factors, and technology and information limitations. Providing quality science education in rural areas can be challenging due to the lack of resources and facilities for experiments, poor internet connectivity, and environmental challenges.
3. The research results also showed that teaching and learning Physical Science in rural areas is challenging due to limited access to instructional materials, equipment, and facilities, as well as the factors that affect student interest in learning. However, teachers and students use coping mechanisms such as being resourceful, seeking help, and adapting to different learners to overcome these challenges. The importance of being adaptive and creative in addressing the challenges encountered in teaching and learning Physical Science in rural areas was emphasized. The findings highlight the unique

difficulties that teachers and students face in the rural context and the strategies they use to overcome these challenges.

4. The research findings showed the importance of improving teaching strategies and resources in Physical Science in rural settings. The plan developed, called Achieving Teaching Breakthroughs (ATB), aims to address the challenges and opportunities in teaching and learning Physical Science in rural areas by improving teacher training and strategies, compliance with the MELC and review of Physical Science topics, availability and familiarization with equipment and materials, specific topics in Physical Science, and suggestions for improvement. The plan emphasizes collaboration among teachers, school administrators, and stakeholders to develop innovative teaching methods and leverage available resources to improve the overall quality of Physical Science education in rural areas. Through the ATB plan, teachers can achieve teaching breakthroughs and enhance student learning outcomes in Physical Science.

DISCUSSION

Research Question Number 1: What insights can be gained about the nature of Physical Science in a rural context based on the reflections of teachers and students?

Theme 1: Rural Physical Science Pedagogy (RPSP1): Navigating Challenges and Opportunities in Teaching and Learning Complex Concepts with Limited Resources and Pandemic Disruptions

Upon analyzing responses from both the teachers and students, several subthemes emerge related to the teaching and learning of Physical Science in a rural context (RPSP1). The following are some of the subthemes that emerged from the coding of responses:

Subtheme 1.1. Teaching Delivery with Limited resources and lack of materials

The initial codes related to limited resources and lack of materials in teaching Physical Science in a rural context highlight the challenges faced by teachers and students due to inadequate access to instructional resources, like textbooks, laboratory equipment, and internet connectivity. These challenges can limit the effectiveness of teaching and hinder student learning.

For instance, one teacher reported the "lack of materials" as a major challenge in teaching Physical Science

"Mahirap ipaintindi ang Physical Science, kulang tayo sa materials kagaya ng IMs ng Physical Science". This was echoed by a student who mentioned the "difficulty in obtaining materials "Sa Physical Science, mahirap pong kumuha ng materials lalo na sa mga activities". Similarly, another teacher noted the "insufficiency of imagination-based teaching" due to the lack of materials "Parang ang nangyayari ay puro imagination na ng bata. Kaso hindi naman sapat

naipapaimagine mo lang. Nakahirap ituro kapag walang materials lalo na sa mga topic tungkol sa lights. ”.

Research in the field of science education has also emphasized the importance of having access to appropriate materials and resources for effective teaching and learning (Kokkotas, 2017; Son, 2021). Kokkotas (2017) argues that access to materials and resources is crucial for developing a positive attitude towards science and for enhancing students' engagement and interest in the subject. Son (2021) emphasizes the role of hands-on activities and laboratory experiments in facilitating understanding of abstract concepts and promoting interest in science.

In light of these challenges, some teachers have resorted to creative solutions to overcome the lack of resources. For example, one teacher highlighted the importance of teacher resourcefulness in teaching Physical Science.

“Dapat po ay maging resourceful talaga ang teacher, kapag resourceful po nagkakaroon po ng solusyon ang guro”, while another emphasized the need for hands-on teaching “Sa Physical Science kase ay dapat more on hands-on talaga”. Additionally, some teachers have tried to localize content and use locally available materials to teach Physical Science “Mahirap ituro ang Physical Science kapag walang materials. Pwede naman maglocalize kaso ay hindi naman lahat ay available”.

Both the teachers and students highlighted the challenge of limited resources and lack of materials in teaching and learning Physical Science in a rural context. This includes the difficulty of obtaining materials, the lack of equipment and sources of information, and the limitations of black and white instructional materials. According to a study by Adodo (2021), limited resources can affect the quality of science education in rural areas, leading to lower academic achievement.

Subtheme 1.2. Teaching delivery faced challenges in comprehending abstract concepts.

Another common theme is the difficulty of understanding abstract concepts in Physical Science. Both teachers and students mention the challenge of teaching and learning complex terminology, technical terms, and abstract concepts. This can be attributed to the lack of hands-on experience and the reliance on imagination-based teaching in some cases. One of the respondents uttered that

“Dahil sa ang concept ng Physical Science ay may mga konsepto na hindi madaling maintindihan, ang mga bata ay nangangailangan pa rin ng gabay ng guro”.

According to a study by Walker and Goh (2021), the use of visual aids and analogies can help students understand abstract concepts better.

The subtheme 1.2. focuses on the difficulty in understanding abstract concepts in rural physical science pedagogy. The initial codes that lead to this subtheme are "super abstract concepts," "difficulty of teaching abstract concepts to children," "reliance on intelligent students to understand," and "difficulty of understanding topics for teachers."

Research has shown that abstract concepts are often difficult to learn and understand for students (Gilmore et al., 2019). In rural areas, where there is a lack of resources and materials, teachers often have to rely on students' imagination to understand abstract concepts (Boyd & Sloat, 2019). This can pose a challenge for students who may not have a strong foundation in

the subject, as well as for teachers who may not have the necessary resources to effectively explain these concepts.

Furthermore, some studies have suggested that there may be a correlation between a lack of understanding of abstract concepts and poor academic performance in science (Cho & Kim, 2017). Therefore, it is important for teachers to use various teaching strategies, such as hands-on activities and visual aids, to help students better understand abstract concepts.

In summary, subtheme 1.2. highlights the challenge of teaching abstract concepts in rural physical science pedagogy, which can be attributed to limited resources, reliance on students' imagination, and difficulty in understanding for both students and teachers.

Subtheme 1.3. Teaching delivery emphasizing the significance of hands-on learning.

Both the teachers and students emphasized the importance of hands-on learning in Physical Science. They noted that this approach can enhance learning and help students understand difficult concepts. However, the lack of materials and equipment in rural areas makes it challenging to implement this approach. According to a study by Bester et al. (2021), hands-on activities can be effective in promoting student engagement and academic achievement in science education.

The initial codes that lead to the subtheme 1.3, "Importance of hands-on learning," include "Importance of hands-on approach," "Relevance of hands-on teaching in Physical Science," "Challenges in localization of materials," and "Difficulty of teaching concepts to children." Teacher Respondents uttered that

"Mahirap po talagang ituro ang Physics lalo na pagdating sa mga bagay na kailangan ng experiment, hindi naman po pwedeng ipapamagine nalang, dapat po sila ay may hands-on."

Several studies have emphasized the significance of hands-on learning in science education. According to Akcay and Arslan (2018), hands-on activities encourage students' active participation in learning, facilitate development of inquiry skills, and promote conceptual understanding. Authors further noted that hands-on learning can be particularly beneficial in rural areas where students may lack exposure to scientific phenomena and experiences. Similarly, a study by Santoso and Asyhar (2018) found that hands-on learning could improve students' academic achievement and motivation towards science learning.

The challenges in localizing materials for hands-on learning in rural areas have been recognized by several researchers. For example, in their study on science education in rural schools, Kocakulah and Şahin-Kızıl (2018) found that the lack of materials and resources hindered hands-on learning. The authors suggested that teachers should adapt instructional practices to accommodate the local context and utilize available resources effectively. Similarly, Awofala and Okebukola (2020) pointed out the challenges of localizing science teaching in rural areas due to the scarcity of instructional materials and resources. The authors suggested that teachers should leverage the local environment and use low-cost materials to facilitate hands-on learning. Overall, these studies highlight the importance of hands-on learning in science education and the challenges in localizing materials for such learning in rural areas. Teachers in

rural areas need to be resourceful and adapt their instructional practices to the local context to promote effective hands-on learning.

Subtheme 1.4. Challenges in teaching and learning during the pandemic

The COVID-19 pandemic has brought additional challenges to teaching and learning Physical Science in a rural context. Students and teachers highlighted the difficulties of teaching and learning remotely, the lack of internet connectivity in some areas, and the impact of student numbers on teaching quality. According to a study by Özkan et al. (2021), the pandemic has led to significant disruptions in science education, highlighting the need for flexible and adaptive teaching approaches. The statement

“Kaso nga lang po ay pagdating na po ng grade 12 ay nalilimutan na po nila iyong mga basic concepts na pinag aaralan sa science. May mga concept po sila na nalilimutan lalo’t dumaan po sila sa dalawang taong pandemic”

related to Subtheme 1.4. Challenges in teaching and learning during the pandemic include "pandemic, numbers, basic, lesson, and students." The codes suggest that COVID-19 pandemic has posed significant challenges for teaching and learning, particularly in the context of rural physical science pedagogy.

One major challenge has been the transition to online and remote learning, which has required significant adjustments for both teachers and students. As a result, many students have struggled with basic lessons and concepts, particularly those related to STEM subjects such as physical science (Chen, 2021).

Another challenge has been the difficulty in engaging students during remote learning, which can lead to a lack of motivation and interest in the subject matter. This can be particularly challenging in the context of physical science, which often requires hands-on learning and experimentation (Hu, Li, & Wu, 2021).

Overall, the COVID-19 pandemic has highlighted the need for flexibility and adaptability in rural physical science pedagogy, as well as the importance of finding innovative ways to engage students and maintain their interest and motivation in the subject matter.

Subtheme 1.5. Teaching delivery showcasing the resourcefulness and effectiveness of teachers.

Both teachers and students noted the importance of teacher resourcefulness and effectiveness in teaching and learning Physical Science. Teachers need to be creative and adaptable in their teaching methods to address the challenges of limited resources and materials. According to a study by Reuven and Cohen (2021), effective teaching methods should be student-centered, promote active learning, and be adapted to the specific needs and contexts of the learners.

The subtheme of teacher resourcefulness and effectiveness emerged from the initial codes related to the challenges faced by teachers in rural areas with limited resources and materials. Teachers need to rely on their resourcefulness and skills to effectively teach Physical Science to their students. The subtheme highlights the significance of instructional materials. One of the respondents stated that

“Nahihirapan po talaga sko sir, kaya nagloloocalize nalang po ako” which highlights the need for teachers to create their own instructional materials and resources to compensate for

the lack of commercially available materials in rural areas.

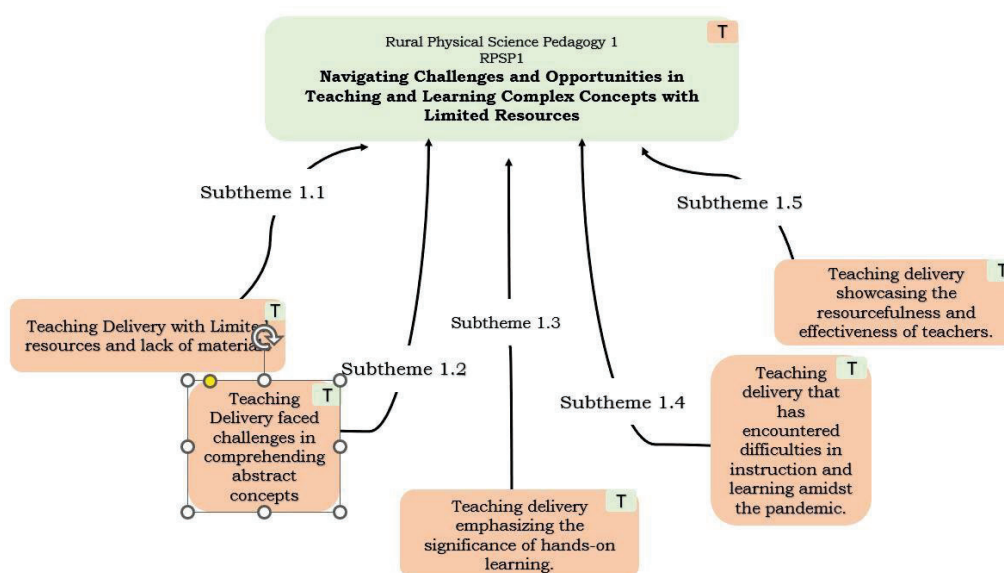
According to a study by Mabogoane and Mosimege (2020), teachers in rural areas need to be creative and resourceful to overcome the lack of materials and resources in their teaching of science subjects. Another statement related to this subtheme is

"Napakahalaga sir na resourceful ang teacher lalo na kapag nalilimutan nila ang basic concept ". Teachers in rural areas need to be familiar with the local context and culture to effectively teach Physical Science to their students.

According to a study by Chikasanda, Majawa, and Kaphuka (2016), teachers in rural areas need to adapt their teaching strategies and methods to the local context to make the subject more relevant and interesting to their students.

All of the initial codes from the five subthemes discussed earlier were integral in the following concept map.

Figure 2. The Rural Science Pedagogy 1 (RPSP1)



The concept map in Figure 2 that emerges from the responses is consistent with previous studies that have explored the teaching and learning science in a rural context. For example, a study by Bell et al. (2017) found that rural science teachers face significant challenges related to limited resources, including a lack of funding for equipment and technology, and limited access to professional development opportunities. Similarly, another study by Peters-Burton et al. (2016) found that rural students often have limited exposure to science and face challenges related to accessing the high-quality science instruction and resources.

Despite these situations, the responses suggest that both teachers and students are committed to engaging with science and recognize its importance for their future success. This aligns with the findings of a study by Czerniak et al. (2016), which found that rural students who were more engaged with science were more likely to pursue science-related careers. The responses also emphasize the importance of hands-on learning and guided instruction, which is

consistent with research on effective science teaching practices (National Research Council, 2012).

Finally, the responses highlight the importance of teacher resourcefulness and adaptability, particularly in the face of pandemic-related disruptions. This is consistent with recent research on the challenges faced by teachers during the COVID-19 pandemic, which has highlighted the need for flexibility, creativity, and support for teachers to effectively adapt to new teaching environments (Chen et al., 2020; UNESCO, 2020).

Theme 2: Rural Physical Science Pedagogy (RPSP2): Continuously Learning and Improvement on Physics and Chemistry Fundamentals

Upon analyzing responses from both the teachers and students, several subthemes emerge related to the teaching and learning of Physical Science in a rural context connected to teaching and learning of physics and chemistry fundamentals (RPSP2). The following are some of the themes that emerged from the coding of responses:

Subtheme 2.1. Success and Failure in teaching and learning of the fundamental principles and concepts

Success of Rural Science Pedagogy. The following are the identified success of rural science pedagogy based from the responses: (1) Teachers described certain concepts as successful in their responses, indicating that these concepts were effectively taught and understood by the students; (2) Teachers recognized successful teaching practices and strategies that facilitated student learning and engagement. (3) Student responses indicated successful learning experiences, where they felt confident and knowledgeable in the subject matter; (4) Factors contributing to success in rural science pedagogy included positive teacher-student interaction, high student interest, as well as effective English language proficiency.

Failure of Rural Science Pedagogy. On the other hand, the following are the statements categorized as failure of rural science pedagogy: (1) Teachers mentioned concepts that were not successful, suggesting that there were challenges in effectively teaching these topics to the students; (2) Teachers expressed difficulty in explaining certain concepts to the students, indicating a failure to communicate complex ideas effectively; (3) Student responses revealed instances of unsuccessful learning experiences, where they faced challenges or struggled to understand the subject matter, (4) Factors contributing to failure in rural science pedagogy included language barriers, lack of student interest, and low aptitude or understanding of the subject.

It becomes clearer that success and failure coexist in the context of rural science pedagogy. Both teachers and students have experiences that fall into each category, and multiple factors influence the outcomes. This separation allows for a more comprehensive analysis of the challenges and successes in rural science education, facilitating targeted improvements and future success.

Both the teachers and students mentioned the concepts of success and failure in their responses. Teachers described some concepts as successful and others as not successful, while students assessed their learning as successful or unsuccessful. In addition, both groups

acknowledged that success or failure can be influenced by a variety of factors, such as teacher-student interaction, student interest, and English language proficiency.

Under this subtheme, both teachers and students described their experiences of success and failure related to teaching and learning. Teachers identified some concepts as successful and others as not successful, while students assessed their learning as successful or unsuccessful. Additionally, both groups acknowledged that success or failure can be influenced by a variety of factors, such as teacher-student interaction, student interest, and English language proficiency.

One teacher response related to the success and failure subtheme was: "Some concepts are successful, but not all". This statement highlights the fact that not every concept can be taught successfully, and that there are inherent challenges in teaching certain topics. Another teacher response that relates to this subtheme is: "Difficulty explaining concepts to children", which suggests that some teachers may struggle with effectively communicating complex ideas to their students.

Similarly, student responses also highlighted the theme of success and failure.

For example, one student response stated that they had "Ako po kase ay hiral talaga kapag ang ginagamit po sa pagtuturo ay English". This statement suggests that language barriers can impact a student's ability to learn and may contribute to feelings of failure or frustration. Another student response that relates to this subtheme is: "Reason for success/failure: mahina po ako at hindi interisado sa Physics". This statement highlights the fact that student interest and aptitude can play a significant role in determining success or failure in a particular subject.

Overall, the subtheme of success and failure underscores the fact that learning is not always a linear process, and that both teachers and students may encounter challenges or obstacles along the way. By recognizing the potential for both success and failure, however, teachers and students can work together to identify areas for improvement and strive towards greater success in the future.

Subtheme 2.2. Teaching and Learning of the Basics

Teachers primarily focused on their experiences with teaching various basic concepts in physics and chemistry, while students primarily discussed their experiences with learning those concepts. However, both groups expressed a desire for effective teaching and learning, and identified factors that can facilitate or hinder these processes. These factors included the teacher's ability to explain concepts clearly, the student's level of engagement, and the relevance of the topic to the student's environment.

This subtheme relates to the experiences and perspectives of both teachers and students in the process of teaching and learning. Teachers described their approaches to teaching and the challenges they faced in conveying complex concepts to their students. Students, on the other hand, described their experiences of learning and the factors that helped or hindered their progress.

One teacher response that is related to this subtheme is "Successful in teaching fundamental principles in Physics and Chemistry".

This statement suggests that teachers may have specific areas of expertise, and that success in teaching may be contingent upon focusing on these areas.

Another teacher response that relates to this subtheme is "Positive view on success in teaching", which suggests that teachers who maintain a positive attitude towards teaching may be more successful in engaging and inspiring their students.

Student responses that relate to this subtheme include "Successful, Learning", and "Successful, Understanding, Unfinished Topics". They uttered that " Successful naman po sir naiintindihan naman po namin iyong mga naituro ni sir iyon nga lang po may mga hindi na po kami natapos nap ag-aralan".

These statements suggest that students may be more likely to succeed when they are able to learn and understand concepts, even if they have not yet fully mastered them. Additionally, one student response highlighted importance of teacher-student interaction, stating that they experienced "successful, good explanation, teacher-student interaction". One potential approach to fostering successful teaching and learning of fundamental concepts is through the application of social cognitive theory (Schunk & Usher, 2019), which emphasizes the importance of motivation and self-regulation in the learning process.

The subtheme of teaching and learning underscores the fact that effective teaching of fundamentals is a complex and multifaceted process, and that success in learning the basics is often dependent on a variety of factors. By recognizing the importance of teacher expertise, positive attitudes towards teaching, and effective teacher-student interaction, educators can help to facilitate more successful learning outcomes for their students.

Subtheme 2.3. Ongoing Learning

Both teachers and students acknowledged that learning is an ongoing process that requires continued effort and attention. Teachers described their own need for further research and improvement in their teaching, while students identified topics that they had not fully understood or areas where they needed more practice. In addition, both groups recognized that learning could occur in a variety of ways, such as through teacher-led instruction, student self-assessment, or identifying learning gaps.

The subtheme of ongoing learning highlights the idea that learning is a continuous process that extends beyond the classroom. Teachers and students alike described their experiences of ongoing learning, including their recognition of the need for further study and the identification of gaps in their knowledge.

One teacher response that is related to this subtheme is "Difficulty explaining concepts to children". This statement suggests that teachers may need to engage in ongoing learning to improve their teaching skills, particularly in terms of adapting to the needs and abilities of their students. Another teacher response that relates to ongoing learning is "need for research", which highlights the importance of ongoing learning in the context of scientific inquiry and discovery.

Student responses that relate to ongoing learning include "Acknowledgment of learning: learned from what was studied" and "Identification of learning gaps: there are still things to learn". These statements suggest that students recognize the value of ongoing learning and the fact that there is always more to learn, even after completing a course or program of study.

