



ROMBLON STATE UNIVERSITY

RESEARCH JOURNAL

ISSN 2350-8183 (Print)
ISSN 2619-7529 (Online)
Volume 7 No. 2, 2025





ABOUT THE JOURNAL

Romblon State University Research Journal (RSURJ) is a refereed multi-disciplinary research journal that aims to provide a source of information in the areas of agriculture, natural resources and environment; social science, ethics, humanities and the arts; physical and biological sciences; business and management; engineering, information and communication technology; education; health and medical education; alternative medicine; institutional system and process assessment; and community baseline or impact studies. The objective of the journal is to help educators and decision-makers disseminate information and learn from each other's work.

RSURJ is indexed in:



Crossref



Scilit



Research Gate



Google Scholar



Philippine e-Journals



Semantic Scholar



RefSeek

EDITORIAL TEAM

Eddie G. Fetalvero, Ph.D.
Editor-in-Chief

Anna Beatriz R. Mayor, M.Sc.
Jewelle V. Olarte
Managing Editors

Kenneth Dave Castillon
Layout Artist

Prince Allen Jay M. Rodelas
Web Designer

Von Kaiser R. Fallena
Technical Assistant

Merian P. Catajay-Mani, Ed.D., CESE
Emelyn F. Montoya, Ph.D.
Denver I. Walitang, Ph.D.
Engr. Jerome G. Gacu
Editorial Advisors



PEER REVIEWERS FOR THIS ISSUE

Dr. Arkady Tahlil

Mindanao State University

Dr. Michael Jacob Dy

Far Eastern University

Dr. Ferdinand C. Lacuata

Firat Üniversitesi Kimya Mühendisliği

Dr. Arnel S. Traverro

University of Science and Technology of Southern Philippines-Claveria

Dr. Fides A. del Castillo

De La Salle University Manila

Engr. Charmaine Fetalve

Romblon State University – Main Campus

Mr. Frankie A. Fran

Romblon State University – Main Campus

Dr. Emelyn Montoya

Romblon State University – Main Campus



TABLE OF CONTENTS

Design, Development, and Experimental Evaluation of Marble Spool Insulator Mark Lawrence Ical, Jay Oliveros, and Jerome Gacu	1-7
Probing the Enigmatic Record of <i>Gracilaria disticha</i> (Gracilariales, Rhodophyta) Reported from Sibuyan Island, Philippines Jeric B. Gonzalez and Lawrence M. Liao	8-15
Empowering Educators: Cultivating Resilience in Secondary Teachers through Effective Coping Mechanisms Clareisse F. Gabinete, and Elvin F. Gaac	16-22
Utilization of Video Blogs (Vlogs) Versus Video Presentations: A Comparison of Learning Gains in Home Economics among Senior High School Learners Joy G. Galicha, and Catherine Bhel Aguila	23-29
Perception, Employability, and Challenges of Master of Arts in Education-Major in Home Economics Graduates Carren May M. Juanzo	30-38

Design, Development, and Experimental Evaluation of Marble Spool Insulator

Mark Lawrence Ical¹, Jay Oliveros¹, and Jerome Gacu²

ABSTRACT

Spool insulators made of either porcelain or polymer are widely used in insulating electrical components in secondary electrical wires and are typically imported. The Philippines should capitalize on producing spool insulators using locally available materials such as marble, with promising potential due to its abundance, mechanical durability, hydrophobic properties, and environmental sustainability. Thus, this study aimed to design, develop, and test marble spool insulators. Three (3) different marble materials categorized by color were used and designed using the ANSI 53-2 standard. The prepared marble spool insulators were electrically tested using an impulse flashover voltage test, while physical properties like wettability and abrasion resistance were also determined. Impulse flashover voltage test results revealed that all marble spool insulators exhibited high electrical resistance to voltages up to 30 kV, while the contact angle test showed that marble spool insulators are more hydrophobic ($\theta \geq 60^\circ$) than the porcelain spool insulator ($\theta = 0^\circ$). Moreover, abrasion loss is 4.85% greater than marble's, suggesting that marble is more durable than porcelain. The study demonstrates the viability of using marble for spool insulator fabrication, showcasing its superior electrical resistance, hydrophobicity, and durability compared to porcelain. This presents an opportunity for local production, reducing dependence on imports and opening new market prospects in the electrical insulation industry. However, further market research and validation tests are needed to compete with commercial porcelain spool insulators.

Keywords: *marble, marble spool insulator, impulse flashover, wettability, abrasion test*

INTRODUCTION

Efficient and reliable electrical power transmission across vast distances critically depends on the design and functionality of overhead transmission lines, where insulators are essential components (Han et al., 2009). These insulators prevent the unwanted flow of electrical currents from conductors to the earth, safeguarding the integrity and efficiency of the power transmission system (Tongse et al., 2023). Among various materials employed for this purpose, porcelain (Han et al., 2009), made from clay (Orovwode et al., 2024), silica, kaolin, and feldspar emerge as a prominent choice due to their superior insulating properties (Ologunwa et al., 2021; Tongse et al., 2023). The effectiveness of this material is attributed to its ability to be molded into various

shapes and sizes. Its high dielectric strength and minimal water absorption ensure durability and resistance against environmental stressors like weather, acid fumes, or gases (Kempton, 1910).

The distinction between the types of insulators (e.g., pin, post, shackle) and the materials from which they are made (e.g., glass, porcelain) is crucial for understanding their applications and functionalities within the transmission system (Ologunwa et al., 2021). This paper aims to critically analyze the optimal particle sizes of porcelain's constituent materials, with the intention of enhancing the insulating efficiency of overhead transmission lines.

Moreover, the production of insulators made from porcelain and plastic is energy-intensive and contributes significantly to greenhouse gas emissions, primarily due to high-temperature firing and long processing cycles (Ibn-Mohammed et al., 2019). These environmental concerns necessitate the use of alternative materials that meet both performance and sustainability standards. In line with circular economy principles, recent research promotes the repurposing of locally available and underutilized materials for engineering applications (Kirchherr et al., 2017). One such material is marble,

✉ : jeromegabutero@rsu.edu.ph

¹Electrical Engineering Department, College of Engineering and Technology, Romblon State University, Philippines

²Civil Engineering Department, College of Engineering and Technology, Romblon State University, Philippines