The subtheme of ongoing learning emphasizes the importance of recognizing that learning is a lifelong process, and that teachers and students alike can benefit from ongoing

efforts to expand their knowledge and skills. By acknowledging the need for ongoing learning and committing to ongoing personal and professional development, individuals can continue to grow and succeed in their chosen fields.

All of the initial codes from the five subthemes discussed earlier were integral in the following concept map.

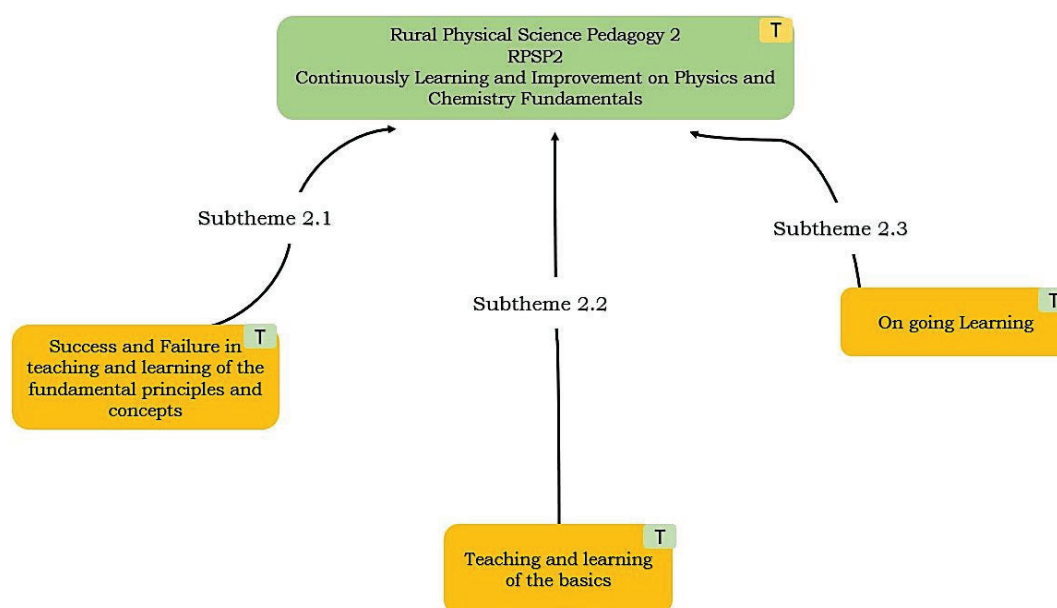


Figure 3. Rural Science Pedagogy 2 (RPSP2)

After analyzing the subthemes that emerged from the initial responses/codes of both the teachers and students, the overarching theme that can be identified is the continuous process of learning and improvement.

Both groups recognized that learning is not a one-time event, but a continual process that involves ongoing effort, self-assessment, and identification of learning gaps. Furthermore, both groups acknowledged the importance of effective teaching and learning, and the role of various factors such as teacher-student interaction, student interest, and relevance of the topic in facilitating or hindering this process. Finally, both groups also acknowledged the possibility of success or failure, and recognized that success can be achieved through continued effort and improvement. Cox and Sanchez (2016) discussed the importance of ongoing education and training for developing global leaders. The authors emphasize the need for individuals to continuously learn and develop their skills, and note that this process involves not only formal education, but also informal learning experiences and personal reflection.

Thus, the overarching theme that can be derived from the subthemes is the continuous process of learning, growth, and improvement, in which teachers and students work together to achieve their goals and overcome any obstacles that may arise.

Theme 3: Rural Physical Science Pedagogy (RPSP3): Balancing Resource Constraints

and Effective Learning Strategies for Enhancing Student Learning

Upon analyzing the responses from both the teachers and students, several subthemes emerge related to the teaching and learning of Physical Science in a rural context pertaining to strategies and use of resources (RPSP3). The following are some of the subthemes that emerged from the coding of responses:

Subtheme 3.1. Teaching delivery constrained by insufficient resources for hands-on

The first emergent subtheme of "Lack of Resources for Hands-On Learning" highlights the importance of overcoming the challenges posed by a lack of laboratory equipment, materials, and time. Teachers reported difficulties in conducting experiments due to missing equipment and a lack of clarity on equipment usage in modules. Meanwhile, students reported infrequent opportunities to conduct experiments, limited experiment opportunities, and a lack of laboratory activities. However, despite these challenges, students and teachers reported strategies to maximize available resources, such as improvising materials and partnering with students to overcome resource constraints.

This subtheme relates to the need for adequate resources and equipment to facilitate effective STEM education.

This is highlighted by the statement “Napakadalang po naming mag experiment, hindi po namin ito nagagawa dahil po sa kakulangan sa equipment”.

As noted in the citation by Herrington and Parker (2021), resource-constrained STEM learning environments can present significant challenges to educators, who may struggle to provide students with access to hands-on learning opportunities. Without sufficient resources, students may be unable to engage in the kinds of experiments and activities that are essential to developing a deep understanding of STEM concepts.

Subtheme 3.2. Instructional delivery highlighting the significance of collaborative and multimedia learning.

The second emergent subtheme of "Importance of Collaborative and Multimedia Learning" emphasizes the role of collaborative learning, group work, and multimedia presentations in enhancing student learning. Students reported success in group work, simulations, and presentations, while teachers emphasized the importance of focusing on presentation and collaborative activities. Additionally, multimedia learning, such as videos and multimedia presentations, was reported as successful by both teachers and students.

Students and Teacher respondents stated that “Successful po sa group work, simulation at presentation”, it is supported by the teacher respondent that “Nagagawa po video video at presentation experiment lang po ang hindi”.

As noted by Bakia et al. (2012), online teacher professional development programs can be a powerful tool for improving STEM education outcomes by providing educators with the skills and knowledge they need to create engaging and effective multimedia learning experiences. Collaborative learning activities, such as group work and discussion, can also be highly effective in helping students build a deep understanding of STEM concepts

Subtheme 3.3. Teaching Method facing challenges in conducting experiments.

The third emergent subtheme of "Challenges with Conducting Experiments" encompasses the challenges students face with conducting experiments, such as limited experiment opportunities and unsuccessful performance in experiments. Teachers reported issues with conducting experiments, such as difficulty in conducting experiments due to missing equipment. However, despite challenges with conducting experiments, students still identified a learning gap in the lack of experimental learning and reported success in making videos and simulations.

This subtheme highlights the challenges that educators may face when attempting to conduct experiments in STEM classrooms.

Respondent uttered that "Hindi po kami nagi-experiment sa Physical Science, dahil kulang kami sa tools at kulang din po sa oras".

As noted in the citation by Hmelo-Silver (2012), scaffolding technology-enhanced learning environments can be an effective strategy for helping students overcome these challenges by providing them with the guidance and support they need to engage in hands-on learning activities. However, these efforts may be hampered by a lack of resources, equipment, and time, as noted in the other citations.

To balance the limitations of resources with effective learning, teachers can employ a variety of strategies such as collaborative and multimedia learning and improvising materials. For instance, teachers can use multimedia presentations to supplement the lack of hands-on learning and engage students in the learning process. Additionally, teachers can partner with students to improvise materials and conduct experiments using available resources.

After coding and decoding all responses, the following concept map was generated and labeled as Rural Physical Science Pedagogy 3(RPSP3).

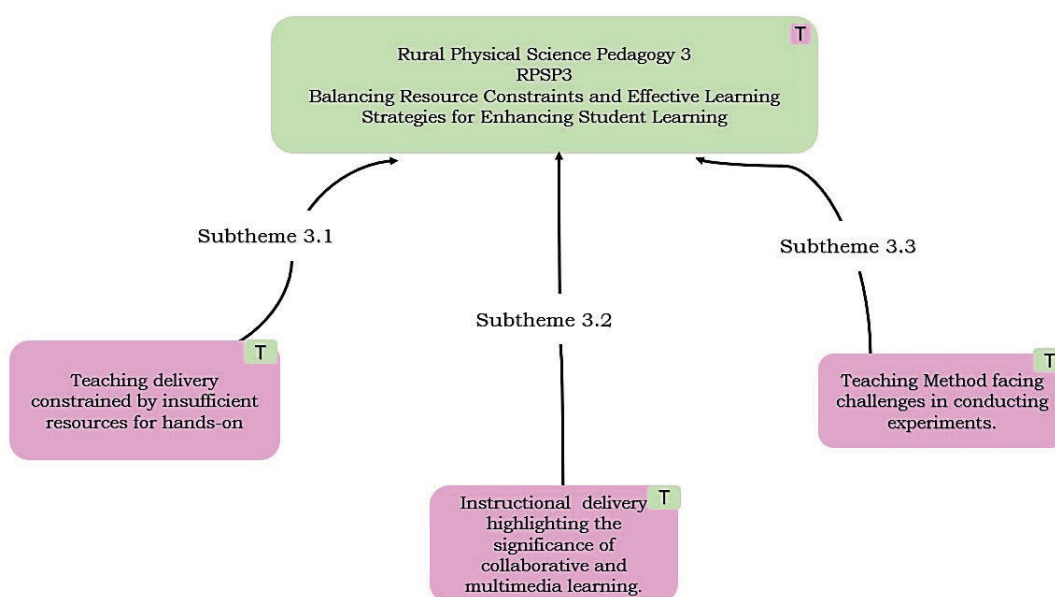


Figure 3. Rural Physical Science Pedagogy 3(RPSP3)

Figure 3 shows the overarching RPSP3 of "Balancing Resource Constraints and Effective Learning Strategies for Enhancing Student Learning" highlights the challenges faced by students and teachers when it comes to hands-on learning in resource-constrained environments. This theme encompasses the need to balance the limitations of resources with the need for effective learning experiences that engage students and enhance their understanding of concepts.

The theme also underscores the need for innovative strategies to overcome resource constraints and enhance student learning. By employing a variety of approaches, teachers can create engaging and effective learning experiences that enable students to develop a deeper understanding of concepts.

Theme 4: Rural Physical Science Pedagogy (RPSP4): Lack of Inquiry-Based Learning

Subtheme 4.1 Teaching enriched by teacher support and interaction.

There are several codes related to this theme. Teachers who are approachable and encourage questions create a positive learning environment for students, as evidenced by the code.

"Sir is approachable for questions, sinasagot nya po ang aming tanong kapag meron po kaming hindi naiintindihan".

This highlights the importance of teachers who prioritize engaging and stimulating lessons to keep students interested in science. Teachers who prefer student-initiated questioning can foster a culture of curiosity and inquiry in the classroom, as noted in the code "Preference for student-initiated questioning".

This subtheme emphasizes the importance of teacher-student interaction and the need for an approachable and supportive teacher. The codes related to this subtheme indicate that the teacher should be available to answer questions and encourage students to ask questions and participate in discussions. The teacher should also provide explanations and support student-initiated questioning. According to Bao et al. (2021), teacher-student interaction and communication are essential for creating a positive inquiry-based learning environment.

Subtheme 4.2 Education hindered by lack of hands-on exploration and experimentation.

There are also several codes put under this theme. Respondent stated that

"hindi nga lang po kami palaging nabibigyan ng time sa self-discovery, dahil wala pong internet".

The lack of hands-on exploration and experimentation in science education, as noted in the code "No experiments or exploration", can limit students' understanding of scientific concepts. The code "Not given time for self-discovery due to lack of internet access" highlights the challenges that students face in engaging in self-directed learning when resources are limited. Without access to laboratory facilities, as noted in the code "No laboratory use", students may miss out on important opportunities to engage in hands-on experimentation.

This subtheme highlights the limitations of a lack of hands-on exploration and experimentation in the learning process. The codes related to this subtheme indicate that the

absence of experiments or exploration due to limited facilities or lack of internet access can hinder students' learning experiences. Without laboratory use or discovery activities, students may struggle to fully understand and retain information. According to Akpan et al. (2020), hands-on experimentation in science education is essential for improving the students' critical thinking skills and promoting their deeper understanding of the scientific concepts.

Subtheme 4.3 Teaching with Limitations and Challenges of Inquiry

Several codes are seen connected to this theme. Students in rural areas may face gaps in their science education due to resource limitations and other factors, as noted in the code "Gaps due to being in a rural area". The code "Concern over lack of student questioning" highlights the need to encourage students to ask questions and engage in independent inquiry to deepen their understanding of the scientific concepts. Respondent uttered that

"Bihira lang po sir, dahil wala nga po kaming mapagkuhanan ng sagot dahil nga po nasa rural area po kami."

Teachers who struggle with large class sizes, as noted in the code "Difficulty with large class sizes", may face additional challenges in providing individualized attention and support to each student. The respondent uttered that

"Hindi lang po naming napi-perform ang handson activities. Dahil nga po siguro ang dami po namin sa isang klase. Nahhirapan din po siguro si sir na bantayan o kami isa isa."

This subtheme encompasses various limitations and challenges that affect the inquiry-based learning process, including the difficulty of large class sizes, the limitations of a rural area, and the lack of access to resources. The codes related to this subtheme indicate that the lack of facilities or resources can limit students' ability to ask questions, conduct research, or engage in discovery activities, hindering their understanding of the subject. As to Pritchard et al. (2021), inadequate resources and facilities in schools can negatively impact students' academic performance and lead to inequalities in education.

All of the responses were analyzed and decoded which led to the following concept map relating to RPSP4.

The overarching theme of the initial responses is the lack of inquiry-based learning in science education under the rural context.

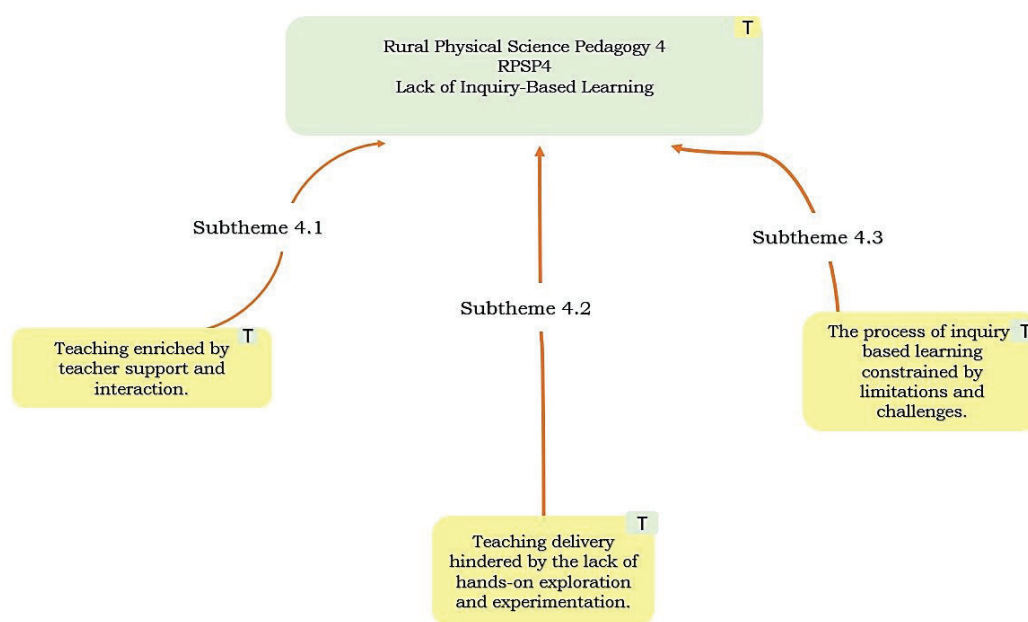


Figure 5. Rural Physical Science Pedagogy 4 (RPSP4)

This theme is reflected in the subthemes of teacher support and interaction, lack of hands-on exploration and experimentation, and limitations and challenges in inquiry science education. Despite the importance of inquiry-based learning for developing critical thinking skills and deepening understanding of scientific concepts, many of the codes suggest that students are not being given enough opportunities for self-directed learning and exploration. Harlen et al. (2015), found that inquiry-based learning can improve students' understanding of scientific concepts and their attitudes towards science. The authors note that "inquiry-based learning enables learners to take control of their own learning, developing their own questions and hypotheses, designing and conducting their own investigations, and evaluating their own findings" (Harlen et al., 2015, p. 25). This aligns with the subtheme of teacher support and interaction, as teachers who encourage student-initiated questioning and provide individualized support can help facilitate inquiry-based learning.

Theme 5: Teachers & Students (RPSP5): Creating effective learning environments.

Upon the analysis of responses, the following subthemes emerged which relate to the teachers' role and how students learn science best in a rural setting.

Subtheme 5.1 Teaching Characterized by Active and hands-on learning

This subtheme highlights the importance of active and hands-on learning in the rural setting. Teachers should be flexible in their teaching approach, adjusting to the level and capacity of their students, and using varied strategies such as discovery learning and exploratory science to make learning enjoyable and effective. Additionally, teachers should provide adequate materials and laboratory activities to facilitate practical activities, experimentation, and faster

learning (Hands-on activities, Need for laboratory activities, Physical Science Laboratory facilities, Equipment).

Respondents uttered that “ *Kailangan po na ito ay ginagawa sa laboratory. Dapat po talaga ay facilitator lang po ang guro at naggaguide lang po sa bata mas matututo po sila kapag ganoon.*”

According to the research of Guo, Hao, and Su (2022), hands-on activities and experimentation are effective strategies to improve students' engagement, motivation, and achievement in science education.

Subtheme 5.2 Collaborative and learner-centered learning

This subtheme emphasizes the importance of creating a collaborative and learner-centered learning environment where students can discuss ideas, share their knowledge, and learn from each other. Teachers should encourage group study, discussion, and learner-centered activities to facilitate this type of learning (Discussion, Idea sharing, Group study, Learner-centered activities). Respondent stated that

“dapat po ang guro ay facilitator lang more on learner-centered po dapat ang mga activity”.

According to the research of Pan and Wong (2018), collaborative learning and learner-centered instruction are effective strategies to improve the students' academic achievement, problem-solving skills, and social interactions.

Subtheme 5.3 Teacher's role in facilitating learning.

This subtheme highlights the critical role of teachers in facilitating learning in the rural setting. Teachers should act as facilitators rather than traditional instructors, using a Q and A format and a facilitator role to encourage student participation and engagement (codes: facilitation vs. traditional teaching, Q and A format, Facilitator role). Additionally, teachers should provide guidance and avoid spoon-feeding among students to promote self-reliance and independence (teacher guidance, spoon-feeding among students). respondent stated that:

“Kung may laboratory po ay dapat facilitator lang po tayo”.

According to research of Ross and Bruce (2020), teacher facilitation and guidance are effective strategies to promote active and engaged learning in science education.

Subtheme 5.4 Importance of confidence and self-reliance

This subtheme highlights the importance of developing self-confidence and self-reliance in students in the rural setting. Teachers should encourage student confidence by avoiding a lack of confidence in students and promoting enjoyment of classes (Lack of confidence in students, Self-confidence, No reliance on others, Confidence in asking questions, Enjoyment of classes). Respondent stated that

“ Kailangan po ng tiwala sa sarili at dapat pong hindi ka dapat aasa sa iba”.

According to the research of Adelabu, Adu, and Adu (2019), building student confidence is a crucial factor in enhancing their learning outcomes and academic success.

All of the previous codes were taken into account which led to the development of the concept for RPSP5

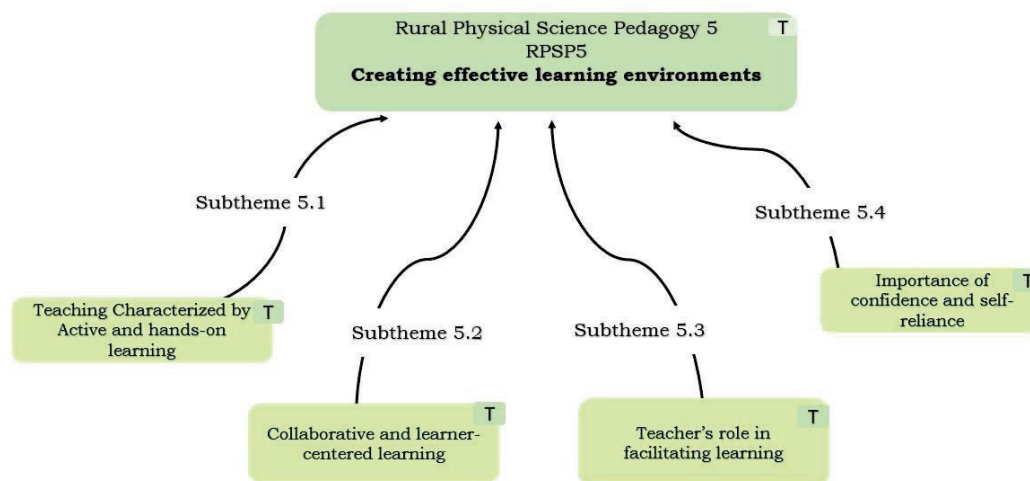


Figure 5. Rural Physical Science Pedagogy 5(RPSP5)

Figure 5 shows RPSP5 which displays the overarching theme that emerged from the previous subthemes. The importance of creating effective learning environments that enable students to learn actively, collaborate with their peers, and develop their self-confidence and independence. Teachers play a critical role in facilitating this learning by using varied strategies, providing adequate materials, and encouraging experimentation and hands-on activities. Additionally, creating collaborative and learner-centered learning environment, where students are encouraged to ask questions and share ideas, is essential for effective learning. Ultimately, creating effective learning environments that meet the needs of students in rural areas is crucial for their success in their studies.

Theme 6: Learning KSA in Physical Science (RPSP6): Challenges and Opportunities in KSA Learning

The following subthemes emerged after analyzing the responses of teachers and students related to learning knowledge, skills, and attitudes (KSA) in senior high school.

Subtheme 6.1 KSA Learning Challenges

This subtheme relates to the difficulties that students and teachers face in the learning process. It includes codes which highlight the challenges of complex topics, lack of time and resources, incomplete learning, lack of interest, and confusion among students.

Respondent stated that:

"Medyo confusing po minsan, may mga topic po kase na masyadong malalim, mahirap po syang intindihin muna. Minsan po ay kulang pa kami sa time bago po naming maiintindihan".

The difficulty of understanding due to deep and complex topics (DCT) is a common challenge in the KSA learning (Acar & Uluyol, 2019). Moreover, inadequate time to comprehend (ITI) and insufficient resources necessitate further development (IRN) are also significant factors

that can hinder the learning process (Johnson, 2017). Students face difficulties in understanding complex topics, insufficient time, and lack of resources, which lead to incomplete learning and poor understanding. The teachers perceive the shallow understanding among the students, limitations in the rural context, lack of materials, and challenges in teaching complex science concepts.

Subtheme 6.2 Teaching Approaches and Strategies

This subtheme relates to the different approaches and strategies used by teachers to facilitate learning. It includes codes that highlight the importance of adequate explanations, knowledge sharing, experimentation, and hands-on activities to enhance understanding and skills. Teachers adjust their teaching level, use a gradual approach, and teach bit by bit to cater to the varying levels of understanding among students. Students learn from adequate explanations from their teacher, as well as from sharing and discussing ideas among classmates. Respondent stated that

“Kaya kailangan ko munang ituro ang basic talaga. Kaya po paunti-unti talaga”.

Effective teaching approaches and strategies are critical in KSA learning (Hakim, 2020). Gradual and bit-by-bit teaching approaches (TAA and TAA2) are effective in improving learning outcomes and retention (Lin, Chen, & Hung, 2021). Moreover, the development of understanding and the applicability of knowledge outside the classroom (DUA) is essential in motivating students and enhancing their skills (Mousoulides, 2019).

Subtheme 6.3 Knowledge and Skill Acquisition

This subtheme relates to the acquisition of knowledge and skills by students. It includes codes that highlight the importance of assessing students' knowledge foundation, identifying gaps in knowledge, and developing skills through gradual and systematic teaching. Students recognize their increased learning in Senior High School but note a rare opportunity for experimentation and insufficient development of knowledge, skills, and values. Respondent stated that

“Kailangan po munang ituro ang basic talaga, kaya lang ay paunti-unti talaga”.

Teachers note the need to teach the basics, develop understanding, and improve skills acquisition. Effective knowledge and skill acquisition is essential in KSA learning (Firmin & Karabenick, 2019). The assessment of student knowledge foundation (SKL) is an important step in identifying gaps and promoting learning (Brouwer & Korthagen, 2020). Moreover, the development of basic skills (TBS) and identification of incomplete knowledge and modules (INK, INM) help students acquire essential knowledge and skills.

Subtheme 6.4 External Factors Affecting Learning

This subtheme relates to external factors that affect the learning process. It includes codes that highlight the importance of addressing external factors such as limited resources, inadequate modules, and the effects of the pandemic on learning. Students note the effects of the pandemic on learning and the need for applicability outside of the classroom. Teachers

mention limitations due to the rural context, lack of internet access, and confusion with certain science concepts. They specified that

“nalilimitahan sya dahil nga nasa rural context, kulang din ang allotted time para sa mga concept, tapos hindi naman pwedeng umasa lang sa modules. Minsan may mga topic din din akong hinahanap na wala sa module”.

External factors such as limited resources and the lack of materials can hinder the learning process (Nisha & Bhardwaj, 2019). Furthermore, the pandemic has had significant effects on KSA learning, such as increased online learning and limited access to resources (Mohammed, 2021). Therefore, addressing external factors is crucial in promoting effective KSA learning.

After analyzing and decoding all the previous responses, the following concept map is formed relating the learning of KSA in the senior high school. The overarching theme that emerges from the codes is the Challenges and Opportunities in KSA Learning and the need for improvement in the teaching and learning of knowledge, skills, and attitudes (KSA) in the Senior High School (SHS) level.

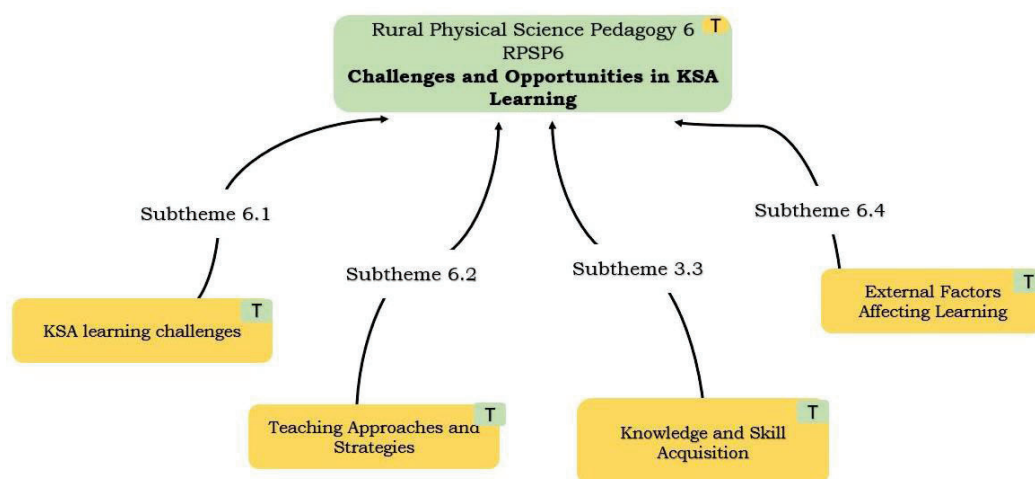


Figure 7. Rural Physical Science Pedagogy 6 (RPSP6)

Both students and teachers recognize the challenges and limitations faced in the classroom, such as insufficient time, resources, and understanding of complex topics. Teachers also note the need for adjustments in their teaching approaches and importance of developing students' knowledge and skills. Students emphasize the benefits of learning from adequate explanations, sharing and discussing ideas, and the importance of real-life application of their learnings. Finally, the effects of external circumstances, such as the pandemic and the rural context, are also noted as challenges to the teaching and learning of KSA in the SHS level.

It is important to address these challenges to ensure that students in the SHS level are equipped with the necessary KSA for their future careers and personal development. Teachers should be supported with adequate resources and training to improve their teaching approaches and ensure that students are able to acquire the knowledge and skills they need. Additionally,

incorporating more hands-on activities and real-life applications of concepts may also help students better understand and retain their learnings (Santos, Gardoce, & Mendoza, 2021).

Research Question Number 2: What are the factors that influence the success and failures of Physical Science Pedagogy in a rural context?

Theme 7: Factors Affecting Success and Failure of Science Pedagogy in a Rural Setting

After analyzing responses of students and teachers related to the factors affecting the success or failures of Physical Science Pedagogy in the rural setting, the following subthemes emerged.

Subtheme 7.1 Environmental and Resource Limitations

This subtheme includes lack of materials, equipment, and facilities for experiments, poor internet connectivity, and environmental challenges that hinder teaching and learning physical science.

Students specified that *“Wala pong internet at gadget maghihintay pa po kami ng kinabukasan para mgatanong sa guro”*. They also stated that *“Ganoon din po sir ang kakulangan sa facilities sir iyon din po ang dahilan kaya hindi po kami nakakapaglaboratory”*. Likewise another student justified that *“factor din po ang layo ng school sa bahay minsan po kase ay maputik at mahairap ang daan”*.

Teachers uttered that *“Unang una talaga ay materials, kasunod na ang equipment. May ilang equipment, kaso wala naman kaming mapaglagyan ng experiment. Ganoon din ang facility. Kase napakahirap na magkoconsume ka talaga ng ilang oras sa pagbibibit ng mga materials., ilang oras nalang ang natitira sa pagaactivity mo.*

According to Bravmann (2020), limited resources in rural areas are a challenge for educators. Lack of resources, inadequate facilities, and poor internet connectivity are common concerns in rural schools (Ahmed, 2020). Other codes connected to this subtheme are transportation issues, distance between home and school, and the condition of the road that makes it difficult for students to attend classes regularly.

The other related codes are lack of resources: Lack of materials, equipment, facilities, and resources for experiments and teaching physical science, as well as inadequate facilities, poor signal, and transportation issues.

Subtheme 7.2 Personal and Social Factors

This subtheme encompasses various personal and social factors such as household responsibilities, financial constraints, family problems, emotional issues, and external distractions that affect students' focus and concentration in learning physical science. Students stated that

“Wala po kami minsang pambili ng materyales na gagamitin sa activity”. Likewise another student added that *“Minsan po wala kaming baon ay malayo po ang bahay namin sa school. They also stated that “factor din po ang problema sa bahay. May mga gawaing bahay din. Ako din kasi ang nagbabantay sa kapatid ko kaya po hindi ako nakakapasok”*.

Students who have to balance school and work, or who have family responsibilities, often

struggle with academic performance (Makara & Kosiba, 2019). Moreover, students' interest in the subject and their behavior also impact their academic performance. For Wang and Degol (2018), motivation, engagement, and persistence are critical components of student success in science. These related codes are Personal and social factors: Household responsibilities, financial constraints, family problems, emotional issues, and external distractions that affect students' focus and concentration, and students' interest in the subject and their behavior.

Subtheme 7.3 Pedagogical and Instructional Factors

This subtheme includes various pedagogical and instructional factors, such as teachers' capability to teach the subject, teaching style and strategy, language barrier, difficulty in understanding due to broad or insufficient explanation or shift in topics, overwhelming amount of concepts to learn, and lack of equipment and resources that hinder learning. Students stated that

“May mga mahihirap po talagang intindiing terms sa Physical Science, nararamdaman din po namin kung nahihirapan o ang guro namin na ituro ang isang subject.” This was resounded by teacher respondent who stated that “Hindi ako Science Major Sir, kaya minsan ay nahihirapan talaga ako sa mga terminologies.

Teachers uttered that *“Ganoon din ang comprehension and confidence ng guro. Ganoon din sa speaking skills ng guro. Kapag ang guro ay hirap sa pagdi-deliver ng concept kahit alam nya ang concept. Nahihirapan sya ay sa pag papaliwanang ng konsepto. Kapag ganoon ang nangyari hindi din ito maiintindihan ng bata. Ganoon din po, hindi ako sir Science Major talaga. Nahihirapan po ako sa mga terminologies.”*

Respondent justified that “Teachers' ability to deliver engaging and meaningful instruction is critical to student success in science (Hennessy & Onguko, 2021). Students benefit from explicit instruction, scaffolding, and teacher-led discussions that support learning (Tas, Peker, & Arslan, 2020). The related codes are pedagogical and instructional factors: Teachers' capability to teach the subject, teaching style and strategy, language barrier, difficulty in understanding, and lack of equipment and resources that hinder learning, overwhelming amount of concepts to learn, and shift in topics.

Subtheme 7.4 Technology and Information Limitations

This subtheme includes limited access to information and technology, such as the lack of gadgets and internet access, vocabulary related to the internet and signal, and the need for internet connectivity for online classes and research.

Student specified that *“Signal din po sir, minsan po ay kaakibat talaga ng science ang technology. Sa mga libro po ay may nakalagay na link ay dahil nga po walang signal, hindi po nagagwa ng bata ang mga activity. Pagdating ng teacher sa signal dun palang naming madadownload at saka ipapakita sa bata. Syempre po ang location kung nasaan ang school, pag ganito pong malayo ay bukod po sa may mga kulang sa gamit ay wala po talagang signal kaya kailangan po talagang mag strategize ang guro.”*

Teachers stated that *“factor din po ang kawalan ng kompletong gadget, ganoon din po ang kawalan ng Internet at Signal minsan po ay kaakibat talaga ng science ang technology. Sa mga libro po ay may nakalagay na link ay dahil nga po walang signal, hindi po nagagwa ng bata ang mga activity. Pagdating ng teacher sa signal dun palang naming madadownload at saka*

ipapakita sa bata. Syempre po ang location kung nasaan ang school, pag ganito pong malayo ay bukod po sa may mga kulang sa gamit ay wala po talagang signal kaya kailangan po talagang mag strategize ang guro.”

According to Marak and Gogoi (2019), technology infrastructure in rural areas is inadequate, resulting in limited access to information and technology. Additionally, students need internet connectivity for online classes and research (Jhala, Patel, & Patel, 2018). Lack of access to information and technology impacts student learning and achievement. The related codes are technology and information limitations: Limited access to information and technology, such as the lack of gadgets and internet access, vocabulary related to the internet and signal, and the need for internet connectivity for online classes and research.

After all the previous codes are decoded, the following concept map pertaining to factors affecting the success and failure of science pedagogy was developed.

Figure 8 on the succeeding page shows the overarching theme, the factors affecting the success and failure of physical science pedagogy in the rural setting. This theme encompasses four subthemes: environmental and resource limitations, personal and social factors, pedagogical and instructional factors, and technology and information limitations.

In rural areas, providing quality science education can be challenging due to lack of resources and facilities for experiments, poor internet connectivity, and environmental challenges.

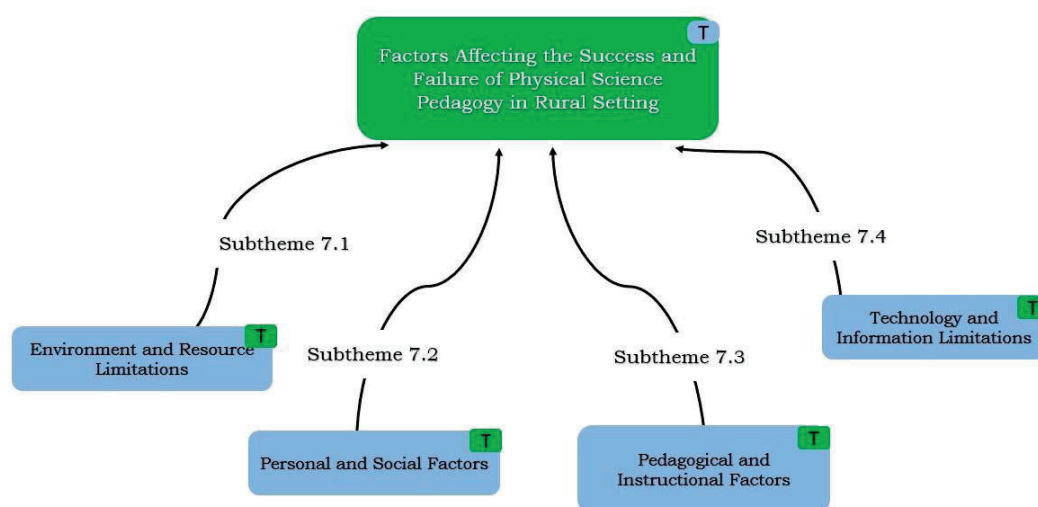


Figure 8. Factors affecting the Success and Failure of Physical Science Pedagogy

As noted by McEwan and Bull (2016), rural schools often struggle to provide students with the necessary resources and facilities to learn science, including laboratories, equipment, and supplies. This lack of resources can make it difficult for students to understand scientific concepts and apply them to real-world situations.

Personal and social factors can also impact the quality of science education in rural areas. For example, students may face household responsibilities, financial constraints, and family problems that can affect their ability to focus on their studies. Additionally, students' interest in

the subject and their behavior can impact their academic performance, as noted by Sujatha and Sasikala (2020).

Pedagogical and instructional factors also play a significant role in the quality of science education in rural areas. Teachers' capability to teach the subject, their teaching style and strategy, and the difficulty in understanding scientific concepts due to insufficient explanation or an overwhelming amount of information can all hinder students' learning. According to a study by Bao et al. (2021), improving teacher training and support in rural areas can lead to better science education outcomes for students.

Finally, limited access to technology and information can also pose a challenge to providing quality science education in rural areas. The lack of gadgets and internet access can hinder students' ability to conduct research and access online resources, as noted by Amutabi (2019). Additionally, students may struggle with vocabulary related to the internet and signal, making it difficult for them to navigate online resources.

Furthermore, the challenges in providing quality science education in rural areas are multifaceted and require a holistic approach to address. By addressing the subthemes of environmental and resource limitations, personal and social factors, pedagogical and instructional factors, and technology and information limitations, educators and policy-makers can work towards improving science education outcomes for rural students.

Research Question Number 3: How do teachers and students retain success and overcome failures in Physical Science Pedagogy in a rural context?

Theme 8: Challenges and Coping Mechanisms in Teaching and Learning Physical Science in the Rural Setting

Subtheme 8.1 Coping Strategies of Students

This subtheme revolves around the different methods that students use to cope with the difficulties they encounter in learning Physical Science. These methods include borrowing books and requesting tutorial sessions, asking classmates and teachers for help, and searching for alternative research methods. Other strategies include requesting hands-on activities, additional video presentations and simulations, and computation lessons. This is justified in the statement of the respondent that “*Nanghihiram po kami ng libro sa teacher, humihingi rin po ako ng tulong sa kaibigan, family ko po at sa guro*”.

For example, in a study by Boado, et al. (2021), students coping mechanisms in learning Physical Science were explored, and it was found that many students cope by asking questions when they don't understand, hoping to revisit lessons from Junior High School, and focusing on studying Physical Science.

The following are some example codes under this subtheme: Borrowing books from teacher, asking questions when don't understand, hoping to revisit lessons from Junior High School, want to review topics that weren't understood, focusing on studying Physical Science, requesting materials for experiments and activities, asking for help from friend, family, and teacher, requesting tutorial in Physical Science, suggesting to split costs for experiment materials, searching for alternatives to materials, asking for help from relatives in town or with strong signal, and asking classmates or teachers for help when absent.

Subtheme 8.2 Teacher's Coping Strategies

This subtheme focuses on the different strategies employed by teachers to overcome the challenges of teaching Physical Science. These strategies include researching to solve difficult concepts, finding relevant and accessible resources, and being adaptive to different learners. Other strategies include providing handouts, searching for a resource speaker, and localizing with available resources.

Teacher respondent stated that “Lagi po akong nag ririsearch at nonood po ng mga video at tutorials”. Another teacher stated that “ang ginagawa ko po ay nagbibigay ako ng handouts, maliban sa mga modules nila, ako nalang ang naghahanap ng ibang references”. Another teacher justified that “Huwag tayong mahiyang magtanong dapat maging adaptive tayo sa ibat-ibang uri ng learners kaya naghahanap ako ng resource speaker para magdiscuss ng isang topic”.

In the study conducted by Vargas et al. (2021), the researchers examined the coping mechanisms employed by teachers when teaching Physical Science in rural settings. The findings revealed that teachers adopted various coping strategies to address the challenges they faced in these contexts. Some of the coping strategies identified included adapting teaching strategies, seeking assistance from colleagues, and resourcefulness in finding alternative teaching materials.

One of the coping mechanisms employed by teachers was the adaptation of teaching strategies. In rural settings, teachers recognized the diverse needs of their students and modified their instructional approaches accordingly. They adjusted their teaching methods to accommodate different learning styles and cater to the unique requirements of students in the context of Physical Science. This adaptability allowed teachers to enhance student engagement and comprehension. Another coping strategy involved seeking help from colleagues. Recognizing limitations and difficulties they encountered in teaching Physical Science, teachers actively sought assistance and support from their fellow educators. The collaborative efforts were crucial in sharing experiences, knowledge, and effective instructional practices. By engaging in professional networks, teachers were able to overcome challenges more effectively and improve their teaching outcomes.

Resourcefulness played a significant role in teachers' coping mechanisms. In the absence of readily available instructional materials, equipment, and facilities, teachers in rural settings demonstrated creativity and resourcefulness in finding alternative solutions. They actively sought out supplementary teaching materials and adapted existing resources to suit their teaching needs. This resourcefulness allowed teachers to provide quality education despite limited resources, enhancing the learning experience of their students.