Received 16 April 2025; Revised 15 July 2025; Accepted 5 December 2025



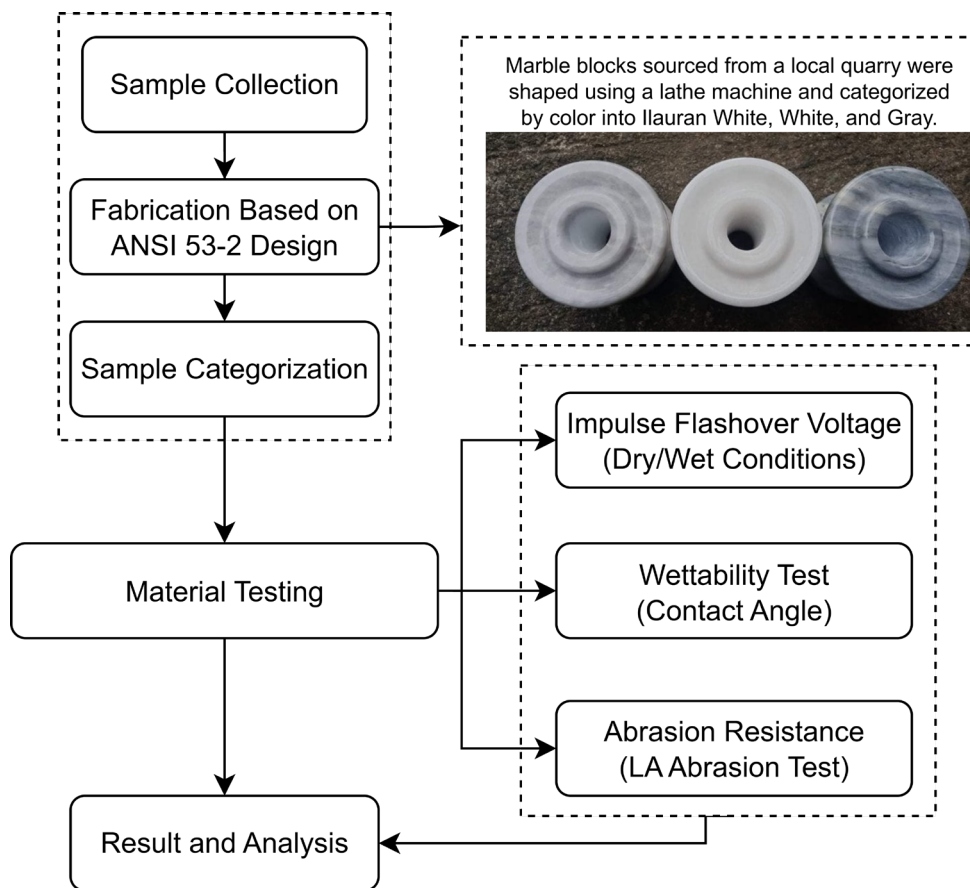


Figure 1. Sequential Methodology

which is abundant in Romblon, Philippines, and traditionally used in construction. Its dense structure, mechanical durability, and hydrophobic properties offer promising potential for electrical insulation. Utilizing local marble not only reduces reliance on imports but also supports regional industry and sustainable development (Gacu & Sim, 2022).

The context of local materials and industries, such as the marble industry in the Philippines' Romblon municipality, underscores the potential of local resources in various applications (Senoro et al., 2022). While marble is primarily associated with construction and decoration, the extraction and processing practices in regions with abundant natural resources illustrate the broader implications of material selection in industrial applications (Forcado & Estrada, 2018; Gacu & Sim, 2022; Senoro et al., 2022). Although extensive studies have been conducted on porcelain and polymer insulators, there is a noticeable absence of literature on the use of marble as an insulating material. The lack of prior research results in limited data on the design applicability, performance behavior, and field validation of this system, especially under tropical and humid conditions. This study aims to address this gap by

pioneering the evaluation and design of marble spool insulators based on international standards.

This study addresses the lack of research on alternative materials for spool insulators by exploring the potential of marble to improve the performance and sustainability of existing porcelain-based designs. The study aims to design, develop, and test marble spool insulators. Specifically, it aimed to design and develop a marble spool insulator conforming to a standard specification and to determine the electrical properties of the marble spool insulator in terms of horizontal and vertical impulse flashover voltage, as well as its physical properties in terms of wettability and abrasion resistance.

MATERIALS AND METHODOLOGY

Fabrication of the Marble Spool Insulators. The study determined that the design of the spool insulator is based on ANSI 53-2, as specified in ANSI/NEMA C29-3, for wet-process porcelain insulators (spool type), as it is the most widely used and available in the local market. Rectangular-shaped blocks of marble rock were



Figure 2. Various colored Marble Spool Insulators bearing the patent code PH 2/2020/050891.

obtained from local quarry sites and formed into a design specified using a lathe machine, with a smooth finish surface achieved by buffing. Three (3) types of marble spool insulators were fabricated according to color: Ilauran white, white, and gray.

Material Testing and Characterization. The prepared marble spool insulators and another porcelain spool insulator sample were tested according to their electrical (impulse flashover voltage) and physical properties (wettability and abrasion).

Impulse Flashover Voltage Test. An HRHGV-30 kV lightning impulse generator was utilized to conduct impulse flashover voltage tests. The equipment was configured in automatic mode, with the maximum voltage set to 30 kV to mimic lightning strikes. Each sample, including porcelain spool insulators, was firmly affixed vertically and horizontally onto dedicated sample holders. These tests aimed to ascertain the sample's ability to withstand lightning pulses perpendicular to its surface.

To assess the impact of moisture on resistivity, one batch of samples was sprayed with distilled water before testing, while another batch remained dry throughout the testing process. This procedure evaluated variations in flashover performance under different moisture conditions. The test setup and execution adhered to established protocols to ensure accurate and reliable results (Zhang et al., 2018). Furthermore, Kalenderli et al., 2003 emphasize the importance of comparing insulators for impulse voltages, highlighting criteria such as high breakdown strength, dielectric constant, low costs, and ease of maintenance. The test focused on identifying the breakdown performance of marble and porcelain samples under dry and wet conditions.

Wettability. The condition of polymeric insulator surfaces can be crucially inferred from their wettability. Initially, these surfaces display hydrophobic traits, causing water to form distinct droplets. Over time, however, as the insulator ages, it loses this hydrophobicity. This degradation results in the

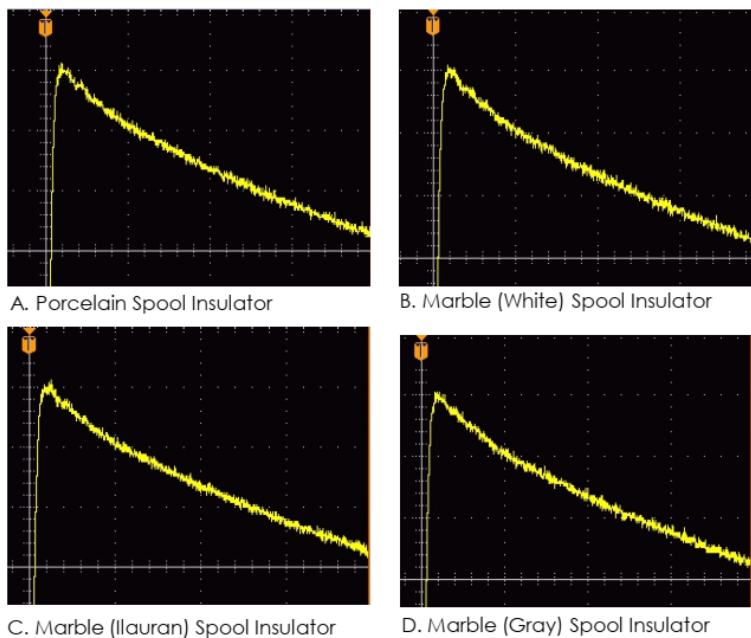


Fig. 3. Waveform results of the impulse flashover voltage test at 30 kV for porcelain (a) and marble spool insulators in White (b), Ilauran (c), and Gray (d).

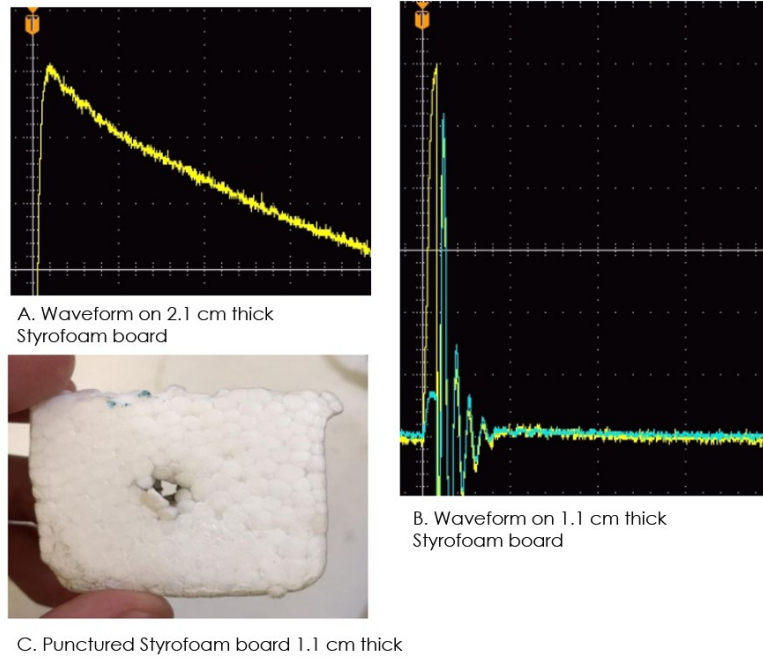


Fig. 4. A waveform generated on a 2.1 cm thick sample (a); on a 1.1 cm thick sample (b); and shows the punctured Styrofoam board 1.1 cm thick (c).

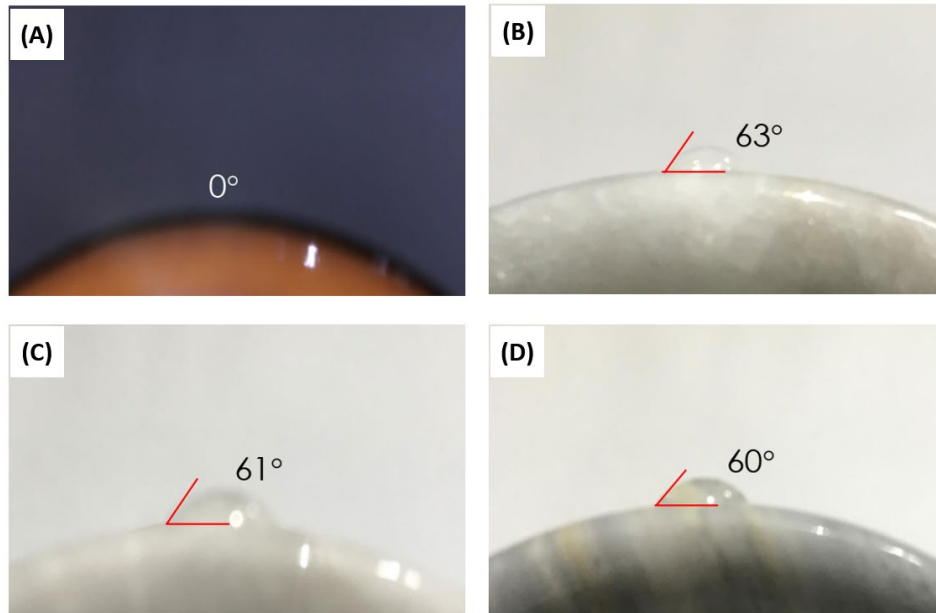


Fig. 5. Contact angles on porcelain (a); Ilauran white (b); white (c); and gray (d).

formation of continuous water films on the surface, which can lead to severe issues such as dry band arcing and flashovers, significantly impairing the insulator's long-term functionality (Chatterjee et al., 2020). The water resistance properties of marble and porcelain spool insulators were assessed using contact angle measurement. Cleaned sample surfaces were tested with water droplets under controlled conditions, and contact

angles were measured using macro photography and image analysis software.

The wettability of the marble and porcelain spool insulators was assessed using contact angle measurement. All samples were thoroughly cleaned with distilled water and dried before testing to remove any surface contaminants. A water droplet was carefully applied to each dry surface under ambient laboratory

Table 1. Summary of the abrasion test for marble and porcelain spool insulators.

Parameters	Marble	Porcelain
Weight of sample, g	5,080	5,151
Retained weight, g	3,695	3,496
Abrasion loss, %	27.28	32.13

conditions (~60% relative humidity). The droplet-surface interaction was recorded using a macro camera and analyzed using image processing software to determine the contact angle. This measurement quantifies the surface's hydrophobicity or hydrophilicity, helping assess its performance in real-world outdoor environments.

Abrasion Test. The abrasion testing method involved preparing samples of at least 5kg each from marble and porcelain spools (Tian et al., 2021). These samples were crushed to evaluate their durability and toughness. Subsequently, the destructive LA abrasion test was conducted, utilizing tumbler equipment containing standard steel balls. The powdered samples were placed inside the tumbler and mixed for 15 minutes at a specific speed and weight. Following the mixing process, only the remaining large chunks were retained. These retained chunks were then weighed to determine the amount lost due to abrasion. This method provides a direct and efficient means of assessing the abrasion resistance of marble and porcelain spools, which is crucial for evaluating their suitability for various applications.

RESULTS AND DISCUSSION

Marble Spool Insulators. As shown in Figure 2, each sample is distinguishable in terms of color and appears aesthetically appealing compared to existing porcelain or polymer spools on the market, which are typically brown, white, or black. This presents a local manufacturing advantage for Romblon, which is rich in marble resources and has established marble processing capabilities that can be extended to technical applications such as insulator production.

Impulse Flashover Voltage Test. The result of the 30 kV waveform generated by the lightning impulse equipment is shown in Figure 3.

The marble spool insulators developed passed the impulse voltage test, as there is no remarkable leakage voltage (no ripples on the waveform). This means that the marble material and design of the spool insulator were sufficient to resist the 30 kV impulse voltage without causing any visible damage to the samples. This result is similar to that of the porcelain spool insulator

tested. This performance is comparable to the findings of Zhang et al. (2018), who reported similar dielectric strength and flashover resistance in standard porcelain and glass insulators under lightning impulse conditions. The results demonstrate that locally sourced marble can achieve equivalent insulation capability, validating its potential as a functional alternative to conventional materials. Moreover, any voltage surge up to 30kW will not pass through the marble material. To confirm this, another test, such as the low-frequency flashover voltage test, is needed alongside the impulse flashover voltage test done in this study. To compare how the impulse flashover voltage test appears on a more porous insulating material, a separate test on a Styrofoam board at 2.1 cm and 1.1 cm thickness was done to compare as shown in Figure 4.

As observed in Figure 4c, the impulse lighting punctured the 1.1cm thick Styrofoam board, indicating that lighting can pass through a material as insulating like a Styrofoam board. Ripples on the generated waveform of voltage are observed on the punctured sample, as shown in Figure 4b, while no such ripple is monitored on a 2.1 cm thick sample, which was not punctured at all.

Wettability. The water contact angle on each sample is shown in Figure 5.

The result of the contact angle test shows that the water droplet's contact (θ) on the surface of the marble spool insulators is no less than 60° . For a material to be completely hydrophobic, it must have a contact angle greater than 90° . The porcelain spool's surface is completely hydrophilic on this test, while the marble spools are more hydrophobic. This finding aligns with Bi et al. (2020), who noted that composite insulators with moderate to high hydrophobicity often exhibit contact angles above 60° , indicating a favorable resistance to surface wetting. The marble samples, therefore, demonstrate surface characteristics similar to modern polymer-based hydrophobic insulators, suggesting their suitability for humid and outdoor conditions. This test relates not only to a material's electrical resistivity but to its behavior when in contact with liquids. The accumulation and adsorption of moisture on the material could reduce its insulating properties. Considering that the Philippines is a tropical

country, it is essential to determine how the marble spool insulator reacts to humidity and rain.

Abrasion Resistance. The result of the LA abrasion test is summarized in Table 1.