The example codes provided in this subtheme further illustrate the specific coping strategies employed by teachers. Instructional materials, equipment, facilities, and schedule highlight the importance of adapting and improvising with available resources to create an effective learning environment. Perception, interest, readiness, and self-study emphasize the teachers' focus on understanding their students' individual needs and tailoring their teaching approaches accordingly. The mention of Physical Science and rural context emphasizes the specific challenges faced by teachers in teaching this subject in rural areas. Lastly, researching to ensure understanding, watching video tutorials, and reviewing lessons demonstrate the teachers' proactive approach in enhancing their own knowledge and skills to meet the demands of teaching Physical Science in rural settings.

Subtheme 8.3 Access to resources

This subtheme encompasses codes related to the availability and adequacy of instructional materials, equipment, and facilities needed for effective teaching and learning of Physical Science. Teachers and students alike encountered challenges in accessing these resources, which in turn affected their teaching and learning experiences. Teachers had to be resourceful and creative in adapting to limitations of their school's available resources, such as borrowing materials, searching for alternative research methods, localizing with available resources, and providing handouts.

Students requested additional books and equipment, hands-on activities, reduction in number of subjects per day, laboratory access, and a proper library. Student respondent stated that *"Nanghihiram po kami ng libro sa teacher sir at nagkukusa nalang po kami minsan humanap ng signal para makapag internet po, sana nga rin po ay mabigyan kami ng materials na pwede po naming gamitin sa experiment"*. Another student uttered that *"sana po ay may laboratory kami, model at equipment sa Physical Science"*.

These requests highlight the need for adequate resources to be made available to facilitate the teaching and learning of Physical Science in rural areas. According to Hughes and Quinn (2013), access to instructional materials and facilities is crucial in enhancing the quality of education. This subtheme encompasses codes such as instructional materials, equipment, facilities, handouts, and laboratory access.

Subtheme 8.4 Student Engagement

Student engagement encompasses codes related to the factors that affect student interest in learning Physical Science. Students encountered challenges such as financial difficulties, difficulty accessing the internet, sleepy students during afternoon classes, insufficient materials, and poor signal.

Teacher Respondent mentioned that *"Nagkakaroon po kami ng problema sa kakulangan ng pasilidad at mahinang internet kaya nagiging maparaan ako sa paggamit kung ano lang ang available"* This is supported by the statement *"To address these challenges, teachers employed various strategies such as finding ways to get children's attention, being adaptive to different learners, addressing students' needs, and finding relevant and accessible resources. The teacher respondent also stated that "kapag may kakulangan nag-aadjust ako sa bata"*.

On the other hand, students requested hands-on activities, reduction in the number of subjects per day, more engaging the teaching of Physical Science, additional video presentations and simulations, and computation lessons. These codes highlight the need for teachers to use engaging teaching strategies and to address the needs of their students to enhance their interest in learning Physical Science.

According to Fredricks, Blumenfeld, and Paris (2004), student engagement is critical in promoting the student learning and academic achievement. This subtheme encompasses codes like student interest, engagement, teaching strategies, and addressing students' needs.

All the previous codes were decoded which paved way to the development of the following concept map connected to the challenges and coping mechanisms in the teaching and learning of physical science in the rural setting.

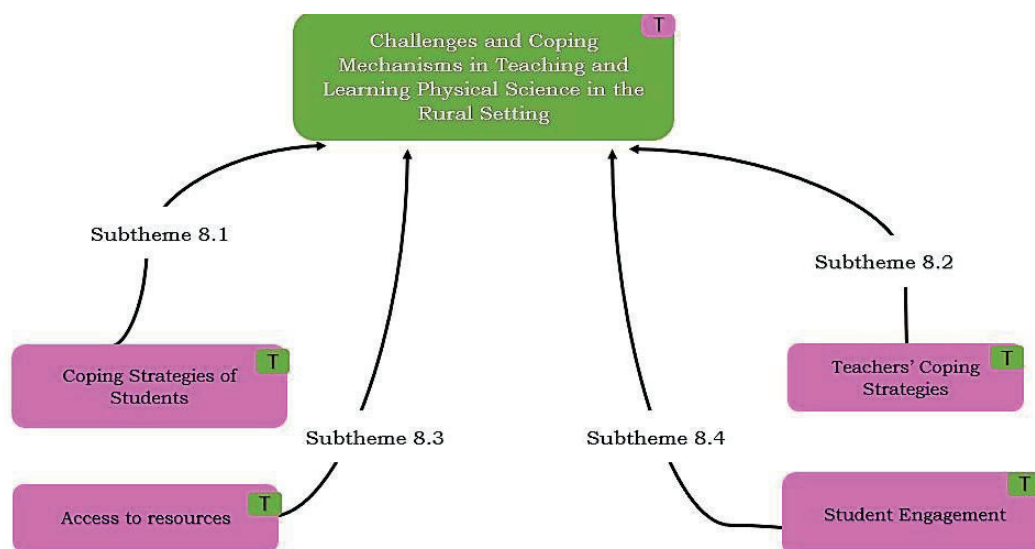


Figure 9. Challenges and Coping Mechanisms in Teaching and Learning Physical Science in the Rural Setting

Figure 9 shows the overarching theme, Challenges and Coping Mechanisms in Teaching and Learning Physical Science in the Rural Setting. The codes related to the challenges highlight the difficulties encountered in teaching and learning Physical Science in rural areas, such as limited access to instructional materials, equipment, and facilities, as well as the factors that affect student interest in learning. On the other hand, the codes related to coping mechanisms highlight the strategies employed by teachers and students to overcome these challenges, such as being resourceful, seeking help, and adapting to different learners.

The overarching theme emphasizes the importance of being adaptive and creative in addressing the challenges encountered in teaching and learning Physical Science in rural areas. This theme highlights the unique difficulties that teachers and students face in the rural context and the strategies they use to overcome these challenges.

Teaching and learning physical science in a rural setting is a complex process that involves various factors such as limited access to instructional materials and equipment, inadequate facilities, and unfamiliarity with scientific terminologies. These challenges may affect the students' interest and motivation to learn, as well as the teacher's ability to effectively deliver the lessons.

However, both the teachers and the students employ various coping mechanisms to overcome these challenges. Teachers adapt their teaching strategies and seek help from different sources such as resource speakers, websites, and other teachers from Junior High School. They also utilize available resources and find creative ways to provide hands-on activities and relevant samples to their students.

On the other hand, students cope with the challenges by seeking help from their teachers, classmates, and even their relatives. They also request for additional materials and equipment, as well as hands-on activities and laboratory access to enhance their understanding and retention of the lessons.

The theme emphasizes the importance of resourcefulness, adaptability, and collaboration in teaching and learning physical science in a rural setting. It also underscores the need for better facilities, equipment, and materials, as well as engaging teaching strategies that cater to the unique needs and interests of the students.

OBJECTIVE 4: Design a Learning Action Cell Plan that can be used to address the challenges of Science Teachers in rural area

Theme 9. Importance of improving teaching strategies and resources in Physical Science

After analyzing the responses in relation to the suggestion for learning action cells, the following emergent subthemes were identified:

Subtheme 9.1 Training and strategies for teaching Physical Science

One of the identified subtheme or subcategories is the need for training and strategies for teaching Physical Science. Many of the teachers recognize the importance of constantly improving and innovating teaching strategies to make difficult topics more accessible to students.

Teacher respondent stated that *“Sa tingin ko training o strategies kung paano ituturo ang pagtuturo ng Physical Science, Sana magkaroon tayo ng training.”*

A study by Lavy and Sand (2015) found that professional development programs for science teachers had a positive impact on student learning outcomes. This highlights the importance of providing ongoing professional development opportunities for teachers to enhance their teaching strategies and improve student achievement.

Some of the notable codes identified in this study are the: need for training on teaching strategies, innovative teaching methods, focus on science and strategies in training, strategy sharing. Teachers suggest a need for training on teaching strategies to improve their delivery of science lessons and propose innovative teaching methods to make science more engaging for students.

Subtheme 9.2 Compliance with MELC and Review of Physical Science topics

Another category or subtheme that emerged is the need for compliance with the MELC and review of Physical Science topics. Teachers recognize the importance of ensuring compliance with the curriculum guidelines to ensure students are receiving a comprehensive education. Additionally, reviewing Physical Science topics helps teachers identify areas where students may need more support.

Teacher respondent mentioned that *“Seminars po sana about topic po ng Physical Science na mababalikan po ang MELC”*.

A study by Mangubhai, Dashwood, and Annabell (2016) found that reviewing science content helped teachers identify misconceptions that their students held, and this led to improved student learning outcomes.

Some of the notable codes identified under this subtheme are the Physical Science improvement, review of Physical Science topics and MELC. Teachers suggest a need for improvement in physical science education, including the review of physical science topics and adherence to the MELC (Most Essential Learning Competencies).

Subtheme 9.3 Availability and familiarization with equipment and materials

The availability and familiarization with equipment and materials is another subtheme that emerged from the teachers' responses. Teachers recognize that access to adequate resources is important to ensure students are receiving a quality education.

Respondent stated that “*dapat sana sir kahit tayo ay nasa rural ay may laboratory at equipment pa rin ang bata*” Another teacher added that “*Ganoon din po sana ang mga materials ay ipakilala sana sa mga guro kapag idi-deliver sa amin sa school*”.

A study by Manu, Oteng-Pepurah, and Amedahe (2018) found that the availability of laboratory equipment had a positive impact on student motivation, engagement, and achievement. Additionally, teachers need to be familiar with the equipment and materials to ensure they can effectively integrate them into their lessons.

Some of the notable codes identified to be under this theme are: Availability of TV in classrooms, introduction of materials to teachers, need for laboratory, familiarization with equipment, complete materials, facilities. Teachers suggest improvements to the availability of resources, including the introduction of materials to teachers, familiarization with equipment, and the need for laboratory facilities.

Subtheme 9.4 Specific topics in Physical Science

Another subtheme that emerged is the specific topics in Physical Science that teachers identified as being particularly difficult or important. Teachers mentioned difficult topics such as Stellar Nucleosynthesis, Polar and Non-Polar, and the Theory of Relativity.

Teacher respondent stated that “sana po ay magkaroon ng training sa mahihirap na topic kagaya ng Stellar Nucleosynthesis, Polar and Non-Polar, and the Theory of Relativity”.

Focusing on these specific topics allows teachers to better tailor their lessons to meet needs of their students. A study by Dancy and Henderson (2010) found that tailoring instruction to specific student needs led to improved student achievement in science.

The following are notable codes related to the said subtheme: Physical Science, Stellar Nucleosynthesis, Polar and Non-Polar, Theory of Relativity. Teachers suggest focusing on specific topics within physical science, including the challenging topics of Stellar Nucleosynthesis, Polar and Non-Polar, and Theory of Relativity.

Subtheme 9.5 Suggestions for improvement

The final subtheme that emerged is the suggestions for improvement that teachers provided. Teacher respondent uttered that “*Sana po ay magkaroon ng LAC about teaching techniques, specific topic in Physical Science at magkaroon ng TV ang lahat ng classroom para po mas Madali po sa guro ang pagtuturo na may kasamang presentation sir.*”

These suggestions included localized activities, inviting science majors as speakers, and conducting seminars on Physical Science topics. These suggestions can help teachers improve their lessons and engage students in learning. Additionally, suggestions such as complete materials, facilities, and availability of TV in classrooms can help improve the overall learning environment for students.

The notable codes for this subtheme are Suggested/localized activities, Inviting a science major as a speaker, and Laboratory demo during SLAC. All of the previous responses were decoded which led to the development of the following concept map, Importance of improving teaching strategies and resources in Physical Science.

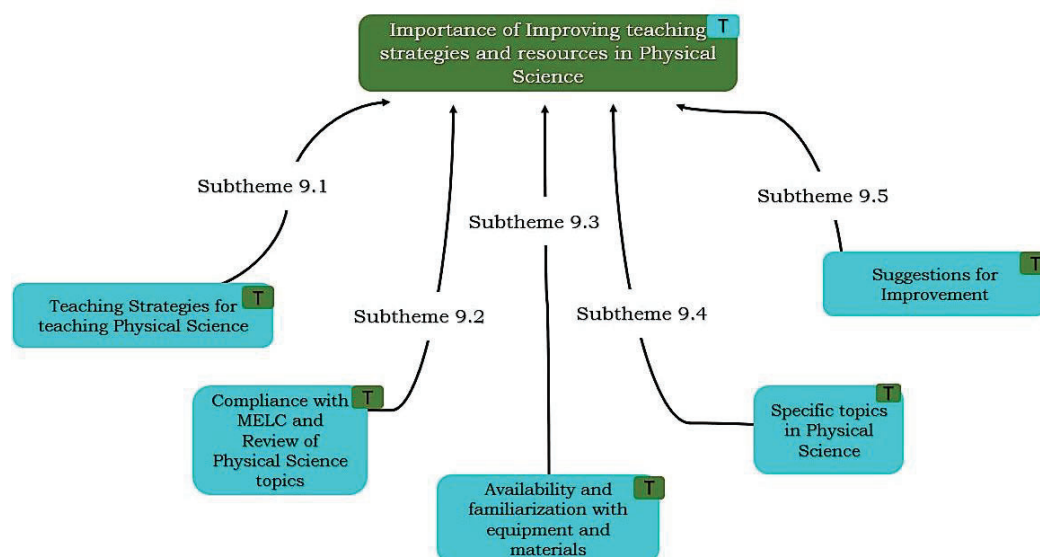


Figure 10. Importance of improving teaching strategies and resources in Physical Science

Figure 10 shows the overarching theme and its connections to five themes related to suggestions for the action cell topics. The overarching theme that emerged from the subthemes is the importance of improving teaching strategies and resources in Physical Science. This includes training and strategies for teaching physical science, compliance with MELC and review of physical science topics, availability and familiarization with equipment and materials, specific topics in physical science and suggestions for improvement. These findings are consistent with previous research that highlights the importance of teacher professional development, access to resources, and tailoring instruction to student needs to improve student learning outcomes (Lavy & Sand, 2015; Manu et al., 2018; Dancy & Henderson, 2010).

Conclusions

From the results of the study, the following conclusions are drawn:

1. Rural science teachers encounter obstacles like limited resources, inadequate training, and low student interest, requiring customized training, resource provision, and engaging curricula to improve student learning outcomes.
2. Environmental and resource limitations, personal and social factors, pedagogical and instructional factors, and technology and information limitations impact the success and failure of rural physical science pedagogy, necessitating the establishment of a conducive learning

environment, adoption of student-centered teaching strategies, and utilization of suitable technology to enhance science education in rural areas.

3. The study emphasized the significance of adaptability and creativity in tackling challenges faced in rural Physical Science education, with coping mechanisms involving resourcefulness, seeking assistance, and adapting to diverse learners, and to enhance student learning outcomes, it is essential to offer support to teachers and students, foster peer learning opportunities, and encourage collaboration among stakeholders.

4. Enhancing student learning outcomes in physical science requires improving teaching strategies and resources, and the study developed a localized Learning Action Cell (LAC) plan that promotes collaboration among teachers, school administrators, and stakeholders to develop innovative teaching methods and utilize available resources, ultimately enhancing the quality of physical science education in rural areas. Implementing this plan enables teachers to achieve teaching breakthroughs and improve student learning outcomes in the subject.

Recommendations

From the conclusions drawn, the following recommendations are offered:

1. The school administration may increase support and funding for science education in rural areas to address the lack of resources, equipment, and facilities that impede effective teaching and learning.
2. The school district and its component schools may provide additional professional development opportunities for teachers in rural areas to enhance their pedagogical knowledge and skills, particularly in teaching physical science. This could include training on effective teaching strategies, innovative ways to teach physical science topics, and how to use available resources to enhance instruction.
3. The school may encourage collaboration among teachers, school administrators, and stakeholders in the rural setting to develop innovative teaching methods and leverage available resources to improve the overall quality of physical science education.
4. School district administrators and school heads may ensure that physical science curricula are designed and implemented in a way that is relevant and engaging to students in rural areas, taking into consideration the unique environmental and social factors that affect their learning.
5. School principals and science head teachers may encourage the use of technology and information resources to supplement physical science instruction, particularly in rural areas where access to physical resources and equipment may be limited.
6. School principals and science head teachers may establish learning action cells in rural schools to promote peer-to-peer learning and provide teachers with ongoing support and feedback. This will help teachers develop innovative teaching methods, share resources and ideas, and enhance the overall quality of physical science instruction in rural areas.

Compliance with Ethical Standards

In preparation for the structured interviews, participants were not only requested to

provide informed consent but were also provided with a thorough explanation of the study's objectives. Explicit consent for recording the interviews was also diligently sought. Throughout the study, participants were consistently reminded of their right to withhold their thoughts on specific topics or decline to answer questions.

The researcher placed paramount importance on the security and confidentiality of the participants. All data collection and analysis procedures were meticulously carried out with an unwavering commitment to safeguarding the identity and privacy of the respondents. Rigorous steps were taken to ensure anonymity, providing an additional layer of protection for the participants.

Participants were not only informed of their right to withdraw from the study at any time without facing any repercussions, but they were also assured of this absolute freedom. The researcher respected their right to discontinue participation without any questions asked, ensuring that their choices were honored throughout the study.

Furthermore, it is crucial to note that participants were never exposed to any form of harm during any phase of the research. The researcher took stringent measures to guarantee that the study did not cause any physical or psychological harm to the respondents.

This study was conducted with an unwavering commitment to a conflict-free environment. It was undertaken solely with the purpose of contributing to the body of knowledge and understanding in the field of study.

In addition to upholding ethical standards, strict measures were in place to prevent plagiarism. Every source and reference was accurately cited, and the research was conducted with academic integrity at its core.

The analysis of research findings was executed with a profound commitment to impartiality. The researcher ensured that findings were interpreted objectively, devoid of any preconceived notions, thus maintaining the integrity of the study.

Acknowledgments

The researcher would like to extend his heartfelt gratitude to everyone who, in some way or another, had contributed to conception and completion of this work, especially to:

Dr. Marife S. Magpantay, his research adviser, for her encouraging words, support, help, tireless efforts, and vital assistance in editing the paper to make this study better;

Dr. Luis Miguel P. Saludez, for his untiring effort in answering the questions of the researcher and acts a member of the panel; Vanessa S. Zubieta and Dr. Arsenia A. Abuel his research panel, for their insightful remarks on how to enhance the research's qualitative component's substance and reliability, for reviewing the paper, for offering helpful feedback on how to make the study better, and most importantly for motivation; Dr. Teresita V. de la Cruz, and Dr. Richan S. Santiago his external panel, for giving assistance and devoting valuable time

to reviewing the paper and for insightful recommendations and comments that helped this study come to completion;

Dr. Klenn Michael Jameson B. Piquero, Dr. Wins Marian C. Dela Cruz, Dr. Eric V. Mornaol, Dr. Juanito A. Merle, Dr. Rebie Marciano his validators, who offered encouraging words and made an effort to substantiate his guiding queries;

Mrs. Loradel B. Romano, School Principal II of Pagsangahan National High School, for assisting the researcher throughout the full study process and providing guidance;

Mr. Eutiquio A. Empleo and Laarni A. Gloria District Supervisors of San Francisco District and All School Heads of San Francisco District for contributing your time and assistance with this study's administration and execution;

Senior High School Teachers and Junior High School Teachers of Pagsangahan National High School, for motivation, comprehension, and moral support of the researcher;

All Physical Science Teachers of San Francisco District II and Grade 12 Senior High School Students of San Francisco District II who served as respondents for their active participation; His loving family for their love, support, prayers, and financial aid.

Almighty God, for HIS immeasurable kindness, care, and direction.