Data as shown above indicates that more material is crushed on the porcelain than on the marble, with a difference of 4.85%. This implies that marble is more durable and rigid than porcelain, making it a better alternative material for spool insulators.

CONCLUSION

In conclusion, this study demonstrates the feasibility of using marble as an alternative material for spool insulator fabrication. The fabricated marble spool insulators exhibit high electrical resistance up to 30 kV in both wet and dry conditions while showcasing superior hydrophobicity, durability, and rigidity compared to porcelain counterparts. These findings suggest that marble can offer performance characteristics that are equal to or better than traditional porcelain, particularly in terms of water repellency and abrasion resistance, two key factors for long-term outdoor use.

The positive market outlook, indicated by the increasing number of approved constructions, suggests significant potential for marble spool insulators, especially considering the demand from unregistered constructions. However, further testing, such as low-frequency flashover tests, is needed to validate the impulse flashover voltage results. Additionally, comprehensive market and feasibility studies are essential to accurately gauge the market potential of marble spool insulators in the Philippines.

ACKNOWLEDGMENT

The authors gratefully acknowledge the financial support provided by the Department of Science and Technology – Grants-in-Aid (DOST-GIA) Program through Romblon State University. This research would not have been possible without the funding assistance and institutional support extended to the project.

AUTHORS' CONTRIBUTIONS

M.L. Ical led the conceptualization, drafting of the initial manuscript, experimental analysis, and processing of results. J. Oliveros facilitated the research implementation, laboratory testing, and coordination of technical activities. J.G. Gacu contributed to the final manuscript preparation, critical review, and overall refinement of the paper. All authors read and approved the final version of the manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Bi, J., Hao, Y., Yang, L., Zheng, Y., & Li, L. (2020). Impact of hydrophobicity on wetting characteristics of composite insulators. *IEEE Access*, 8, 159316–159323. <https://doi.org/10.1109/ACCESS.2020.3019585>
- Chatterjee, S., Roy, S. S., Samanta, K., & Modak, S. (2020). Sensing Wettability Condition of Insulation Surface Employing Convolutional Neural Network. *IEEE Sensors Letters*, 4(7), 4–7. <https://doi.org/10.1109/LSSENS.2020.3002991>
- Forcado, M. R. G., & Estrada, J. E. (2018, November). Model development of marble quality identification using thresholding, sobel edge detection and gabor filter in a mobile platform. In *2018 IEEE 10th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management (HNICEM)* (pp. 1-6). IEEE. <https://doi.org/10.1109/HNICEM.2018.8666359>
- Gacu, J. G., & Sim, A. A. M. (2022). Effect of marble microparticles as additive on the physical and mechanical properties of concrete mixes. *Materials Today: Proceedings*, 65, 1491–1497. <https://doi.org/10.1016/j.matpr.2022.04.469>
- Han, S., Hao, R., & Lee, J. (2009). Inspection of insulators on high-voltage power transmission lines. *IEEE Transactions on Power Delivery*, 24(4), 2319–2327. <https://doi.org/10.1109/TPWRD.2009.2028534>
- Ibn-Mohammed, T., Randall, C. A., Mustapha, K. B., Guo, J., Walker, J., Berbano, S., Koh, S. C. L., Wang, D., Sinclair, D. C., & Reaney, I. M. (2019). Decarbonising ceramic manufacturing: A techno-economic analysis of energy efficient sintering technologies in the functional materials sector. *Journal of the European Ceramic Society*, 39(16), 5213–5235. <https://doi.org/10.1016/j.jeurceramsoc.2019.08.011>
- Kalenderli, O., Onal, E., Merev, A., & Mardikyan, K. (2003). Impulse flashover voltages in air at low pressure. In *XIIIth International symposium on High Voltage Engineering*, 1–4.
- Kempton, W. H. (1910). The application of porcelain to strain insulators. *Proceedings of the American Institute of Electrical Engineers*, 29(6), 841–848. <https://doi.org/10.1109/paice.1910.6660125>

- Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221–232. <https://doi.org/10.1016/j.resconrec.2017.09.005>
- Ologunwa, T., Akinbogun, T., Frischer, R., Kashim, I., Kuca, K., Krejcar, O., & Fadeyi, O. (2021). Optimizing Performance of Porcelain Insulators: How does Particle Size Influence Dielectric and Mechanical Strengths? *Acta Mechanica Slovaca*, 25(2), 20–28. <https://doi.org/10.21496/ams.2021.017>
- Orovwode, H., Matthew, S., Amuta, E., Olanipekun, A. J., & Thompson, T. (2024). Fabrication and investigation of local clay-based insulators for high voltage applications. *Cogent Engineering*, 11(1). <https://doi.org/10.1080/23311916.2024.2327903>
- Senoro, D. B., Monjardin, C. E. F., Fetalvero, E. G., Benjamin, Z. E. C., Gorospe, A. F. B., Jesus, K. L. M. De, Ical, M. L. G., & Wong, J. P. (2022). Quantitative Assessment and Spatial Analysis of Metals and Metalloids in Soil Using the Geo-Accumulation Index in the Capital Town of Romblon Province, Philippines. *Toxics*, 10(633), 1–22. <https://doi.org/10.3390/toxics10110633>
- Tian, Y., Qian, L., Liu, X., Ghanekar, A., Liu, J., Thundat, T., Xiao, G., & Zheng, Y. (2021). High-temperature and abrasion-resistant metal-insulator-metal metamaterials. *Materials Today Energy*, 21, 100725. <https://doi.org/10.1016/j.mtener.2021.100725>
- Tongse, R. B., Awankar, N. S., Kurhade, S. J., Shendre, Y. R., Nawalkar, S. S., & Mate, D. P. (2023). Types of Insulators Used in Transmission (Overhead) Lines. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 3(1), 854–858. <https://doi.org/10.48175/568>
- Zhang, Y., Li, L., Han, Y., Ruan, Y., Yang, J., Cai, H., Liu, G., Zhang, Y., Jia, L., & Ma, Y. (2018). Flashover performance test with lightning impulse and simulation analysis of different insulators in a 110 kV double-circuit transmission tower. *Energies*, 11(3). <https://doi.org/10.3390/en11030659>

Probing the Enigmatic Record of *Gracilaria disticha* (Gracilariales, Rhodophyta) Reported from Sibuyan Island, Philippines

Jeric B. Gonzalez^{1,2} and Lawrence M. Liao³

ABSTRACT

The marine red seaweed genus *Gracilaria* is among the most species-rich that is widely distributed throughout the Philippines. While many species are common and well characterized, there are a number of those poorly known and often based on single and overlooked reports. One such little known species is *Gracilaria disticha* (J. Agardh) J. Agardh which was first collected in 1975 from Sibuyan Island in Romblon. An exhaustive search and comparison with published descriptions and scanned images have revealed a misidentification. Results suggested that the Romblon samples are typical of the common Philippine species, *Gracilaria edulis* (Gmelin) Silva, and that the record of *G. disticha* should be removed from the Philippine seaweed flora. This report emphasizes the importance of thorough verification of records based on examination and comparison of well-preserved samples by experienced taxonomists and exhaustive literature searches.