REFERENCES

- Abiodun, A. (2020). How some factors in the school environment can affect the learning of Nigerian secondary school students. Munich, GRIN Verlag, <https://www.grin.com/document/535915>
- Adelabu, M. O., Adu, E. O., & Adu, O. F. (2019). Confidence and academic performance among secondary school students in Oyo state, Nigeria. *Journal of Education and Practice*, 10(30), 77-85.
- Adodo, S. O. (2021). Science education in developing countries: Challenges and opportunities. In S. O. Adodo (Ed.), *Science Education in Developing Countries* (pp. 1-12). Springer.
- Abiodun, A. (2020, February 25). *GRIN - How some factors in the school environment can affect the learning of Nigerian secondary school students*. <https://www.grin.com/document/535915>
- Acar, E., & Uluyol, Ç. (2019). Investigating pre-service science teachers' understanding of energy concepts. *Journal of Education and Training Studies*, 7(1), 19-28. <https://doi.org/10.11114/jets.v7i1.3915>
- Ahmed, N. (2020). Challenges faced by rural schools in Pakistan: A review of literature. *International Journal of Education and Research*, 8(6), 33-44. <https://doi.org/10.24113/ijer.v8i6.965>
- Akcay, B., & Arslan, C. (2018). The effects of hands-on activities on academic achievement and attitudes towards physics. *International Journal of Environmental and Science Education*, 13(3), 181-195.
- Akpan, J. P., Olasehinde, G. I., Akpabio, E. M., & Joseph, E. A. (2020). Effect of hands-on experimentation on students' critical thinking skills in secondary school physics. *European Journal of Physics Education*, 11(3), 1-16.
- Ambag, R. (2019). Teaching Science In The Philippines: Why (And How) We Can Do Better. <https://www.flipscience.ph/news/features-news/features/teaching-science-philippines/>

- Amutabi, M. N. (2019). The challenges of technology access and use in remote rural schools: The case of schools in Kenya. *Education and Information Technologies*, 24(6), 3899-3915. <https://doi.org/10.1007/s10639-019-09893-2>
- Arifin, S. R. M. (2018). Ethical Considerations in Qualitative Study. *INTERNATIONAL JOURNAL OF CARE*. <https://journals.iium.edu.my/ijcs/index.php/ijcs/article/view/82>
- Awofala, A. O., & Okebukola, P. A. (2020). Pedagogy of science teaching in rural schools: challenges and opportunities for science teacher education in Africa. *African Journal of Research in Mathematics, Science and Technology Education*, 24(2), 261-276.
- Bakia, M., Murphy, R., Anderson, R., & Williams, R. (2012). Learning from online teacher professional development: Emerging views and perspectives. *Journal of Teacher Education*, 63(1), 33-44. doi: 10.1177/0022487111428640
- Bao, W., Cai, T., Yao, Z., Zhang, B., & Liu, Q. (2021). Digital technology, teacher-student interaction and academic achievement in primary education during the COVID-19 pandemic: a longitudinal study. *Educational Research and Evaluation*, 27(1-2), 70-88.
- Bao, L., Zhao, Y., Zhang, Y., & He, W. (2021). Teacher training and support in rural areas of China: The case of science education. *International Journal of Science and Mathematics Education*, 19(4), 791-809. <https://doi.org/10.1007/s10763-020-10138-4>
- Boado, M. P., Conaco, C. R., Salinas, K. D., Dado, M. P., & Encina, R. E. (2021). Coping mechanisms of learners in learning physical science: A mixed-method approach. *Asia Pacific Journal of Multidisciplinary Research*, 9(1), 96-105. <https://doi.org/10.26740/apjmr.v9n1.p12>
- Bravmann, S. (2020). Rural teacher retention and attrition: What we know and what we need to learn. *Peabody Journal of Education*, 95(1), 42-60. <https://doi.org/10.1080/0161956X.2019.1687565>
- Brouwer, N., & Korthagen, F. (2020). How to assess the foundation of students' knowledge: A systematic review. *Teaching and Teacher Education*, 93, 103070. <https://doi.org/10.1016/j.tate.2020.103070>
- Bell, R. L., Maeng, J. L., Peters-Burton, E. E., & Gess-Newsome, J. (2017). Teachers' challenges in implementing inquiry-based science instruction in rural schools. *Journal of Research in Science Teaching*, 54(5), 668-697.
- Bester, J. C., Thielmann, L., & Potgieter, M. (2021). Investigating the impact of a hands-on approach on learner engagement and academic achievement in Natural Sciences. *African Journal of Research in Mathematics, Science and Technology Education*, 25(2), 245-257.
- Boyd, D., & Sloat, E. (2019). The impact of limited resources on science teaching in rural schools. *International Journal of Science and Mathematics Education*, 17(7), 1347-1365. doi: 10.1007/s10763-019-10047-5
- Castro M., Expósito-Casas E., López-Martín E., Lizasoain L., Navarro-Asencio E., Gaviria J.L.(2015). Parental involvement on student academic achievement: A meta-analysis. *Educ. Res. Rev.*;14:33–46. doi: 10.1016/j.edurev.2015.01.002.
- Chen, X. (2021). Covid-19 and educational inequality. *Economics of Education Review*, 79, 101988.
- Chen, J., Chen, T., & Zhu, J. (2020). Teachers' attitudes, professional identity and self-efficacy regarding emergency remote teaching during COVID-19 pandemic. *Pedagogical Research*, 5(4), em0063.
- Chikasanda, V. M., Majawa, T. M., & Kaphuka, J. J. (2016). Science teacher education in a rural context: challenges and opportunities for innovation. *Journal of Research in Science Teaching*, 53(6), 898-924. doi: 10.1002/tea.21309

- Cho, H., & Kim, M. (2017). Exploring the impact of abstract concept learning on science achievement. *Journal of Educational Research*, 110(5), 485-494. doi: 10.1080/00220671.2015.1126641
- Cox, M. & Sanchez, J. (2016). Developing global leaders through education and training. *Journal of World Business*, 51(3), 366-374. doi: 10.1016/j.jwb.2016.01.004
- Craig, S. (2013). Questioning. In Hattie, J. & Anderman, E.(Eds.). *International guide to student achievement*. New York, USA: Routledge.
- Czerniak, C. M., Haney, J. J., Lumpe, A. T., & Egan, V. (2016). Rural students' access to and interest in STEM careers: A Nebraska case study. *Journal of Science Education and Technology*, 25(6), 916-929.
- Dancy, M., & Henderson, C. (2010). Pedagogical practices and instructional change of physics faculty. *American Journal of Physics*, 78(10), 1056-1063.
- De La Cruz, R.J.D. (2022). Science Education in the Philippines. In: , et al. *Science Education in Countries Along the Belt & Road. Lecture Notes in Educational Technology*. Springer, Singapore. https://doi.org/10.1007/978-981-16-6955-2_20
- Engelsrud GH and Markula P (2022) Editorial: Embodied Pedagogy and Movement (Discourses) in Physical Education. *Front. Sports Act. Living* 4:873091. doi: 10.3389/fspor.2022.873091
- Farooq M.S., Chaudhry A.H., Shafiq M., Berhanu G. (2012). Factors affecting students' quality of academic performance: A case of secondary school level. *J. Qual. Techn. Manag.* ;7:1–14.
- Firmin, M. W., & Karabenick, S. A. (2019). Reducing cognitive load in science instruction: A review of the literature on cognitive load theory. *Science Education*, 103(3), 527-551. <https://doi.org/10.1002/sce.21490>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109. <https://doi.org/10.3102/00346543074001059>
- Gilmore, C., Cuskelly, M., & Gilmore, A. (2019). Investigating student difficulties in understanding abstract algebraic concepts. *Research in Mathematics Education*, 21(1), 33-50. doi: 10.1080/14794802.2018.1548326
- Gluckman, P. (2011). *Looking Ahead: Science Education for the Twenty-First Century* Wellington: Office of The Prime Minister's Science Advisory Committee
- Goddard R.D. (2013). Relational networks, social trust, and norms: A social capital perspective on students' chances of academic success. *Educ. Eval. Pol. Anal.* ;25:59–74. doi: 10.3102/01623737025001059.
- Goss, P. & Sonnemann, J. (2017). *Engaging students: Creating classrooms that improve learning*. Melbourne: Grattan Institute. Retrieved 21 April 2018 from: <https://grattan.edu.au/report/engaging-stud>
- Gordy, X.Z.; Sparkmon, W.; Imeri, H.; Notebaert, A.; Barnard, M.; Compretta, C.; Dehon, E.; Taylor, J.; Stray, S.; Sullivan, D.; et al. (2021) Science Teaching Excites Medical Interest: A Qualitative Inquiry of Science Education during the 2020 COVID-19 Pandemic. *Educ. Sci.* 2021, 11, 148. <https://doi.org/10.3390/educsci11040148>
- Guo, Y., Hao, Y., & Su, X. (2022). The effectiveness of hands-on activities on science learning outcomes: A meta-analysis. *Educational Research Review*, 38, 100462.
- Hakim, A. A. (2020). The impact of effective teaching approaches and strategies on the development of students' knowledge and skills in KSA. *International Journal of Academic Research in Business and Social Sciences*, 10(8), 625-637. <https://doi.org/10.6007/ijarbss/v10-i8/7452>
- Hawk, R. (2022). What Is Pedagogical Science? <https://www.languagehumanities.org/what-is-pedagogical-science>.

- Haworth, C. M., Davis, O. S., Hanscombe, K. B., Kovas, Y., Dale, P. S., & Plomin, R. (2013). Understanding the science-learning environment: A genetically sensitive approach. *Learning and Individual Differences*, 23, 145-150. <https://doi.org/10.1016/j.lindif.2012.07.018>
- Harlen, W., Holroyd, C., & Maloney, J. (2015). Inquiry-based learning in science education: Evidence from the field. *Journal of Educational Change*, 16(2), 185-210. doi: 10.1007/s10833-015-9244-0
- Hendrix, E. (2019). *How your surroundings affect how you study?* <https://www.ucas.com/connect/blogs/how-your-surroundings-affect-way-you-study>
- Hennessy, S., & Onguko, B. (2021). Teachers' ability to deliver engaging and meaningful instruction is critical to student success in science. *International Journal of Science and Mathematics Education*, 19(4), 739-757. <https://doi.org/10.1007/s10763-020-10123-x>
- Herrington, A., & Parker, J. (2021). Meeting the needs of resource-constrained STEM learning environments. *Journal of Educational Research and Practice*, 11(1), 40-52. doi: 10.1177/1474904120968531
- Herodotou, C., Sharples, M., Gaved, M., Rienties, B., Scanlon, E., & Whitelock, D. (2019). Innovative Pedagogies of the Future: An Evidence-Based Selection. *Frontiers in Education*, 4. <https://doi.org/10.3389/feduc.2019.00113>
- Hindman, A. H., and Morrison, F. J.(2012). Differential contributions of three parenting dimensions to preschool literacy and social skills in a middle-income sample. *MerrillPalmer Quarterly*,58(2), 191-223.
- Hmelo-Silver, C. E. (2012). *Design principles for scaffolding technology-enhanced learning environments*. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of research on educational communications and technology* (pp. 56-65). Springer. doi: 10.1007/978-1-4614-3185-5_6
- Hu, Y., Li, Y., & Wu, Y. (2021). How to enhance student engagement in online learning during COVID-19 pandemic. *Journal of Chemical Education*, 98(5), 1495-1502.
- Hughes, K. L., & Quinn, E. (2013). Promoting high-quality science education in rural schools: A review of the research. *Journal of Research in Rural Education*, 28(8), 1-14.
- Jhala, S., Patel, R., & Patel, B. (2018). Accessibility of internet in rural areas of India: A case study of Gujarat. *International Journal of Computer Science and Mobile Computing*, 7(8), 9-15. <https://doi.org/10.15680/IJCSCMC.2018.007806>
- Johnson, E. (2017). *Factors affecting student academic success in gateway courses at Northern Arizona University*. (Doctoral dissertation). Retrieved from <https://nau.edu/wp-content/uploads/sites/74/2017/07/NAU-repository-factors-affecting-student-academic-success-in-gateway-courses-at-northern-arizona-university.pdf>
- Joyce, B., Weil, M. & Calhoun, E. (2014). *Models of teaching* (9th ed.). Pearson.
- Kaufman, T. (n.d.) Building positive relationships with students: What brain science says. [understood.org/en/articles/brain-science-says-4-reasons-to-build-positive-relationships-with-students](https://www.understood.org/en/articles/brain-science-says-4-reasons-to-build-positive-relationships-with-students)
- Kaufman, T. (2022). *Building positive relationships with students: What brain science says*. <https://www.understood.org/en/articles/brain-science-says-4-reasons-to-build-positive-relationships-with-students>
- Kaur, H. (2015). Mixed Methods Research. Retrieved from <https://www.lawctopus.com/academike/mixed-methods-research/>
- Kokkotas, P. (2017). Enhancing science education through access to materials and resources. *International Journal of Science Education*, 39(6), 775-787.
- Kocakulah, M., & Şahin-Kızıl, A. (2018). Science education in rural schools: A case study from Turkey. *International Journal of Environmental and Science Education*, 13(3), 197-210.

- Komal, C. (2022). Factors contributing to learning personal & environmental study notes & material. <https://byjusexamprep.com/cdp-factors-contributing-in-learning-i>
- Law, M. and Finnigan, J. (2021). Letting your students fail: Overcoming failure experiences in undergraduate work-integrated learning. Special Issue: The practice and research of cooperative education and work-integrated learning in the Canadian context. <https://files.eric.ed.gov/fulltext/EJ1313477.pdf>
- Lavy, S., & Sand, E. (2015). On the origins of gender gaps in human capital: Short- and long-term consequences of teachers' biases. *National Bureau of Economic Research*.
- Lemov, D. (2015). Teach like a champion 2.0: 62 techniques that put students on the path to college. San Francisco, USA: Jossey-Bass.
- Lindsay, J. & Davis, V.A. (2016). The global educator: Leveraging technology for collaborative learning and teaching. Cheltenham, Australia: Hawker Brownlow Education.
- Lin, C. H., Chen, Y. J., & Hung, C. Y. (2021). Gradual and bit-by-bit teaching approaches for improving learning outcomes and retention: A systematic review. *Educational Psychology Review*, 33(1), 93-119. <https://doi.org/10.1007/s10648-020-09575-4>
- Mabogoane, T. E., & Mosimege, M. (2020). Exploring challenges faced by rural schools and teachers in teaching natural sciences. *African Journal of Research in Mathematics, Science and Technology Education*, 24(3), 239-249. doi: 10.1080/18117295.2020.1768061
- Marak, N. D., & Gogoi, A. (2019). Technology infrastructure in rural areas of India: A study of rural Assam. *International Journal of Humanities and Social Science Research*, 9(1), 63-73. <https://doi.org/10.11648/j.hssr.2019.0906.10>
- Makara, K. & Kosiba, J. P. (2019). Nontraditional students and academic performance: Exploring the impact of work, family, and other obligations on academic success. *Journal of Higher Education Theory and Practice*, 19(10), 83-94.
- Mangubhai, F., Dashwood, A., & Annabell, R. (2016). Enhancing science teaching in primary schools: A case for engaging teachers in action research. *Asia-Pacific Journal of Teacher Education*, 44(1), 53-68.
- Manu, K. A., Oteng-Pepurah, M., & Amedahe, F. K. (2018). Effect of availability of laboratory equipment on senior high school students' achievement in chemistry. *Journal of Education and Practice*, 9(3), 12-21.
- McEwan, B. E., & Bull, G. L. (2016). Challenges facing rural science education: What are the implications for teacher educators? *Journal of Research in Rural Education*, 31(5), 1-12.
- McLeod, S. A. (2017). *Kolb - learning styles*. *Simply Psychology*. Retrieved from <https://www.simplypsychology.org/learning-kolb.html>
- Mendoza, M.G. et al. (2017). Learning Action Cell as Professional Development Model: An Adaptation of Lesson Study. World Association of Lesson Studies 2017. <https://www.walsnet.org/2017/program/program/pdf/pp-h1.pdf>
- Mohammed, S. A. (2021). Challenges and opportunities of remote online learning during COVID-19 pandemic: A case study of King Saud University, Saudi Arabia. *International Journal of Emerging Technologies in Learning*, 16(7), 61-77. <https://doi.org/10.3991/ijet.v16i07.13363>
- Mousoulides, N. (2019). The development of understanding and the applicability of knowledge outside the classroom: A review of the literature. *Educational Research Review*, 27, 178-189. <https://doi.org/10.1016/j.edurev.2019.01.001>
- Muhtarom, T., Juniati, D. and Siswono, T.Y.E. (2019). Examining Prospective Teachers' Belief And Pedagogical Content Knowledge Towards Teaching Practice In Mathematics Class: A Case Study. *Journal on Mathematics Education* Volume 10, No. 2, May 2019, pp. 185-202

- National Research Council. (2012). *A framework for K-12 science education: Practices, crosscutting concepts, and core ideas*. National Academies Press.
- Nisha, M. K., & Bhardwaj, A. (2019). Challenges faced by rural students: A review of literature. *International Journal of Applied and Pure Science and Agriculture*, 5(7), 120-125.
- Northern Illinois University Center for Innovative Teaching and Learning. (2020). Howard Gardner's theory of multiple intelligences. In Instructional guide for university faculty and teaching assistants. Retrieved from <https://www.niu.edu/citl/resources/guides/instructional-guide>
- Owa, M. (2022). *What is Pedagogy: Definition, Principles & Application*. <https://www.ormpl.us/blog/what-is-pedagogy-definition-principles-application>
- Özkan, E. O., Kocabas, H., & Yüksek, I. (2021). An analysis of COVID-19 pandemic's impact on science education. *Journal of Baltic Science Education*, 20(2), 216-228.
- Pan, W., & Wong, Y. L. (2018). Collaborative learning and learner-centered instruction to promote academic and social gains in science education. *International Journal of Science Education*, 40(14), 1681-1700.
- Peters-Burton, E. E., Bell, R. L., Maeng, J. L., & Gess-Newsome, J. (2016). Rural students' perceptions of science in a rural high school: Relating experiences to the global society. *Journal of Research in Rural Education*, 31(10), 1-15.
- Pritchard, R., Croucher, R., Parry, L., & Fagan, E. (2021). Inequalities in secondary school education in rural and urban areas of Sub-Saharan Africa. *International Journal of Educational Development*, 82, 102397.
- Ulla, M. & Achivar, J. (2021). Teaching on facebook in a University in Thailand during the COVID-19 Pandemic: A collaborative autoethnographic study. *Asia Pacif. Soc. Sci. Rev.* 21, 169–179.
- Ulla, M. B., and Perales, W. F. (2021a). Facebook as an integrated online learning support application during the COVID19 pandemic: Thai university students' experiences and perspectives. *Heliyon* 7:e08317. doi: 10.1016/j.heliyon. 2021.e08317
- Ulla, M. B., and Perales, W. F. (2021b). Emergency remote teaching during COVID19: The role of teachers' online Community of Practice (CoP) in times of crisis. *J. Interact. Med. Educ.* 9, 1–11.
- UNESCO. (2020). *COVID-19 educational disruption and response*. UNESCO. Retrieved from <https://en.unesco.org/covid19/educationresponse>
- Vargas, G. L. V., Andres, R. C. A., & Mariano, J. S. S. (2021). Coping mechanisms of science teachers in teaching physical science in rural settings. *Journal of Physics: Conference Series*, 1770(1), 012052. <https://doi.org/10.1088/1742-6596/1770/1/012052>
- Wang, M. T., & Degol, J. L. (2018). *Motivation, engagement, and persistence: Essential ingredients for success in science*. *Teachers College Record*, 120(9), 1-23.
- Wardale, D., Cameron, R., & Li, J. (2015). A culturally sensitive, mixed-methods approach to analysing a leadership development program. *European Conference on Research Methodology for Business and Management Studies*, 390.
- Personal Factors Affecting Student Learning & Success. (2016, October 26). Retrieved from <https://study.com/academy/lesson/personal-factors-affecting-student-learning-success.html>.
- Piquero, KMJB. (2020). *Enriching the School-Based Stem Curriculum Through Collaborative and Interdisciplinary Approach*. Unpublished Dissertation. Southern Luzon State University-Lucban.
- Power School (2022). *Pedagogy in Education: More Than Just a Buzzword*. <https://www.powerschool.com/blog/pedagogy-in-education-more-than-just-a-buzzword/>
- Reuven, S., & Cohen, A. (2021). A study of effective teaching methods in science. *European Journal of Education Studies*, 8(2), 205-221.

- Rezaie, K. (2016). The Effects of Learning Environment Factors on Students' Motivation in English Language Learning among Undergraduate Students of Azad University of Karaj. [researchgate.net/publication/330168935_the_effects_of_learning_environment_factors_on_students'_motivation](https://www.researchgate.net/publication/330168935_the_effects_of_learning_environment_factors_on_students'_motivation)
- Roorda, D., Koomen, H., Split, J. & Oort, F. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81(4), 493-529.
- Ross, M. A., & Bruce, C. D. (2020). Investigating teacher facilitation in rural middle school science classrooms. *Journal of Research in Science Teaching*, 57(1), 17-40.
- Sæle, O. O., Sæther, I. K., & Viig, N. G. (2021). The Ideal Body: A Social Construct? Reflections on Body Pressure and Body Ideal Among Students in Upper Secondary School. *Frontiers in Sports and Active Living*, 3. <https://doi.org/10.3389/fspor.2021.727502>
- Sahebdeh, B., et al. (2013). Effect of environmental factors for teaching of science on academic achievement and interest of students and on their teachers' job satisfaction. <http://www.ijonte.org/FileUpload/ks63207/File/08.sahebzadeh.pdf>
- Santoso, H. B., & Asyhar, R. (2018). The effect of hands-on activities on science achievement, science self-concept, and science attitude: A meta-analysis study. *Journal of Baltic Science Education*, 17(4), 608-622.
- Schunk, D. H., & Usher, E. L. (2019). Social cognitive theory and motivation. In R. Ryan & E. Deci (Eds.), *Handbook of self-determination research* (pp. 146–161). Rochester, NY: University of Rochester Press.
- Shirke, A. (2021). What Is Pedagogy? Importance Of Pedagogy In Teaching And Learning Process. <https://www.iitms.co.in/blog/importance-of-pedagogy-in-teaching-and-learning-process.html#type>
- Son, J. Y. (2021). The role of laboratory experiments in learning abstract concepts in high school physics. *International Journal of Science Education*, 43(6), 1026-1042.
- Sujatha, R., & Sasikala, P. (2020). Personal and social factors affecting the academic performance of students in rural areas. *Journal of Education and Practice*, 11(10), 43-50. <https://files.eric.ed.gov/fulltext/EJ1260368.pdf>
- Tas, Y., Peker, M., & Arslan, H. (2020). The importance of explicit instruction, scaffolding, and teacher-led discussions in science teaching. *Journal of Education and Learning*, 9(3), 80-92. <https://doi.org/10.5539/jel.v9n3p80>
- Turner J.E., Husman J., Schallert D.L. (2014). The significance of students' aspirations in their emotional experience of academic failure: a study of the causes and outcomes of shame *Educ. Psych.* 37:79–89. *Psych. J.* 5:122–139.
- Van Voorhis, F.L. (2013). The Impact of Family Involvement in the Education of Children. <https://files.eric.ed.gov/fulltext/ED545474.pdf>
- Vettenranta, J., Wang, J., & Garvis, S. (2020). Family related variables effect on later educational outcome: a further geospatial analysis on TIMSS 2015 Finland. *Large-scale Assessments in Education*, 8(1), 1-13. <https://doi.org/10.1186/s40536-020-00081-2>
- Walker, R., & Goh, S. (2021). Helping students understand abstract concepts in science. *Australian Journal of Education in Chemistry*, 84, 19-25.
- Wilder S. (2014). Effects of parental involvement on academic achievement: A meta-synthesis. *Educ. Rev.* 66:377–397. doi: 10.1080/00131911.2013.780009.
- Yin, X. (2021). The Interplay of EFL Students' Enjoyment, Hope, Pride and Self-Regulation. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.803476>
- Zara, C. G., Balazon, F., Wangdi, T., Perales, W. F., Praditson, P., & Ulla, M. B. (2022). Exploring the concept of pedagogical resilience during the COVID-19 pandemic: Teachers' perspectives from Thailand and the Philippines. *Frontiers in Education*, 7. <https://doi.org/10.3389/educ.2022.981217>



Teachers' Self-Efficacy with Artificial Intelligence (AI) Based Educational Tools

Allan H. Sumandal

School of Graduate Studies, Saint Mary's University, Bayombong, Nueva Vizcaya, Philippines

DOI: 10.5281/zenodo.10002206

ABSTRACT

The purpose of this study was to determine the level of teachers' self-efficacy with the use of Artificial Intelligence-based educational tools. Descriptive-comparative was utilized as the research design. The investigation included twenty-five (25) AI teacher-users of Abueg National High School which was selected using a purposive sampling method. A validated self-made questionnaire in a Likert scale with four orderable gradations was employed to gather the necessary data. The statistical tools used were frequency, percentage, mean, standard deviation, and ANOVA test. Results suggest that the majority of the respondents were female, 31 to 40 years of age, 1 to 10 years in service with units in master's degree. They have a high self-efficacy with AI indicating a strong belief in their ability to use AI-based educational tools to enhance teaching and learning practices. Using ANOVA one-way, a value greater than 0.05 was observed in all variables which means there is no significant difference in the respondent's demographic profile and their level of self-efficacy with AI tools. This result accepts the hypothesis. However, it was recommended that teachers should strengthen their use of AI-based tools to improve teaching and non-teaching-related tasks. Furthermore, attending workshops or seminars about AI in education was also suggested.

Keywords: ANOVA; Artificial Intelligence; descriptive-correlation; educational tools; teachers' self-efficacy

INTRODUCTION

Technology plays a pivotal role in the post-pandemic scenario and has profoundly impacted education's digital transformation. It enabled teachers to deliver classes online, allowing learners to continue their education remotely. In addition, it also revolutionized and increased the development and utilization of digital learning resources, helping students to easily access a vast amount of information at their fingertips. As a result, teachers' digital competencies were

enhanced, paving the way for Education 4.0 (Ubaedillah & Pratiwi, 2021) and opening up new possibilities for expanding human knowledge through engagement with new technologies. Digital tools have been a long-time partner for teachers in education delivery. It enables teachers to teach and do non-teaching functions faster and easier, making them more effective and efficient. Indeed, technology increases teachers' self-efficacy.

Teachers' self-efficacy refers to the capabilities of teachers to positively impact student learning and outcomes. It plays a crucial role in their motivation, job satisfaction, and instructional practices. However, it is affected by some factors, such as the teachers' personal characteristics, experiences, and support.

According to Pelaez et al. (2022), technological support is important for teachers' self-efficacy. Therefore, providing resources like technology tools can help teachers increase their self-efficacy in teaching. Educational technology integration has been found to positively influence teachers' self-efficacy, specifically in areas such as classroom management, instruction strategy design, student engagement, and technology integration. Educator preparation programs that focus on integrating technology into the classroom can also improve self-efficacy in technology use for teacher candidates (Saeinko et al., 2020; Thomson & Sorbet, 2020).

Moreover, teachers' past experiences, attitudes, and confidence in learning and adapting to new technologies can impact their self-efficacy. Opportunities for professional development, access to technology resources, and willingness to experiment with new approaches can also contribute to teachers' self-efficacy (Mitchel, 2021). These reflect that technology can positively affect teachers' self-efficacy and that teacher training and instructional design can play a role in improving self-efficacy.

The utilization of Artificial Intelligence in education can help achieve SDG 4 by providing personalized and adaptive learning experiences, predicting student outcomes, and identifying students at risk of failing. AI can be used in education in various ways, such as adaptive learning, teaching evaluation, virtual classroom, and improving the overall quality of teaching and learning, leading to better academic performance and outcomes for students (Huang et al., 2021). AI systems can offer personalized learning to students, automate instructors' routine tasks, and power adaptive assessments, making online learning and teaching more effective (Seo et al., 2021).

The integration of AI into education has the potential to revolutionize traditional teaching methods. By increasing efficiency, improving teaching effectiveness, and developing new learning methods, teachers can easily develop lesson plans, choose appropriate instructional materials, and deliver topics. AI can also analyze student performance data and provide insights into how to improve teaching and learning. As such, many educator-researchers have shown interest in AI applications for teaching and learning (Darayseh, 2023).

The effects of AI on teachers' self-efficacy have been examined in several studies. Noy & Zhang (2023) claimed that exposure to a generative AI technology increased job satisfaction and self-efficacy among professionals. For instance, integrating educational technologies positively impacted university teachers' self-efficacy in classroom management, instruction strategies design, students' engagement, and technology integration (Saienke, 2020). Elementary and junior high school teachers were confident in their ability to study AI-related courses, but junior

high school teachers had higher anxiety levels than elementary school teachers. It implies that more teacher training workshops on AI applications can be conducted for junior high school teachers to improve their familiarity with AI applications (Hsu et al., 2023).

Today, there are abundant AI resources available for teachers to utilize in various tasks like planning lessons, recording scores, presenting lessons, and creating instructional materials. Some of the widely used AI tools by educators are Grammarly (Miranty et al., 2021), QuillBot (Fitria, 2021), and Canva Education (Fauziyah et al., 2022). With these AI tools, it is now easy for teachers to find and generate instructional materials. On the contrary, many are still questioning the credibility and accuracy of the information given by AI.

Studies have shown that implementing artificial intelligence in education can effectively solve issues and improve students' learning experiences (AlGhamdi, 2022; Kashive, 2020). AI integration can also enhance accessibility to knowledge and improve the quality of the educational process (Osetskyi, 2020). Therefore, it is crucial to explore the potential of AI in teaching and consider it as a new approach to transforming traditional methods, thereby attaining sustainable education.

In the Philippines, no policies or republic acts support the usage of artificial intelligence in the academe. Also, no local studies assess the teachers' self-efficacy with artificial intelligence such as AI, that creates lesson plans, instructional materials, and assessments. In this, the researcher of this study would like to delve into measuring teachers' self-efficacy with artificial intelligence.

Research Questions

This study aims to determine the level of self-efficacy of teachers while integrating Artificial Intelligence in their teaching process. Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - a. Gender
 - b. Age
 - c. Years in Service
 - d. Educational Attainment
2. What is the level of self-efficacy of teachers with AI-based educational tools?
3. Is there a significant difference between the respondents' level of self-efficacy with AI tools when they are grouped according to profile?

Hypothesis

H₀: There is no significant difference between the respondents' level of self-efficacy with AI tools when they are grouped according to profile.

METHODOLOGY

Research Design

This study utilized a descriptive-comparative research design. The descriptive research design was used to determine the teachers' self-efficacy with Artificial Intelligence. Meanwhile, the comparative research design was utilized to test the differences between the respondents' level of self-efficacy with AI tools when they were grouped according to profile.

Respondents

Respondents of this study were 25 pre-identified teacher-users of Artificial Intelligence such as Canva Education, Grammarly, QuillBot, Classpoint, and others in Gov. Alfredo A. Abueg Sr. National Technology & Vocational Memorial High School. They were chosen purposively since they are the only teachers utilizing AI-Based educational tools in teaching.

Data Sources/Research Instrument

To gather the needed data, the researcher used a self-made questionnaire. The items in this questionnaire were based on the readings about the teachers' self-efficacy with the help of technology. The instruments consisted of two parts – Part I was about the respondents' demographic profile while Part II was about their level of self-efficacy with AI. A total of 16 statements were developed to gather the needed information. Some of the items in the questionnaire were adopted from the "Teacher's Self-Efficacy Scale Form 1 (long form)" by Tschannen-Moran & Hoy (2001).

Statements on the questionnaire were based on a 4-point Likert scale with the following assigned values: 1-Strongly Disagree; 2-Disagree; 3-Agree; 4-Strongly Agree.

The instrument was pilot-tested on 40 teachers. Using SPSS v. 27, Cronbach alpha was determined. Taber (2017) reported that an alpha value of 0.70 or higher is considered acceptable, thus reflecting sufficient internal consistency. The reliability coefficient of this instrument was 0.932. This indicates that the instrument is highly reliable.

The instrument was also checked by at least three panels of internal and external validators.

Data Gathering Procedures

Prior to the start of the data collection, the researcher forwarded a letter of request to the School Principal of the identified school, asking permission to conduct the study employing teachers under his area of supervision. After approval, teachers were asked to answer the questionnaire through a Google survey form. To protect intellectual property rights, all data acquired was kept strictly confidential.

Data Analysis

In quantifying the responses, a Likert scale with four orderable gradations with a Range of Means and descriptions was utilized. The data were entered in SPSS and Microsoft Excel and were treated using mean, frequency, standard deviation, and ANOVA. Mean ($\bar{x}$) was employed to

determine the central point in the distribution of measurement. In the context of this study, the weighted mean was used to identify the average response of the respondents. Frequency (f) or descriptive measure was used to describe the extent to which the respondents had experienced the items indicated in the questionnaire. Standard deviation (sd) is a statistical measure that quantifies the amount of variation or dispersion in a set of values. It provides information about how spread out the data points are relative to the mean (average) of the data set. One-way ANOVA was used to establish whether there are any statistically significant differences between the means of three or more independent (unrelated) groups (Fawad, 2020). In this study, respondents' demographic profile and teachers' self-efficacy with AI was correlated.

RESULTS and DISCUSSIONS

Table 1. Demographic Profile of the Respondents

	FREQUENCY	PERCENT
Gender		
Male	4	16.0
Female	21	84.0
Prefer not say	0	0.00
Total	25	100.0
Age		
21-30	7	28.0
31-40	12	48.0
41-50	5	20.0
51-60	1	4.0
Total	25	100.0
Length of Service		
Less than 1 year	1	4.0
1-10 years	20	80.0
11-20 years	2	8.0
21-30 years	2	8.0
Total	25	100.0
Educational Attainment		
Baccalaureate Degree	10	40.0
With Master's Degree Unit	13	52.0
Master's Degree Graduate	2	8.0
Total	25	100.0

The data presented above provides an overview of the demographic profile of the 25 respondents surveyed in this study. The majority of respondents were female (84%), with a relatively uneven distribution of ages, but the largest age group is 31-40 years old (48%). With regards to the length of service, 80% of respondents were 1-10 years. In terms of educational attainment, 52% of respondents were with Master's degree unit, followed by a Baccalaureate degree 40%.

The demographic profile of the teachers in chosen school highlights the diversity in age, length of service, and education, which is essential when examining the difference in the level of self-

efficacy. The predominance of female respondents in the sample may indicate that women are more likely to use technology in the classroom more frequently and of different types than that of male (Wiseman et al., 2017). As reflected by the respondents' age and length of service, many of them can still be considered young and new to the profession. This may depict that younger teachers tend to use technology more frequently in teaching and learning than older teachers (Boorang et al., 2018). The respondents' educational attainment implies that continuing professional development may affect technology integration in class. According to Drossel and Eickelmann (2017), teachers who participate in professional development use computers more frequently in class, place a greater focus on teaching ICT skills, and have a stronger feeling of ICT self-efficacy.

Table 2. Teachers' Level of Self-Efficacy with AI (n=25)

Statements	Mean	SD	Interpretation
<i>I can craft good questions for students with the help of AI.</i>	3.44	0.70	High
<i>I can provide an alternative explanation or example when students need clarification with the help of AI.</i>	3.44	0.75	High
<i>I can develop lesson plans that are fitted to the needs of each student using AI.</i>	3.44	0.70	High
<i>I can explain difficult lessons in simple instructions with the help of AI.</i>	3.40	0.49	High
<i>I can use various assessment strategies with the help of AI.</i>	3.36	0.74	High
<i>I can adjust lessons to the proper level of each student with the help of AI</i>	3.32	0.73	High
<i>I can present the lesson more engagingly through the help of AI.</i>	3.24	0.86	High
<i>I can instantly respond to students' difficult questions with the help of AI.</i>	3.24	0.81	High
<i>I can create relevant content, supplementary materials, and other resources beyond traditional textbooks with the help of AI.</i>	3.24	0.81	High
<i>I can accurately provide knowledge to students through AI-generated information.</i>	3.16	0.78	High
<i>I can quickly provide feedback on students' output through the help of AI.</i>	3.12	0.82	High
<i>I can help students increase their memory of the lessons taught through AI.</i>	3.04	0.82	High
<i>I can keep students on task on difficult assignments using AI.</i>	2.84	0.67	High
<i>I can maintain students' discipline with the aid of AI.</i>	2.84	0.78	High
<i>I can assist parents in using AI for them to monitor their children's school tasks.</i>	2.84	0.67	High
<i>I can help students think critically using AI.</i>	2.80	0.89	High
OVERALL MEAN	3.17	0.69	High

Legend: 3.50-4.00-Very High; 2.50-3.49-High; 1.50-2.49-Low; 1.00-1.49-Very Low

According to the statistics, the level of teachers' self-efficacy with AI scored on average 3.17 with a standard deviation of 0.69, falling inside the "High" category as indicated by the accompanying

legend. The highest mean score of 3.44 was observed in the first three items with a standard deviation of 0.70, 0.75, and 0.70, respectively. This manifests that teachers have high self-efficacy in instructional strategies. On the other hand, the last statement had the lowest mean score, 2.80 (SD=0.89), indicating the need for teachers to explore more AI that will help teachers to improve students' critical thinking. This finding is in line with the study of Barton & Dexter (2020), providing resources like technology tools can help teachers increase their self-efficacy in teaching. This also suggests that teachers' self-efficacy increases with the help of technology like Artificial Intelligence.

Table 3. Difference between Respondents' Level of Self-Efficacy with AI when grouped according to profile

Demographic Profile		Mean	SD	Sig.	Decision
Age	21-30	2.99	0.58	0.537	Not significant
	31-40	3.34	0.44		
	41-50	3.00	0.82		
	51-60	3.31	0.00		
Gender	Male	3.38	0.38	0.444	Not Significant
	Female	3.13	0.59		
Length of Service	Less than 1 year	2.88	0.00	0.803	Not Significant
	1-10 years	3.14	0.61		
	11-20 years	3.28	0.40		
	21-30 years	3.50	0.27		
Educational Attainment	Baccalaureate Degree	3.06	0.51	0.742	Not Significant
	With Master's Unit	3.25	0.62		
	Master's Graduate	3.22	0.66		

*Legend: ** denotes significant at 0.05 level of significance*

Table 6 presents the results of a One-way ANOVA test comparing the mean scores of the respondent's profiles and their level of self-efficacy. The analysis reveals no significant differences between these variables since all the computed p-values are all greater than the significance level of 0.05. In detail, none from Age, Gender, Length of Service, and Educational Attainment have been found to have significant differences with the level of self-efficacy with AI. This result opposes the findings of Montellese (2019), stating that there was a significant difference in technology self-efficacy scores that may influence a teacher's self-efficacy based on a teacher's age, number of years teaching, and attitude toward technology.

Conclusions

1. The majority of the respondents were female, and the largest age group was 31-40. Respondents were in 1 – 10 years of length of service and with almost the same percentage of having Master's unit and baccalaureate degrees.
2. Teachers have high self-efficacy with AI, which contributes to their belief that AI could help enhance teaching and learning.

3. When the respondents' levels of self-efficacy in AI are compared when grouped according to profile, it was found that there were no significant differences between the two. This indicates that the level of self-efficacy of teachers with AI does not differ with the respondents' gender, age, length of service and educational attainment.
-

Recommendations

1. Teachers may continue and maximize the use of AI as an educational resource to better enhance the teaching and learning process.
 2. Teachers may explore other AI tools that could help them lessen their other administrative functions.
 3. The Department of Education or School Administrators should support teachers by conducting seminars or LAC sessions on the use of AI in teaching.
 4. For future studies, researchers may conduct similar studies and the same instrument for a greater number of teachers.
-

Compliance with Ethical Standards

The study adhered to ethical guidelines in conducting research with human participants. Before starting the data collection process, the researcher ensured that informed consent was obtained from all participants. Participants were informed about the purpose of the study, how the data would be used, and the voluntary nature of their participation. Additionally, the confidentiality of the participants' information was guaranteed, and any identifying information was removed during the data analysis process to protect their privacy.

Acknowledgments

The author wishes to thank the Department of Science and Technology, Science Education Institute for the provision of the scholarship to complete this undertaking. The teachers and administrators of Gov. A. Abueg Sr. National Technology and Vocational Memorial High School are likewise acknowledged for taking part in this academic endeavor.