Keywords: *agarophyte, database, herbarium, seaweed, species record, taxonomy*

INTRODUCTION

The eminent Hawaii'an marine phycologist, Dr. Isabella Aiona Abbott was regarded as the leading seaweed taxonomist recognized as a world authority on the taxonomy of marine red algal families, particularly Liagoraceae and Gracilariaceae, among other groups. She organized a taxonomy workshop held in Guam in 1985 providing a comprehensive list of Philippine Gracilariaceae that have been published by many Filipino phycologists (Abbott, 1985) incorporating the work of Trono et al. (1983) which attempted for the first time to monograph the Philippine representatives of this economically-important group of agar-yielding seaweeds. In addition, her list was primarily based on

specimen illustrations of other Philippine samples brought to the workshop by Dr. Maxwell Stanford Doty, who is credited with the development of seaweed aquaculture in the Philippines. Both Professors Abbott and Doty were affiliated with the University of Hawai'i at that time and are recognized as the most renowned phycologists and taxonomists.

Among the species listed by Abbott (1985), *Gracilaria disticha* (J. Agardh) J. Agardh [erroneously as *G. disticha* J. Agardh] was never reported from the Philippines but collected from Sibuyan Island in the province of Romblon and illustrated in her paper as Figure 56. This record was from the work of Dr. Abbott was subsequently included in the catalog of Philippine marine algae by Silva et al. (1987: 42) without any notes or queries but cited the work of Abbott (1985) as the sole basis for its inclusion. Later, Ganzon-Fortes (2012: 188) also included *G. disticha* in her survey of Philippine seaweed records, also without any supporting notes. A year after, Ang et al. (2013: 30) published a summary of all known Philippine marine macroalgal records including *G. disticha*. Their checklist was meticulously checked against the AlgaeBase, (Guiry & Guiry, 2025) and the Index Nominum Algarum [INA] maintained by the Silva Center for Phycological Documentation at the University of California at Berkeley (Silva, 1996 into date). The latest in this parade of Philippine seaweed

✉: lliao@hiroshima-u.ac.jp

¹School of Fisheries and Technology, Romblon State University, Cabulotan, San Agustin, 5501 Romblon, Philippines

²Institute of Aquatic Science and Technology, National Kaohsiung University of Science and Technology, Kaohsiung City 81157, Taiwan, Republic of China

³Graduate School of Integrated Sciences for Life, Hiroshima University, 1-4-4 Kagamiyama, Higashi-Hiroshima 739-8528, Japan

Received 26 October 2025; Revised 17 December 2025; Accepted 27 December 2025



lists was that of Lastimoso & Santiañez (2021: 62) who also listed *G. disticha* as a member of the Philippine marine flora. In addition, the latter authors included information obtained from the online resources available, the Macroalgal Herbarium Portal [www.macroalgae.org] and the National Museum of Natural History at the Smithsonian Institution [www.collections.nmnh.si.edu]. In the last two checklists cited above, no explanatory notes nor comments were added to the records of *G. disticha*, suggesting direct and simple citation, most likely unverified and unquestioned, carried over from the first report of Abbott (1985).

A more recent study by Clemente et al. (2017) conducted a comprehensive survey of the marine benthic algae of Romblon province. Prior to their study, only two species of marine algae have been reported from Romblon, namely *Laurencia flexilis* Setchell reported by Trono (2004: 128) and *G. disticha* by Abbott (1985). *L. flexilis* was collected from Agtiwa, San Fernando on the western tip of Sibuyan Island and currently known as *Ohelopapa flexilis* (Setchell) F. Rosseau, Martin-Lescanne, Payri & L. Le Gall. The same species was reported by Clemente et al. (2017: 995) from localities in Tablas and Romblon Islands. Unfortunately, *G. disticha* as recorded from Sibuyan Island was not found and remains an enigmatic species to this day, thus its presence in the Philippines remains doubtful until samples are examined.

Revisiting this is crucial for maintaining the accuracy of national biodiversity inventories and taxonomic databases. Additionally, erroneous species listings can mislead ecological assessments, resource management and biodiversity policymaking. Therefore, it is essential to re-examine past records using available herbarium materials, digital archives, and comparative morphological analysis to ensure the reliability of species checklists.

Most recently, the authors tracked down some samples identified as *Gracilaria disticha* that were deposited in the Herbarium Pacificum of the Bernice P. Bishop Museum in Honolulu. The samples were part of the personal collection of Dr. Doty which were donated to the Herbarium Pacificum. Among those samples found was the same material used by Abbott (1985), specifically that sample shown in her Figure 56 which remains the only photo voucher for the published Philippine record of *G. disticha*.

METHODOLOGY

Digitally scanned images of *Gracilaria disticha* examined in this study were retrieved from the Herbarium Pacificum of the Bernice Pauahi Bishop Museum in Honolulu, Hawai'i, U.S.A. Additional

scanned materials of the target species as well as supplemental information were searched in different online databases such as the Algae Herbarium Portal (<https://macroalgae.org/portal/index.php>) and AlgaeBase (Guiry & Guiry, 2025; <https://algaebase.org>) for comparison. Relevant phytogeographical and historical information were also obtained from many published and online sources.

RESULTS AND DISCUSSION

Samples of the marine red alga *Gracilaria disticha* (J. Agardh) J. Agardh were first collected off the coast of the African region formerly known as Abyssinia (likely Massawa in present-day Eritrea) in the Horn of Africa on the eastern central side of the continent (Agardh, 1837). The original materials were collected in 1831-1832 by Wilhelm Peter Eduard Simon Rüppell when he was in a collecting trip to Eritrea and the southern Red Sea region. Soon after, the seaweed samples from Eritrea were sent to Paris to the prominent Swedish algal taxonomist Jacob Georg Agardh for him to study. Several new species were described by him including *Sphaerococcus distichus* and published in the journal *Museum Senckenbergianum* (Agardh, 1837). After some years have passed and reexamining the samples, the same species was transferred to the genus *Gracilaria* (Agardh, 1852). The authors attempted to locate the original type specimens at the Senckenberg Museum (Frankfurt), the Museum National d'Histoire Naturelle (Paris) and Lund University (home institution of J.G. Agardh) where samples were reportedly deposited (Papenfuss, 1968) but could not be located. Further information on the whereabouts of the type materials and other samples examined by J.G. Agardh was also unavailable upon thorough search.

A set of representative samples identified as "*Gracilaria disticha* J.Ag." was collected from "the reef flat at Danao, Cajidiocan, Sibuyan Island, Romblon Province" on 22-25 August, 1975 by Agaton E. Manago. Another set was obtained from Silum, Magdiwang (Sibuyan Island), Romblon Province on 29 August, 1975 also by A.E. Manago. These samples have been mounted in at least six herbarium sheets deposited at the Herbarium Pacificum with each sheet assigned an MSD field number (MSD-Maxwell S. Doty) and a BISH accession number (BISH-Bernice P. Bishop Museum).

All samples were identified as "*Gracilaria disticha* J.Ag." by Mitchell D. Hoyle who at that time was a Ph.D. student under M.S. Doty studying the Hawaiian species of *Gracilaria* as his dissertation research topic. He wrote the species name into the specimen labels on 08 June 1978. In one of the sheets

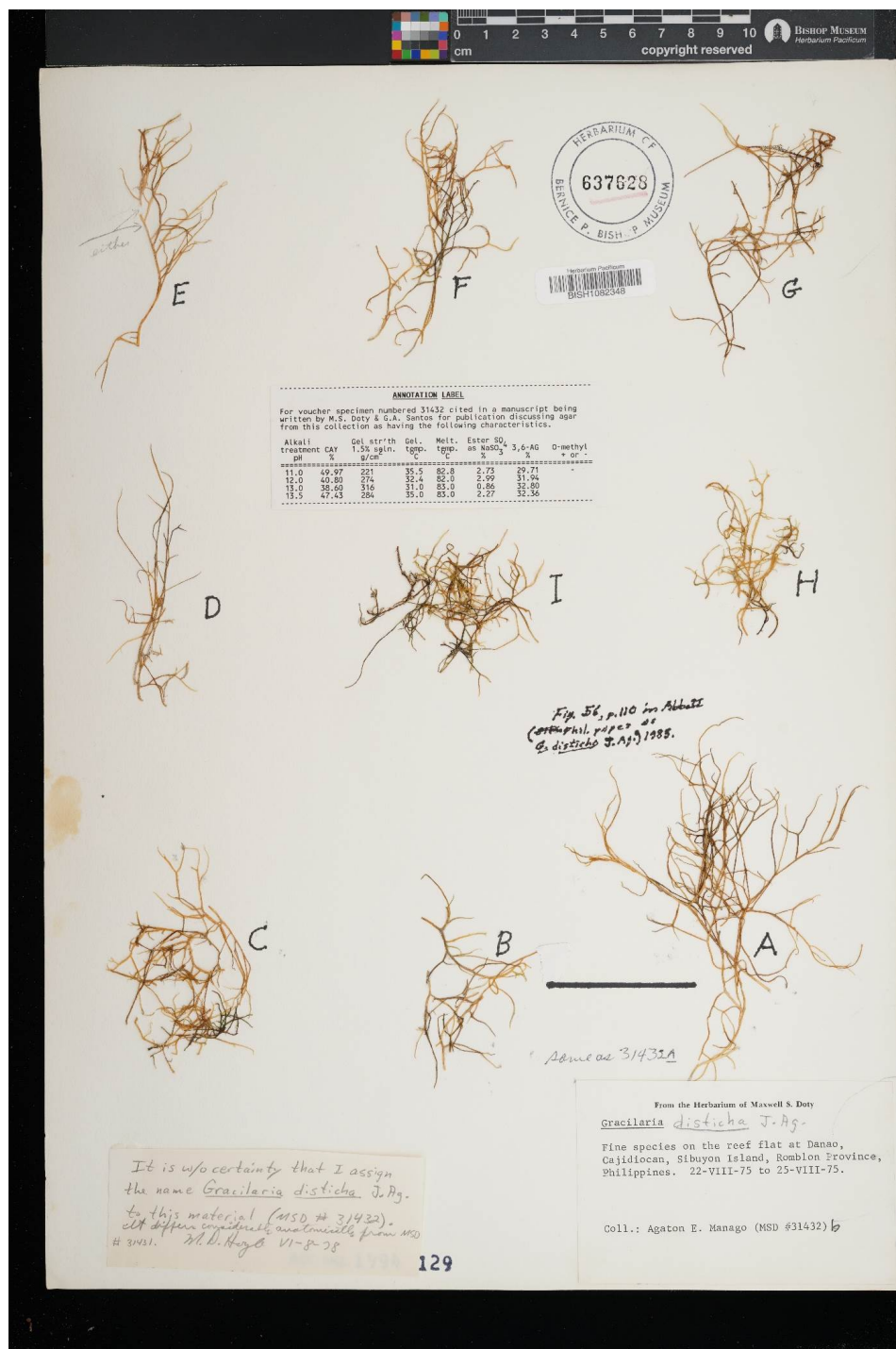


Fig. 1. Herbarium samples (BISH 637628) from Cajidiocan, Sibuyan Island, Romblon identified as *Gracilaria disticha* J. Ag. by M.D. Hoyle. Sample marked A on the lower right corner was the basis of the first Philippine report in Abbott (1985)



Figure 2. Herbarium sample (AHFH in UC 53905 = UC 1850526) from Singapore identified as *Gracilaria disticha* J.Ag. by E. Yale Dawson.



Fig. 3. Herbarium sample (MICH 665105) from Krusadai Island, southeast India identified as *Gracilaria disticha* (J.Ag.) J.Ag. by M.J. Wynne.

(BISH 637628) containing nine samples from Cajidiocan (designated by letters A to I), he added a note found at the bottom of the herbarium sheet which said “It is w/o certainty that I assign the name *Gracilaria disticha* J.Ag. to this material (MSD#31432).” The sample code (MSD#31432 A) was used by Abbott (1985: 89) as the basis for including *G. disticha* among the species from the Philippines. Dr. Abbott just copied the species name directly from the label as she said “I have not studied any of the specimens reported herein,” referring to all samples brought to the Guam taxonomy workshop. The same sample from Cajidiocan was included as Figure 56 of Abbott & Norris (1985: 110) which is illustrated as part of Fig. 1 of this present report.

Gracilaria disticha has been reported by Papenfuss (1968) and Einav et al. (2021) from throughout the western shores of the Red Sea (coasts of Egypt and Eritrea). In the Indian Ocean region, it was reported from the southeast coast of the Arabian Peninsula, Mauritius and India (Silva et al., 1996). Samples collected from southern India were examined by Umamaheswara Rao (1972) who compared them with *G. coronopifolia* J. Agardh. with which they are superficially similar. In our own online search, materials identified as *G. disticha* collected from Mauritius, India and Singapore were found, which made this species widely distributed throughout the Indian Ocean. Although Singapore is not directly located within the waters of the Indian Ocean, it was included in the marine algal catalogue of Silva et al. (1996).

Our search using the Algae Herbarium Portal (www.macroalgae.org) found an undated sample from Singapore (duplicate, AHFH 53905 in UC 1850526) originally distributed from the herbarium of the Irish phycologist William H. Harvey at Trinity College in Dublin, Ireland. This was found among the collections of the Allan Hancock Foundation herbarium at the University of Southern California, which was later transferred to the University of California Berkeley herbarium (Fig. 2). The sample was identified by Elmer Yale Dawson as *Gracilaria disticha* J.Ag. It is bushy, ca. 10 cm tall, composed of thinly cylindrical branches of ca. 2 mm diameter at the base that are gradually attenuating distally, branching sparingly at the base, dichotomously to subdichotomously, fastigiate, becoming proliferous distally by branching more frequently towards the acute tips. This general morphology and size of the Singaporean sample are reminiscent of the South Indian sample studied by Umamaheswara Rao (1972) who illustrated it in his Plate IID. The Indian sample was collected from Pamban and Krusadai Island in southeastern India facing Sri Lanka. Another sample from the same vicinity was located at the herbarium of the University

of Michigan (MICH 655105), It was collected in August 1970 by P. Dayanandan and identified as *G. disticha* (J.Ag.) J.Ag. by Michael J. Wynne. However, the sample (Fig. 3) is strikingly different from that examined by Umamaheswara Rao (1972). It is a large plant, up to 35 cm high, with its main axes 2-3 mm in diameter for the most part, branching dichotomously, more frequently so distally, ending in fine, attenuate tips. The presence of many filiform outgrowths on the branches is remarkable. These filiform branchlets are ca. 1 mm in diameter, 2-10 mm long, may branch once or twice, issued randomly every few millimeters along the length of the branchlets, sometimes appearing distichous.

Southeast Asian waters boast of many species of *Gracilaria* with cylindrical, slender branches of 1.0 mm diameter or less and any of these would be superficially similar to *G. disticha*. The authors are aware that the taxonomy of cylindrical species of *Gracilaria* is still in a state of flux and that morphological plasticity is commonly seen among them. Inasmuch as type materials of *G. disticha* could not be found, the closest resemblance to authentic samples would likely be the specimens from southeastern India deposited at the University of Michigan cited above (Fig. 3) owing to the fact that the cylindrical branches are clothed with distichous, filiform branchlets that may have inspired the naming of this species as *G. disticha* (originally as *Sphaerococcus distichus*). However, the samples from Romblon have smooth branches that are definitely devoid of such distichous branchlets (see Fig. 1).