REFERENCES

- AlGhamdi, A. (2022). Artificial Intelligence in Education as a Mean to Achieve Sustainable Development in Accordance with the Pillars of the Kingdom's Vision 2030—A Systematic Review. *International Journal of Higher Education*. <https://doi.org/10.5430/ijhe.v11n4p80>
- Barton, E. A., & Dexter, S. (2019). Sources of teachers' self-efficacy for technology integration from formal, informal, and independent professional learning. *Educational Technology Research and Development*, 68(1), 89–108. <https://doi.org/10.1007/s11423-019-09671-6>

- Boorang, A. M., Fard, S. H., Sharahi, Y. B., & Khodabandelou, R. (2018). A Phenomenological Study on Teacher's View and Perspectives on Using Technology in Teaching Learning. *The Journal of Social Sciences Research*, 2(Special Issue), 348-355.
- Darayseh, A. A. (2023). Acceptance of artificial intelligence in teaching science: Science teachers' perspective. *Computers & Education: Artificial Intelligence*, 4, 100132. <https://doi.org/10.1016/j.caeai.2023.100132>
- Drossel, K., & Eickelmann, B. (2017). Teachers' participation in professional development concerning the implementation of new technologies in class: a latent class analysis of teachers and the relationship with the use of computers, ICT self-efficacy and emphasis on teaching ICT skills. *Large-scale Assessments in Education*, 5(1). <https://doi.org/10.1186/s40536-017-0053-7>
- Fauziyah, N. L., Widodo, J. P., & Yappi, S. N. (2022). The Use of 'Canva for Education' and the Students' Perceptions of Its Effectiveness in the Writing Procedure Text. *Budapest International Research and Critics Institute-Journal*, 5(1), 6368–6377. <https://doi.org/10.33258/birci.v5i1.4359>
- Fitria, T. N. (2021). QuillBot as an online tool: Students' alternative in paraphrasing and rewriting of English writing. *Englisia : Journal of Language, Education and Humanities*, 9(1), 183. <https://doi.org/10.22373/ej.v9i1.10233>
- Hsu, T., Hsu, T., & Lin, Y. (2023). The Artificial Intelligence Learning Anxiety and Self-Efficacy of In-Service Teachers taking AI training courses. <https://doi.org/10.1109/icaie56796.2023.00034>
- Huang, J., Saleh, S., & Liu, Y. (2021). A Review on Artificial Intelligence in Education. *Academic Journal of Interdisciplinary Studies*, 10(3), 206. <https://doi.org/10.36941/ajis-2021-0077>.
- Kashive, N., Powale, L., & Kashive, K. (2020). Understanding user perception toward artificial intelligence (AI) enabled e-learning. *The International Journal of Information and Learning Technology*. <https://doi.org/10.1108/ijilt-05-2020-0090>.
- Miranty, D., Widiati, U., Cahyono, B. Y., & Sharif, T. I. S. T. (2021). The Effectiveness of Using Grammarly in Teaching Writing Among Indonesian Undergraduate EFL Students. In *Advances in social science, education and humanities research*. Atlantis Press. <https://doi.org/10.2991/assehr.k.211212.008>
- Mitchell, P. (2021). "Teacher Technology Self-Efficacy and its Impact on Instructional Technology Integration". Doctor of Education Dissertations. 58. <https://digitalcommons.gardner-webb.edu/education-dissertations/58>
- Montellese, N. (2019). How age, number of years teaching, attitude, educational philosophy and building type can influence teachers' Self-Efficacy utilizing technology in K-1 suburban classrooms. In ProQuest LLC eBooks. <https://eric.ed.gov/?q=https%3a&pg=540&id=ED601805>
- Noy, S., & Zhang, W. (2023). Experimental evidence on the productivity effects of generative artificial intelligence. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.4375283>
- Osetskyi, V., Vitrenko, A., Tatomyr, I., Bilan, S., & Hirnyk, Y. (2020). ARTIFICIAL INTELLIGENCE APPLICATION IN EDUCATION: FINANCIAL IMPLICATIONS AND PROSPECTS. . <https://doi.org/10.18371/fcaptp.v2i33.207246>.
- Pelaez, A. J. L., Jacobson, A., Trias, K., & Winston, E. (2022). The Turing Teacher: Identifying core attributes for AI learning in K-12. *Frontiers in Artificial Intelligence*, 5. <https://doi.org/10.3389/frai.2022.1031450>
- Research With Fawad. (2020). One-WAY ANOVA [Video]. YouTube. <https://www.youtube.com/watch?v=xQ64jPXt1xQ>

- Saienko, N., Lavrysh, Y., & Lukianenko, V. (2020). The impact of educational technologies on university teachers' self-efficacy. *International Journal of Learning, Teaching and Educational Research*, 19(6), 323–336. <https://doi.org/10.26803/ijlter.19.6.19>
- Seo, K., Tang, J., Roll, I. et al. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. *Int J Educ Technol High Educ* 18, 54. <https://doi.org/10.1186/s41239-021-00292-9>.
- Taber, K. S. (2017). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Thompson, A., & Sorbet, S. R. (2020). The impact of self-efficacy on leveraging technology in the classroom. In *Advances in educational marketing, administration, and leadership book series* (pp. 244–261). IGI Global. <https://doi.org/10.4018/978-1-7998-1766-6.ch014>
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Ubaedillah, U., & Pratiwi, D. (2021). Utilization of Information Technology during the Covid-19 pandemic: Student's Perception of Online Lectures. . <https://doi.org/10.31004/EDUKATIF.V3I2.320>.
- Wiseman, A. W., Al-Bakr, F., Davidson, P. M., & Bruce, E. J. (2017). Using technology to break gender barriers: gender differences in teachers' information and communication technology use in Saudi Arabian classrooms. *Compare*, 48(2), 224–243. <https://doi.org/10.1080/03057925.2017.1301200>



The Impact of Political Satire on the Level of Political Discourse and Civic Engagement among Selected Youth Leaders in the Province of Cavite

Joana Marie O. Alegado , Hannah Kayla C. Peñaranda

Department of Social Sciences, Cavite State University, Indang, Cavite, Philippines

DOI: 10.5281/zenodo.10002311

ABSTRACT

In a democratic society where freedom of expression is constantly repressed, people devise ways to communicate criticisms towards the government. One of these is using satire. The use of political satire has flourished in Philippine contemporary politics. It strives to attack the absurdity of society and politics creatively. Through the expansion of mass media, satire has been utilized to disseminate political information and as an avenue for activism.

This study investigated the impact of political satire on political discourse and civic engagement among selected youth leaders in the province of Cavite. This study determined the following: (1) types of political satire media strategies the participants are frequently exposed to; (2) their level of exposure to these media strategies; (3) their level of political discourse; (4) their level of civic engagement; and (5) examined if exposure to political satire media strategies could predict the level of political discourse and civic engagement. Responses from 391 youth leaders in Cavite were gathered. A descriptive-correlational analysis has been applied to identify the relationship between variables.

The result showed that the exposure to different political satire media strategies has a significant positive relationship with the level of political discourse and civic engagement. An increase in exposure tends to increase the level of political discourse and civic engagement. It implies that political satire has a great potential as an unconventional way to spread information and encourage the mass to engage in politics. Satire has a positive impact to ignite discussion and generate active citizen participation.

Keywords: *satire; political discourse; civic engagement; youth leaders; media*

INTRODUCTION

Aside from entertainment, political satire has been used as a strategy against oppression, a call for action, and means to effectively dispense information to the masses. It became an avenue for socio-political criticism and strives to attack the absurdity of society and politics in creative manner.

In western-democratic societies, the use of political satire is considered as legitimate source of information. An analysis was published by Pew Research Center (2014) which stated that satirical news media such as *The Daily Show* and *The Colbert Report* are trusted by its viewers and considered them as part of their day-to-day news consumption. Lee (2012) stated that the use of political satire in media outlets promotes political engagement among the citizens, especially those who lack interest in acquiring political information, due to its humorous approach. It provokes discussion among the interested audience and shares educational information with others via interpersonal discourse and online interaction.

During the 2022 Philippine National Election, the use of political satire to mock electoral candidates is widely popular. Prominent news outlets such as *Manila Bulletin* and *Philippine Star* started to incorporate satire in presenting their news – which gained greater engagement from readers compared to their previous style of reporting. It stirs up political discussions among the netizens and enables ordinary people to express their opinion. Satire breaks the stereotype of politics perceived as complicated, tiresome, and intimidating – capturing the taste of the masses. Contrary to its positive attributions, political satire has been used by different political actors as a form of propaganda. Adams (2018) claimed that numerous websites claimed that they are satirical but intend to cause mis- and disinformation among their audience. The problem arises when satirical information was thought to be a fact by its readers and shared as part of serious political discussion. These kinds of materials that aim to be deceptive were mostly difficult to spot for most people. If this information continuously circulates in the political sphere, it can negatively affect the democratic process. Plevriti (2014) postulated that political memes only satirize politics. They aim to be humorous, but critical assessment of recent political issues is often overlooked and not taken seriously. According to Declercq (2018), the use of satire can be associated with being unpatriotic and rebellious. Hence, the big question is: Does political satire have the capability of democratizing and mobilizing a nation, or a gradual democratic deterioration?

Due to contradicting statements on the effect of political satire, the researchers intend to clarify these inconsistencies. Also, the researchers found that most of the academic data on the utilization of political satire were international studies. There is little to no research on the local arena about the relationship of satire with political discourse and civic engagement. The researchers aim to identify the different political satire media strategies used by the selected youth leaders in the province of Cavite. This study measures the impact of political satire on their level of political discourse and civic engagement.

Research Questions

Generally, the study determined the impact of political satire on the level of political discourse and civic engagement among selected youth leaders in the province of Cavite.

Specifically, the study identified the following:

1. What type of political satire media strategies do participants are frequently exposed to?
2. What is the level of exposure of the participants to different political satire media strategies?
3. What is the level of political discourse of the participants?
4. What is the level of civic engagement of the participants?
5. Does exposure to political satire media strategies significantly predict the level of political discourse and level of civic engagement of the participants?

METHODOLOGY

The researchers conducted a Descriptive research study with a Quantitative-Correlational approach to answer the research questions and analyze the data. The quantitative method helped the researchers determine the strength of the relationship between the level of exposure to different political satire media strategies, level of political discourse, and level of civic engagement.

The researchers applied Purposive-Criterion Sampling, a type of non-probability sampling. It helped the researchers to choose the participants that provided substantial data for the study. Seventeen (17) youth leaders were chosen among the twenty-three (23) municipalities and cities in the province of Cavite. A total of three-hundred ninety-one (391) responses from youth leaders in the province were gathered.

The data was collected through the use of self-made questionnaire. Data gathering was conducted from third week of February to first of March 2023 via face-to-face interaction and online method such as google form. The collected data was analyzed and interpreted by a licensed statistician in the university using mean, standard deviation, and linear regression analysis.

RESULTS

Political Satire Media Strategies

Table 1 presents the frequency and percentage of different political satire media strategies that participants frequently encountered. Majority of the participants, 358 or 92%, were exposed to political memes. This is followed by online videos with 313 or 80% of the responses. While 67% or 263 participants answered that they were also exposed to films that contain political satire. Caricatures and literary pieces got low responses which are 29% and 28% respectively.

Table 1. Different types of political satire media strategies where the youth leaders are frequently exposed to. (n=391)

POLITICAL SATIRE MEDIA STRATEGIES	FREQUENCY	PERCENTAGE
Political Memes	358	92%
Online Videos	313	80%
Film	263	67%
TV Shows	224	57%
Comic Strips	175	45%

Commentary	152	39%
Stand-up Comedian	152	39%
Podcasts	145	37%
Cartoons	119	30%
Caricatures	113	29%
Literary Pieces	110	28%

Level of Exposure to Political Satire Media Strategies

Table 2 shows the measure of central tendency for exposure to different political satire media strategies using the mean and the standard deviation. The results unfolded that Statement No. 1 got the highest mean score at 3.49. It indicates that they are moderately exposed and often encounter political satire through different platforms such as Facebook, Twitter, TikTok, television, etc.

On the other hand, Statement No. 6 has the lowest mean score of 2.47, which means that the participants are slightly exposed to cartoons containing political satire. They had been exposed to a minimal amount of the medium, but not too often.

The overall mean score of 2.87 suggested that the participants are moderately exposed to different political satire media strategies. It indicates that youth leaders are exposed to a good amount of political satire through different media but not frequently.

Table 2. Measures of central tendency for exposure to different political satire media strategies

INDICATORS	MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
1. I encounter political satire on a daily basis through Facebook, Twitter, Tiktok, Television, and in other media.	3.49	0.60	Highly Exposed
2. I am watching comedic films/TV shows that subtly discuss politics hilariously.	2.82	0.79	Moderately Exposed
3. I read posts online / literary pieces that depict societal condition in humorous manner.	3.17	0.79	Moderately Exposed
4. I watch stand-up comedian performances that make fun of infamous corrupt politicians.	2.60	0.93	Moderately Exposed
5. I see caricatures on newspapers (traditional or digital) that ridicules and criticizes the government.	2.76	0.91	Moderately Exposed
6. I watch cartoon/s that has political satire in it.	2.47	0.97	Slightly Exposed
7. I am listening to podcasts that tackles political and social issues in satirical tone.	2.51	0.97	Moderately Exposed
8. I see comics [traditional/digital] that mock elected officials when they commit unwise decisions.	2.89	0.95	Moderately Exposed
9. I am watching online videos containing political parody.	3.03	0.87	Moderately Exposed

10. I choose to watch videos that tackle politics in satirical manner.	2.73	0.90	Moderately Exposed
11. My social media timeline contains different political satire media strategies.	3.02	0.92	Moderately Exposed
12. I listen to commentaries that tackle government's negligence in humorous way.	2.71	0.92	Moderately Exposed
13. I see political memes when I am using my social media.	3.47	0.70	Highly Exposed
14. I am a follower of social media pages which posts imply political satire.	2.72	1.07	Moderately Exposed
15. I am a follower of various personalities that often share their political beliefs in satirical manner.	2.68	1.04	Moderately Exposed
Overall	2.87	0.62	Moderately Exposed

Legend: 3.25-4.00 Always/Highly Exposed
2.50-3.24 Often/Moderately Exposed
1.75-2.49 Rarely/Slightly Exposed
1.0-1.74 Never/Not Exposed

Level of Political Discourse

Table 3 presented the measures of central tendency for level of political discourse using the mean and the standard deviation. The analysis showed that statement nos. 4 and 10 got the highest mean score at 3.18. This indicates that the participants explain their thoughts calmly even though they disagree with another person's way of thinking and most of them are often conversing with their colleagues about the solutions to the problems in their organization or community. While statement no. 8 got the lowest. It means that most of them rarely talk to politicians to raise their organization's or community's concern.

The overall mean score of the items that measured the level of political discourse of the participants was 2.81. It indicates that the participants are moderately engaged in political discourse. They are engaging in discussions about politics, but not frequently.

Table 3. Measures of central tendency for level of political discourse

INDICATORS	MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
1. I am joining online political discussions through commenting on social media posts (Facebook, Twitter, Tiktok, Quora, etc.).	2.40	0.98	Slightly Engaged
2. I discuss political information with my friends and family members.	3.17	0.81	Moderately Engaged
3. I share my thoughts about politics by posting online (Facebook, Twitter, Tiktok, Quora, etc.).	2.70	1.00	Moderately Engaged
4. When I disagree with the statement of another person regarding political issues, I try to share my stand calmly.	3.18	0.84	Moderately Engaged
5. I engage myself in debates and meetings in our organization/ community.	2.69	0.98	Moderately Engaged

6. I share my insights regarding public concerns in our organization/ community.	2.96	0.91	Moderately Engaged
7. I am joining seminars to gain political knowledge.	2.71	1.01	Moderately Engaged
8. I talk to local politicians to raise problems in our community that needs solutions.	2.15	1.02	Slightly Engaged
9. I share my sentiments regarding political matters.	2.95	0.90	Moderately Engaged
10. I am talking to my colleagues about the possible solutions to the problems in our organization/ community.	3.18	0.82	Moderately Engaged
11. I share my political stand to other people to persuade them towards challenging our political leaders to do their duties.	2.94	0.92	Moderately Engaged
12. Sharing my sentiments about politics is something ordinary to me.	2.91	0.91	Moderately Engaged
13. When talking to my friends, politics is a topic that I never forget to talk about.	2.69	0.98	Moderately Engaged
14. Joining political discussion excites me.	2.86	0.96	Moderately Engaged
15. I like attending debates relating to politics	2.62	1.02	Moderately Engaged
Overall	2.81	0.73	Moderately Engaged

Legend: 3.25-4.00 Always/Highly Engaged
2.50-3.24 Often/Moderately Engaged
1.75-2.49 Rarely/Slightly Engaged
1.0-1.74 Never/Not Engaged

Level of Civic Engagement

Table 4 exhibited the measure of central tendency for level of civic engagement. The descriptive analysis showed that statement no. 2 got the highest mean score of 3.17, followed by statement no. 3. These indicated that the youth leaders are making sure that they will be able to attend the meetings in their organization or community and they positively identified that they had been active participants of the electoral process. It also means that they did these activities three to five times in the span of 12 months. On the other side, parallel to table 3, statement no. 10 which is talking to politicians to raise a public concern or collaborate for a project got the lowest mean score at 2.09.

The overall mean score is at 2.71 which indicated that the youth leaders are moderately engaged in civic activities. Most of the youth leaders did these activities at least three times within the last 12 months.

Table 4. Measures of central tendency for level of civic engagement

INDICATORS	MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
1. I follow/ followed and join/ joined a political campaign or organization.	2.68	1.05	Moderately Engaged

2. I make/ made sure that I attend/ attended each meeting in our organization/ community.	3.17	0.96	Moderately Engaged
3. I sign/ signed a petition that I know will be beneficial to the community.	2.93	1.02	Moderately Engaged
4. I make/ made social media posts for political issues that are important to me.	2.72	1.06	Moderately Engaged
5. I join/ joined public rally or protest to support an electoral candidate or an advocacy.	2.35	1.14	Slightly Engaged
6. I avoid/ avoided purchasing something as a form of protest; or I actively purchase/ purchased something to support an advocacy.	2.56	1.11	Moderately Engaged
7. I volunteer/ volunteered for a group or cause.	2.88	1.00	Moderately Engaged
8. I urge/ urged others to get politically involved on Facebook, Twitter, and other social media platforms.	2.53	1.07	Moderately Engaged
9. I donate/ donated to a campaign or cause.	2.60	1.05	Moderately Engaged
10. I contact/ contacted an elected official to raise a public concern or to collaborate for a community project.	2.09	1.07	Moderately Engaged
11. I join/ joined clean-up drive/s.	2.62	1.04	Moderately Engaged
12. I join/ joined a non-profitable organization.	2.70	1.09	Moderately Engaged
13. I participate/ participated in election process: national elections, senatorial elections, local elections, school/university elections, etc.	3.15	1.01	Moderately Engaged
14. I actively campaign/ campaigned for an electoral candidate.	2.77	1.06	Moderately Engaged
15. I participate/ participated in organizing a fund-raising activity for a cause.	2.87	1.00	Moderately Engaged
Overall	2.71	0.74	Moderately Engaged

Legend: 3.25-4.00 Always/Highly Engaged – participated in the activity more than 5 times within

the last 12 months
2.50-3.24 Often/Moderately Engaged – participated 3-5 times within the last 12 months
1.75-2.49 Rarely/Slightly Engaged – participated 1-2 times within the last 12 months
1.0-1.74 Never/Not Engage – Haven't done it

Relationship of Exposure to Political Satire Media Strategies to Dependent Variables

A. As Predictor of Political Discourse

The relationship between the level of exposure to political satire media strategies as predictor to the level of political discourse by using simple linear regression analysis was first

determined. Results suggest that the model predicts a significant amount of variability in the political discourse scores, $F(1,389) = 405.36$, $p < .001$, $R^2 = 0.51$. This means that 51% of the variability in political discourse scores can be explained by exposure to political satire media strategies. Specifically, an increase in the exposure to political satire media strategies tends to increase political discourse among the participants ($\beta = 0.71$, $t = 20.13$, $p < .001$).

Table 5. Exposure to political satire media strategies as predictor of political discourse (n = 391)

Variable	<i>B</i>	β	<i>SE</i>	<i>T</i>	<i>p</i>
Constant	0.41	-	0.12	3.36	< .001
Exposure to Political Satire Media Strategies	0.83	0.71	0.04	20.13	< .001

B. As Predictor of Civic Engagement

The relationship between the level of exposure to political satire media strategies as predictor to the level of civic engagement by using simple linear regression analysis was also determined. Results suggest that the model predicts a significant amount of variability in the civic engagement scores, $F(1,389) = 273.93$, $p < .001$, $R^2 = 0.41$. This means that 41% of the variability in civic engagement scores can be explained by exposure to political satire media strategies. Specifically, an increase in the exposure to political satire media strategies tends to increase civic engagement among the participants ($\beta = 0.64$, $t = 16.55$, $p < .001$).

Table 6. Exposure to political satire media strategies as predictor of civic engagement (n = 391)

Variable	<i>B</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>
Constant	0.51	-	0.14	3.77	< .001
Exposure to Political Satire Media Strategies	0.76	0.64	0.05	16.55	< .001

DISCUSSION

Political Satire Media Strategies

Political satire has been used to criticize people in power even during the ancient times. For instance, Aristophanes targeted the Athenian leaders and state offices through his play called the Babylonians. Even Indian cartoonists poked fun at the illustrations of Egyptian leaders. And over the years, different political satire media strategies have emerged because of technological advancements.

The figures above imply that the participants encounter most of political satire contents through political memes and online videos. These can be explained by the nature of the mentioned media strategies. In the present time called the digital age, technology plays a role in information dissemination. Both political memes and online videos are circulating in majority of social media platforms such as Facebook, Twitter, YouTube, and Tiktok. These platforms can be accessed for free – making it available to wider scope of patrons especially the younger generation. Political memes and online videos are then followed by film and TV shows which are aired in cinemas and free tv channels which can easily be watched by the masses. On the other hand, literary pieces got the least percentage. Compared to other media strategies, it is inherently much harder to find and costly. Since the age of digitalization plays a great factor, the

accessibility of the media strategies can be attributed to the frequent exposure of the participants to political satire.

Based on the report of Philippine Statistics Authority, most Filipino households owned cellular phones (86.8%) and television (79.9%) in 2019. Filipino youth, ages 10 to 30 years old, are exposed to mass media on a daily basis. Television, internet, and magazines were the top forms of mass media that they consume frequently. Internet was used more to surf social media than for research related activities. The data gathered to answer statement of the problem no. 1 validated the claims of the related literatures discussed in previous chapters.

Meme creation is an acceptable activity in every social media platform like Facebook, Twitter, TikTok, and other social media platforms today. Meme has the ability to passed down socio-cultural behaviors to the next generation. According to Shifman (2013), meme became part of the popular culture that were shared and imitated by internet users. And through the popularity of this kind of media strategy, political satire flourished in social media platforms in recent years (Piata, 2016). Internet users use memes to deliver their opinions about politics (Shifman, 2013). Sreekumar and Vadrevu (2013) believe that political memes can be used to raise awareness about political issues. In a journal released by De Leon and Ballesteros (2021), meme is a tool that could be used as propaganda to in order to manipulate citizen's way of thinking.

Level of Exposure to Political Satire Media Strategies

Political satirical contents have the power to inform and entertain. Satirists saw its potential to stir up public opinion about different societal issues. One of the motivations of satirists in creating satirical contents is to raise awareness--creatively. Thus, it is not surprising that the young generation and even those people who were cynic about politics were more inclined to consume these materials.

These findings imply that the youth leaders have moderate exposure to political satire media strategies and the accessibility of these media in a digitalized era is a key factor. It affirms one of the theories used in this study which is the Normative Theory. This theory laid out the roles of mass media in a democratic society and how media holds responsibility to carry out open discussion on public affairs and empowering the public through information. The wide reach of media in carrying out political information in the form of satire is evident in the figures shown in the table as most of the participants answered 'often' and 'always' in the questions. The virality of political satire in different forms of media strategies can also be attributed to the current Digital Era. The age of digitalization paves way for a greater accessibility of the media strategies to the masses including the youth. Given the scale and scope of youth exposure with media strategies, which is foreseeable to grow more, these platforms have great potential to become legitimate and effective tools to inform young people on aspects of politics.

The combined results shown in the table supports the claims of McClennen (2012) and Young (2013). Both authors enunciate that the young generation is immersed in political satire contents and most consumers of political satire came from this age group. This behavior can be explained by an article made by Martinez (2019). He stated that the general public is inclined to patronize and consume political satire content because of its compelling and entertaining disposition. The humorous approach of political satire captures the attention of the viewers.

It can also be observed from the figures that the participants had the highest amount of exposure on political satire through the use of social media platforms. This is parallel to the

study of David (2013). He stated that Filipino youth are inclined in Information and Communications Technology (ICT). Their extensive use of ICT contributes to their level of exposure. Thus, explaining the participants' moderate exposure to good amount of political satire content. The findings in this study are also in line with the findings of a qualitative study conducted by Penney (2019). The study suggests that youth are exposed in political satire because sharing such content encourages solidarity among like-minded peers and helps the youth build their political identity.

Level of Political Discourse

The results supported the claims in the research article presented by Cabo (2018). Cabo presented that the Filipino youth are interested in politics. They possess critical views towards politicians and political situation in the country. However, it can be observed that statement no. 8 got the lowest mean score. The behavior of youth leaders to rarely talk to politicians in raising concerns can be backed by the report from the United Nations Development Programme. Youth from Asia Pacific has low trust rate towards legislative and executive institutions. As stated by Goudie (2018), factors like distrust towards political institutions can also be the underlying factor.

Overall, the participants who are youth leaders in Cavite have been moderately engaged in political discourse. This result is in contrast with the report from National Youth Commission in 2010. Their report shows that Filipino youth avoids becoming an initiator on political issues – the table above shows otherwise.

Therefore, these findings imply that the youth leaders in Cavite are relatively active when it comes to political discourse, but not on an extensive level. The participants display positive attitude towards voicing out their political views. However, their level of political discourse does not reach the highest possible mean score. They are not highly engaged in political discourse considering they hold high position as officers in their respective council or group. Although they are in a democratic state which encourages freedom of speech and political participation, obstruction from their full civic potential may still occur.

Level of Civic Engagement

The results validated the claim in the study presented by Palomares, *et al.* (2021) that focused on the political participation among elected youth leaders specifically Sanggunian Kabataan officials. The results of their study show that their participants have an average to high levels of political participation. It is similar to the result in this study which determines that the selected youth leaders in Cavite are moderately exposed in participating in civic engagements. The result also proves the claim of the Commission on Elections in 2022 that youth are considered prime movers in civic activities like elections. Similar to the previous discussion under Table 3, this result is in contrast with the report from National Youth Commission in 2010. Their report shows that Filipino youth avoids becoming an initiator on political issues – the table above shows otherwise. Filipino youth leaders engage in different activities that has direct and indirect contribution in their community or respective group.

Therefore, these findings imply that the youth leaders in Cavite are relatively active in participating in various civic engagement activities, but not on an extensive level. The participants display positive attitude towards participating in the political process. However, their level of civic engagement does not reach the highest possible mean score. It can be inferred that the participants are more active in participating within the circle of their organization and

through informal participation. This observation can be explained through the previously identified obstacles to youth participation. They are not highly engaged in civic activities considering they hold high position as officers in their respective council or group. Although they are in a democratic state which encourages freedom of speech and political participation, obstruction from their full civic potential may still occur.

Relationship of Exposure to Political Satire Media Strategies to Dependent Variables

A. As Predictor of Political Discourse

The result validated the statement made by Plevriti (2013) in his dissertation. Satirists create satirical contents to generate commentaries that could stir up a discourse among its audience (Plevriti, 2013). The general public utilize the ability of political satire to voice out their opinions about politics. In addition, Martinez (2019) stated that the entertaining factor of political satire catches the attention of the people from different walks of life including those who lacks interest in politics. A study was conducted by Coronel, *et al.* (2020), the authors stipulated that people can easily retain information if it was delivered humorously. This is because the information was presented on the level of their understanding, hence retention of the information became easier. As a result, the consumers of the medium tend to share this information since they are more confident that they can explain it casually.

The integration of political satire in commentaries and discussions become a vibrant source of political information, and eventually shape public opinions through the use of social media. Meaningful discussions in the platform, as well as senseless political debates took place (Hapal, 2019). Since political information dissemination normalized the use of political satire on the internet, people became saturated with the medium. It introduced the masses to acquisition of political knowledge with an entertaining approach and with less mental effort while being engaged in politics. Abdel-raheem (2018) postulated that despite its divisive takes on certain issues, it became a norm and was well-accepted by its target audience.

The result implies that the exposure to political satire media is a significant predictor of political discourse among selected youth leaders in Cavite. This result validates one of the theories used in this study which is the Rational Choice Theory and supports the study of Lawrason (2015) – who also use the same theory. The Rational Choice Theory emphasizes how a person weighs the cost and benefit before committing a decision. In the study of Lawrason, she claimed that students patronize political comedy instead of hard news sources, yet unintentionally still acquiring the substantial political information. The time spent and attention exerted to acquire information serve as the cost, while the political information that has been gained serves as a benefit (Lawrason, 2015).

In this current study, the finding of Lawrason has been supported. Participants still acquire the political information they need even though it is through political satire contents. Participants has moderate exposure to political satire media strategies has also moderate level of engagement in political discourse. It can be inferred that frequent exposure to political satire bears a good benefit in terms of acquiring political information.

The result clearly showed that political satire is an effective tool to engage people in political discourse. People will engage in political discourse more frequently as a result of increased exposure to various political satire media strategies. Satirists are here to balance the wit and seriousness of politics. The role of political satire in political discussion is to make politics

inclusive despite having differences in societal or economic standing. Having citizens who are politically aware and knowledgeable is a necessity to maintain vibrant democracy. The utilization of political satire in different media is an efficient way to activate the citizens as focal agents of the democratic process.

People who employ political satire to show their dismay about the political condition in the country shall not be condemned. They are actually helping the masses to have access to information that is deemed to be understood by the few—mainly because of many indifferences. Moreover, this analysis also stressed it does not mean that one must believe every narrative they see. The result encourages the citizens to be radical, and to rationalize their thought process before putting it out for the public to consume. This analysis thus confirms that political satire is no longer just a joke about politics but could actually start meaningful discourses.

B. As Predictor of Civic Engagement

The result contrasts with the information presented by Allaina Kilby (2014) and Li Shao and Dongshu Liu (2018), that shows association between the variables. The result in this analysis suggests that exposure to different political satire media strategies has a significant relationship with civic engagement. Hoffman and Young (2011) emphasized that political satire has positive effects on civic engagement through an indirect route of political efficacy. Genuine forms of political satire such as political comedies are greatly associated with political participation. It implies that being exposed to political satirical content could foster the mobilization of people to generate political action (Baumgartner & Lockerbie, 2018). In fact, a study conducted by Kasiye (2019) validated the current analysis. They conducted a study to determine the association of political memes and political participation in Uganda. It posited that an individual is more likely to engage in activities involving politics if they are exposed to political satire. Zhang and Pinto (2021) stipulated that people who are exposed to memes have high levels of intention to protect our environment by joining activities that promote its conservation like clean up drives.

The result further implies that the exposure to political satire media is a significant predictor of civic engagement among selected youth leaders in Cavite. This result validates one of the theories used in this study which is the Affective Intelligence Theory or AIT. This theory emphasizes the role of emotions in generating participation. Political satire focuses not only on delivering political information but also touches the emotional side of individuals through its humorous nature. It has been proven in the study that the youth leaders' exposure and immersion to different political satire media strategies leads to their level of civic engagement. It can be inferred that the participants' reaction towards the political satire content that they encounter in different media urges them to become active in their community and become initiators of change.

Conclusions

This study seeks to broaden the understanding the impact of exposure to different political satire media strategies as it predicts the level of political discourse and civic engagement. Mass media, particularly, social media applications and sites greatly contributes to the popularization of political satire in recent years. Political satire is introduced into this realm through memes,

online videos, and films. Because satirical contents are easier to understand, people tend to patronize it more than any other formal information sources such as news articles and journals.

One of the challenges that the discipline of Political Science faces is how to introduce politics to the masses without them getting intimidated. Some Filipinos no longer watch news, because they do not want to hear negativity – they became cynic. Some do not want to welcome new political information, because they perceive it as complicated. Others are too busy and have no time to read lengthy news. All these that have been mentioned kill the democratic process.

In utilizing political satire, it delivers news and political information in a creative manner. Politics turn into bite sizes. It breaks the stereotype of politics perceived as complicated, tiresome, and intimidating – capturing the taste of the masses. The utilization of wit in delivering one's message has encouraged the citizens to be politically vocal. In other words, those who consume political satirical content tend to be more confident to share information because of the knowledge that they acquire from these materials. Thus, this explains why being exposed to different political satire media strategies tends to increase one's level of engagement in political discourse.

However, due to this political activity, it is not surprising that the spread of mis- and disinformation in the Philippines became extensive. To counter this, a pool of related literature and studies have found that satirists are using satire to unmask the truth that has been forcibly tainted using the same strategy. As a result, people from different spectrums of political ideology are creating rounds of discussions and debates about current political issues.

With regards to the effects of exposure to political satire media strategies on the level of civic engagement, this study shows that being exposed to the medium can intensify one's level of engagement in civic activities. Although this is the case, it is noticeable that youth leaders in Cavite have thin acts of civic engagement.

Attending meetings and participating in the election process are fundamentals and expected behaviors of being a youth leader. One cannot argue that these actions are essential part of democracy and clear manifestations that our country upholds the rights of its citizens granted by the Constitution. Having peaceful meetings indicates the right to assembly and being able to cast a vote shows one's right to suffrage. Yet, those civic activities that could directly affect communities such as participating in clean-up drives, joining non-government organizations, and giving donations, got lower values. But due to the restrictions caused by the COVID-19 pandemic, the result become acceptable. It vehemently chained the whole of humanity into the corners of our house. Insofar, these remarks cannot obliterate the fact that this study proves that being exposed to different political satire media strategies is a novel way that can bolster one's civic engagement.

This study positively affirms that political satire is a catalyst and can manifest change in democratic societies. Still, empirical studies on the effects of political satire and how it affects our democratic process need to be continuously conducted.

Recommendations

The following recommendations are raised by the researchers:

One of the several challenges that the researchers faced during the conduct of the study is the limited number of active youth leaders in each area of the province. By this, it is recommended that the future researchers may expand the study's scope. This study may be conducted and replicated in other provinces. Focusing on different age group or demographics of the participants is highly encouraged.

Another challenge that has been identified is the lack of complexity of the gathered data. Since the study is done quantitatively, the researchers did not have the chance to raise follow up questions to further investigate the participants' answers. It is highly encouraged by the researchers to employ a mixed method to conduct an in-depth analysis of the topic. An experimental study can also be used to differentiate the impacts of viewing news—or any other information source with a formal approach and political satire materials—on the consumers' knowledge retention and level of political understanding. This might be accomplished by showing them a video of both strategy and then administering a survey to them after they have watched it.

Compliance with Ethical Standards

The ethical principles set by the Cavite State University, the American Psychological Association, and the jurisdiction of Republic Act No. 10173 or the Data Privacy Act of 2012 were followed while conducting this research study.

In writing this study, specifically in assembling the related literatures, all the ideas and concepts that the researchers acquired from these sources were properly cited. The researchers strictly validated that this paper is free from plagiarism of any kind. Fabrication for personal gain of the obtained information was not utilized; the researchers gave credit to where it is due.

This study is non-experimental and did not utilize human subjects. It was performed by seeking permission and approval from the university, participants, respective focal persons, and chairpersons of the collaborating organizations and institutions.

The gathering of data from the participants was handled with the outmost confidentiality and integrity. A consent form was attached to the questionnaire, the process did not begin until the participants gave their consent. The participants were allowed to refuse to participate or even withdraw their participation once it has started. All the participants voluntarily agreed to be part of the study. The participants were also permitted to ask questions and clarify things related to the study to the researchers.

During the data analysis, the identities of the participants and their personal information were undisclosed. Blind tallying and codes to secure privacy and maintain the anonymity of the participants were used. The data that were collected are kept securely within the property of the researchers. The information was bound for research purposes only. Since this study was already done, permanent termination of data was applied. All the encoded data were deleted in the hard drive of the researcher's device. The questionnaire sheets bearing the actual name of the participants were disposed through a manual paper shredder. The questionnaires bearing

the participants' information were terminated as a form of compliance with their legal obligation in securing the data.

REFERENCES

- Abdel-raheem, A. (2018). Multimodal humour: Integrating blending model, relevance theory, and incongruity theory. *Multimodal Communication*, 7(1), 1-19. <https://doi.org/10.1515/mc-2017-0013>.
- Adam, H. (2018). Classifying News, Satire, and "Fake News": An SVM and Deep Learning Approach. *Operations Research and Financial Engineering*. <http://arks.princeton.edu/ark:/88435/dsp012n49t445m>
- Baumgartner J. & Lockerbie, B. (2018). Maybe it is more than a joke: satire, mobilization, and political participation: satire, mobilization, and political participation. *Social Science Quarterly*. <https://doi.org/10.1111/ssqu.12501>
- CNN Philippine Staff (2021 September 11). Young Filipinos comprise 52% of total registered voters for 2022 polls so far — Comelec. CNN Philippines. <https://www.cnnphilippines.com/news/2021/9/11/Comelec-youth-vote-2022-national-elections.html>
- Coronel, J., O'Donnell, M., Pandey, P., Delli Carpini, M., & Falk, E. (2020). Political humor, sharing, and remembering: insights from neuroimaging. *Journal of Communication*, 71(1), February 2021, Pages 129–161, <https://doi.org/10.1093/joc/jqaa041>
- David, C. (2013). ICTs in political engagement among youth in the Philippines. *The International Communication Gazette*. 75(3), 322-337. doi:10.1177/1748048512472948
- De Leon, F., & Ballesteros-Lintao, R. (2021). The rise of meme culture: internet political memes as tools for analysing Philippine propaganda. *Journal of Critical Studies in Language and Literature*, 2(4), 1-13. <https://doi.org/10.46809/jcsll.v2i4.70>
- Declercq, D. (2018). A definition of satire (and why it matters). *The Journal of Aesthetics and Art Criticism*, Volume 76, Issue 3, Pages 319–330. <https://doi.org/10.1111/jaac.12563>
- Goudie, Y. (2018). The Youth and Elections. ACE - the Electoral Knowledge Network. <https://aceproject.org/ace-en/topics/yt/yt10/yt220/legislation-that-affects-the-environment-for-youth>
- Hapal, K. (2019). Opportunities and challenges in southeast asia engaging the trolls: reactions of 'netizen' and Philippine human rights organizations on extrajudicial killings.
- Hoffman, L., & Young, D. (2011). Satire, punch lines, and the nightly news: Untangling media effects on political participation. *Communication Research Reports*, 28(2), 159–168. <https://doi.org/10.1080/08824096.2011.565278>
- Kasirye, F. (2019). The effectiveness of political memes as a form of political participation amongst millennials in Uganda. *Journal of Education and Social Sciences*, Vol. 13, Issue 1 ISSN 2289-9855
- Kilby, A. (2014). Satire for Sanity: An Examination of Media Representation and Audience Engagement with the Daily Show's Rally to Restore Sanity
- Lawrason, L. (2015). Laughing our way to stronger democracy: political comedy's potential to equalize political interest and political knowledge in community college students. Wayne State University Dissertations. 1376. https://digitalcommons.wayne.edu/oa_dissertations/1376
- Lee, H. (2012). Communication mediation model of late-night comedy: The mediating role of structural features of interpersonal talk between comedy viewing and political participation. *Mass Communication and Society*, 15(5), 647–671. <https://doi.org/10.1080/15205436.2012.664239>

- Martinez, A. (2019). Funny politics: examining the motivations for political satire consumption and avoidance, and the effects of political satire television consumption on political knowledge, engagement, and trust in institutions. https://scholarworks.utep.edu/cgi/viewcontent.cgi?article=3001&context=open_etd
- McClennen, S. A. (2012). 'Young people are no longer at risk — they are the risk': henry giroux's youth in a suspect society. *Policy Futures in Education*, 10(6), 642–646. <https://doi.org/10.2304/pfie.2012.10.6.642>
- Palomares, P., Cadutdut, D., Amod, A., & Tomaro, Q. (2021). Determining The Motivations for Political Participation Among Elected Youth Leaders. *Journal of Government and Politics*. 12. 35-61. 10.18196/jgp.121127.
- Penney, J. (2020). 'It's So Hard Not to be Funny in This Situation': memes and humor in u.s. youth online political expression. *Television & New Media*, 21(8), 791–806. <https://doi.org/10.1177/1527476419886068>
- Pew Research Center (2014). For some, the satiric 'Colbert Report' is a trusted source of political news. <http://www.pewresearch.org/facttank/2014/12/12/for-some-the-satiric-colbert-report-is-a-trusted-source-of-political-news/>
- Philippine Statistics Authority (2020). Functional literacy rate of Filipinos by exposure to different forms of mass media ranges from 92.6 percent to 97.1 percent in 2019. <https://psa.gov.ph/sites/default/files/attachments/hsd/>
- Piata, A. (2016). When metaphor becomes a joke: Metaphor journeys from political ads to internet meme. *Journal of Pragmatics*. <https://doi.org/10.1016/j.pragma.2016.10.003>
- Plevriti, V. (2014). Satirical user-generated memes as an effective source of political criticism, extending debate and enhancing civic engagement. CCMPs Prize-Winning Dissertations (MA): https://warwick.ac.uk/fac/arts/theatre_s/cp/research/publications/madiss/ccps_13-14_vasiliki_plevriti.pdf
- Shao, L., & Liu, D. (2019). The Road to Cynicism: The Political Consequences of Online Satire Exposure in China. *Political Studies*, 67(2), 517–536. <https://doi.org/10.1177/0032321718791373>
- Shifman, L. (2013). Memes in a digital world: Reconciling with a conceptual troublemaker. *Journal of Computer-Mediated Communication*, 18(3), Pages 362–377, <https://doi.org/10.1111/jcc4.12013>
- Sreekumar, T. & Vadrevu, S. (2013). Online Political memes and youth political engagement in Singapore. *Internet Research* 14.0. <https://journals.uic.edu/ojs/index.php/spir/article/view/8770/pdf>
- the perspective of the youth. <http://nyc.gov.ph/national-youthcommission-resources>
- Young, D. G. (2013). Political satire and occupy wall street: how comics co-opted strategies of the protest paradigm to legitimize a movement. <https://ijoc.org/index.php/ijoc/article/view/1935>
- Zhang, B. & Pinto, J. (2021). Changing the world one meme at a time: The effects of climate change memes on civic engagement intentions. *Environmental Communication A Journal of Nature and Culture* 15(04):1-16. <https://doi.org/10.1080/17524032.2021.189419>