A thorough comparison of samples superficially similar to the materials from Romblon has pointed to two possible names: *Polycavernosa fastigiata* Chang & Xia [later *Gracilaria fastigiata* (Chang & Xia) Chang & Xia] and *G. edulis* (Gmelin) Silva.

Xia and Abbott (1987, figs. 1 and 2) illustrated samples of *Polycavernosa fastigiata* from Malaysia which bore striking similarities with the samples from Romblon. The younger plants in Fig. 1 appear bushy and smooth, closely similar to Romblon materials while the older one in their Fig. 2 had few distichous branchlets. Initially designated as the type of the genus *Polycavernosa*, *P. fastigiata* and similar species were segregated into their own genus because of the presence of multicavitated spermatangial conceptacles in male plants. Later, all species of *Polycavernosa* were transferred to the genus *Hydropuntia* by Wynne (1989) as the latter is a valid, available and earlier name of the former. Much later, Lyra et al. (2015, 2021) provided molecular and evolutionary evidence to recognize a broader circumscription of *Gracilaria* subsuming all *Hydropuntia* species including *H. fastigiata* (Chang & Xia) Wynne. In addition, *H. fastigiata* was also recognized as one of the many synonyms of *G. edulis* (Abbott et al., 1991; Lyra et al.,

2021). Another sample collected from Sorsogon and illustrated by Trono (2004, fig. 135) is almost identical in external morphology to the Romblon materials. This was identified as *G. fastigiata* (Chang & Xia) Chang & Xia by Trono (2004) which is a superfluous and latter heterotypic homonym of *G. fastigiata* J. Agardh (1901) first described from Mauritius and Sri Lanka, which is also a latter homonym of *G. fastigiata* J. Agardh (1852) from the cold waters off the Falkland Islands (Silva et al., 1996). This Antarctic species was later recognized as belonging to another genus, *Callophyllis fastigiata* (J. Agardh) J. Agardh (1876).

Perhaps the most compelling proof pointing to the identity of the Romblon samples was provided by Trono (2017). His Fig. 69 described and identified as *G. edulis* seemed to match every external feature of branch morphology and arrangement. Without any doubt, the materials from Romblon can be identified with much certainty as *G. edulis*. This identification therefore effectively removes *G. disticha* from the list of Philippine marine algae.

CONCLUSION

Thorough archival search and comparing in different online databases are useful approaches providing updated checklists and to re-examine current marine algal lists in the Philippines to maintain accuracy. Among the many species of economically-important seaweed, *Gracilaria disticha* was documented from Romblon in 1985.

Based on the examination and comparison of searched images obtained from online databases and phytogeographic considerations, the samples from Romblon were deemed to have been misidentified. Descriptions and images of specimens were identified to be *G. edulis*, a common and widely distributed species based on external morphology. Therefore, the sole record remained unscrutinized for the past decades, and since then, there have been no other reports of *G. disticha* with the Philippine archipelago, particularly the most recent study by Clemente et al. (2017) in Romblon.

In the future, molecular-assisted alpha taxonomy (MAAT) can be used to help resolve this taxonomic question. For now, samples are limited and any effort to perform MAAT will need destructive sampling of rare samples which institutions are not likely to allow. This study underscored the importance of correctly identified and properly preserved samples such as those deposited in herbaria and natural history collections. In addition, due to the dwindling of Filipino taxonomists and phycologists, these problems are bound to happen. The maintenance of biodiversity repositories consisting of well curated, preserved samples and staffed by

trained and dedicated taxonomists should be encouraged and supported.

ACKNOWLEDGMENT

The authors are grateful to Dr. Barbara Kennedy and Dr. Clyde Imada, collections manager and research specialist, respectively, at the Herbarium Pacificum, Bernice P. Bishop Museum for providing the scanned images of the Sibuyan samples. Acknowledgment is likewise made for the use of the biodiversity occurrence data published by the University of Michigan herbarium and the University Herbarium of the University of California, Berkeley (accessed through [Macro]Algae Herbarium Data Portal, <https://macroalgae.org/portal/index.php>, 2025-01-24). Distributional data were largely obtained from the AlgaeBase (www.algaebase.org, accessed 2024-11-26). The authors sincerely thank the Biodiversity Heritage Library (www.biodiversitylibrary.org) for access to many classical and out-of-print literature useful in tracing the history of the species. The authors appreciate the valuable help provided by Dr. Rosa Celia Poquita-Du of the Senckenberg Biodiversity and Climate Research Center, Germany in locating samples deposited in her institution. LML acknowledges the travel funds provided by the Graduate School of Integrated Sciences for Life, Hiroshima University. The corrections and suggestions by two anonymous reviewers are acknowledged. Lastly, the authors are very grateful for the enormous help provided by the late Dr. Roy Toshio Tsuda (1939-2020), formerly of the University of Guam Marine Laboratory and later of the Herbarium Pacificum at the Bernice P. Bishop Museum during the initial stages of this research. His encouragement and support in locating samples, filling in missing collecting information, carrying out insightful correspondences, sharing many anecdotes and cheerful diligence are hallmarks of an international scientist and friend. In gratitude, this work is hereby dedicated to his memory.

AUTHORS' CONTRIBUTIONS

JBG: field work, material verification, writing, editing and approval of manuscript

LML: archival and data-mining, writing, editing and approval of manuscript

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Abbott, I.A. (1985). *Gracilaria* from the Philippines: List and distribution of the species. In Abbott, I.A. & Norris, J.N. *Taxonomy of Economic Seaweeds with Reference to some Pacific and Caribbean Species* (pp. 89-90). California Sea Grant College Program, La Jolla, California.
- Abbott, I.A. & Norris, J.N. (1985). *Taxonomy of economic seaweeds with reference to some Pacific and Caribbean species*. California Sea Grant College Program, La Jolla, California.
- Abbott, I.A., Zhang, J. & Xia, B. (1991). *Gracilaria mixta* sp. nov. and other western Pacific species of the genus (Rhodophyta: Gracilariaceae). *Pacific Science*, 45, 12-27.
- Agardh, J.G. (1837). Novae species algarum, quas in itinere as oras maris rubri collegit Eduardus Rüppell; cum observationibus nonnullis in species rariores antea cognitae. *Museum Senckenbergianum*, 2, 169-174.
- Agardh, J.G. (1852). *Species genera et ordines algarum.... Volumen secundum: algas florideas complectens, part 2, fascicle 2 (addenda and index)*. Lund.
- Agardh, J.G. (1876). *Species genera et ordines algarum.... Volumen tertium: de Florideis curae posteriors. Part 1*. Leipzig.
- Agardh, J.G. (1901). *Species genera et ordines algarum.... Voluminis tertii, pars quarta. Supplementa ulteriora et indices sistens*. Lund.
- Ang, P.O., Leung, S.M. & Choi, M.M. (2013). A verification of reports of marine algal species from the Philippines. *Philippine Journal of Science*, 142 (Special Issue), 5-49.
- Clemente, K.J.E., Baldia, S.F. & Cordero, P.A. (2017). The marine macroalgal flora of the Romblon Island Group (RIG), central Philippines. *AACL Bioflux*, 10, 983-1000.
- Einav, R., Guiry, M.D. & Israel, A. (2021). A revised list of seaweeds from the Red Sea (1756-2020). *Israel Journal of Plant Sciences*, 68(3), 175-247. <https://doi.org/10.1163/22238980-bja10036>
- Ganzon-Fortes, E.T. (2012). A historical account of biodiversity studies on Philippine seaweeds. *Coastal Marine Science*, 35, 182-201.
- Guiry, M.D. & Guiry, G.M. (2025). *AlgaeBase*. National University of Ireland. Retrieved June 22, 2025 from <https://www.algaebase.org>
- Lastimoso, J.M.L. & Santiañez, W.J.E. (2021). Updated checklist of the benthic marine macroalgae of the Philippines. *Philippine Journal of Science*, 150 Special Issue on Biodiversity, 29-92.
- Lyra, G. de M., Costa, E. da S., de Jesus, P.B., de Matos, J.C.G., Caires, T.A., Oliveira, M.C., Oliveira, E.C., Xi, Z. & Nunes, J.M. de C. (2015). Phylogeny of Gracilariaceae (Rhodophyta): Evidence from plastid and mitochondrial nucleotide sequences. *Journal of Phycology*, 51, 356-366. <https://doi.org/10.1111/jpy.12281>
- Lyra, G. de M., Iha, C., Grassa, C.J., Cai, L., Zhang, H., Lane, C., Blouin, N., Oliveira, M.C., Nunes, J.M. de C. & Davis, C.C. (2021). Phylogenomics, divergence time estimation and trait evolution provide a new look into the Gracilariales (Rhodophyta). *Molecular Phylogenetics & Evolution*, 165, 107294. <https://doi.org/10.1016/j.ympev.2021.107294>
- Papenfuss, G.F. (1968). A history, catalogue, and bibliography of Red Sea benthic algae. *Israel Journal of Botany*, 17, 1-118.
- Silva, P.C. (1996-to date). *Index Nominum Algarum*, University Herbarium, University of California, Berkeley. Retrieved June 22, 2023 from <https://ucjeps.berkeley.edu/INA.html>
- Silva, P.C., Basson, P.W. & Moe, R.L. (1996). Catalogue of the benthic marine algae of the Indian Ocean. *University of California Publications in Botany*, 79, 1-1259.
- Silva, P.C., Meñez, E.G. & Moe, R.L. (1987). Catalog of the benthic marine algae of the Philippines. *Smithsonian Contributions to the Marine Sciences*, 27, 1-197.
- Trono, G.C. (2004). *Field guide & atlas of the seaweed resources of the Philippines*. Bureau of Agricultural Research and Marine Environment and Resources Foundation.
- Trono, G.C. (2017). *An illustrated seaweed flora collected along the Pacific seaboard of the Philippines. Part I. Cyanophyceae and Rhodophyceae*. National Academy of Science and Technology.
- Trono, G.C., Azanza-Corrales, R. & Manuel, D. (1983). The genus *Gracilaria* (Gigartinales, Rhodophyta) in the Philippines. *Kalikasan, Philippine Journal of Biology*, 12, 15-41.
- Umamaheswara Rao, M. (1972). On the Gracilariaceae of the seas around India. *Journal of the Marine Biological Association of India*, 14, 671-696.
- Wynne, M.J. (1989). The re-instatement of *Hydropuntia* Montagne (Gracilariaceae, Rhodophyta). *Taxon*, 38, 476-479.
- Xia, B. & Abbott, I.A. (1987). New species of *Polycavernosa* Chang & Xia (Gracilariaceae, Rhodophyta) from the western Pacific. *Phycologia*, 26, 405-418.

Empowering Educators: Cultivating Resilience in Secondary Teachers through Effective Coping Mechanisms

Clareisse F. Gabinete¹, and Elvin F. Gaac²

ABSTRACT

This study explored the stressors and coping mechanisms influencing the resilience and well-being of secondary school teachers in the District of San Agustin. The research aimed to identify key stressors related to family, school environment, and policies, and examine coping mechanisms employed by teachers. The study targeted all 215 secondary teachers in the district, with qualitative data gathered through interviews and focus groups using random sampling. A predetermined number of schools were randomly selected, and a random sample of teachers was chosen from each school using a random number generator. This approach enhanced the representativeness and external validity of the findings by ensuring a diverse range of perspectives. Quantitative data were collected through surveys and analyzed using the mean to determine the most common stressors, while thematic analysis was applied to identify prevalent coping mechanisms. Major stressors included workload, student behavior, administrative demands, financial constraints, time management issues, and family conflicts. Common coping strategies were social support, time management techniques, and self-care practices. Based on the findings, the study proposed a tailored stress management program aimed at improving resilience and well-being among teachers. Recommendations included fostering peer support networks, providing professional development workshops, and implementing institutional support strategies focusing on work-life balance, financial stability, and stress management. The results underscore the need for a holistic, evidence-based approach to support educators in managing stress and enhancing their overall well-being in the teaching profession.

Keywords: *stressors, coping mechanism, stress management program*

INTRODUCTION

Secondary teachers often face a multitude of stressors in their daily professional lives, including heavy workloads, student behavior issues, administrative demands, and insufficient resources. These challenges can significantly affect their mental and emotional well-being, job satisfaction, and overall effectiveness as educators. In the context of the District of San Agustin, it is essential to understand the specific stressors impacting secondary teachers in order to develop targeted interventions that support their resilience and promote a sustainable teaching environment.

Equally important is identifying the coping mechanisms secondary teachers employ to manage these stressors. Coping mechanisms, defined as the cognitive and behavioral strategies individuals use to deal with stressful situations, play a central role in maintaining psychological well-being and professional functioning. Recent studies emphasize the importance of these mechanisms in promoting resilience among educators.

Despite the growing body of research, a clear gap remains in understanding which coping mechanisms are most effective in cultivating resilience among secondary school teachers in localized settings. Most existing studies offer general strategies, often lacking context-specific data that could inform tailored interventions. Furthermore, the relationship between effective coping mechanisms and broader aspects of teacher well-being, such as job satisfaction, work-life balance, and mental health, has not been thoroughly explored in many local educational settings.

✉ : clareisse.gabinete@deped.gov.ph

¹Calatrava National High School;

²Romblon State University, Odiongan, Romblon

Received 6 May 2025; Revised 23 July 2025; Accepted 17 December 2025



Another pressing gap lies in the design and implementation of stress management programs specifically tailored to the unique challenges faced by secondary teachers. Although general stress reduction programs exist in educational systems, few are informed by empirical data gathered directly from teachers themselves.

In light of these research gaps, this study focuses on three core objectives: (1) identifying the key stressors experienced by secondary teachers in the District of San Agustin, (2) examining the specific coping mechanisms that promote resilience and overall well-being, and (3) designing an effective, evidence-based stress management program tailored to teachers' actual needs. By addressing these gaps, the study aims to empower educators and promote a more supportive teaching environment. The findings may contribute to policy-making, school leadership strategies, and professional development initiatives that prioritize teacher well-being—ultimately benefiting both teachers and the learners they serve.

Synthesis of Related Literature

The discourse on stress management and teacher resilience underscores the multifaceted nature of challenges faced by educators and the critical need for effective coping mechanisms and support structures within educational institutions. Stress, as defined by various scholars, emerges from a multitude of factors, both internal and external, and manifests in physical, mental, and emotional symptoms. It is crucial to recognize the stages and symptoms of stress, ranging from subtle signs to severe manifestations, and to address them proactively to prevent burnout.

Burnout, a consequence of prolonged exposure to stress, is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. Its prevalence among educators highlights the pressing need for strategies to manage stress and foster resilience. The Job Demand-Resource model and Maslach's three-dimensional model of burnout provide frameworks for understanding the interplay between job demands, individual resources, and burnout outcomes.

Effective stress management involved a range of strategies, including cognitive, emotional, and behavioral approaches, as well as social support and lifestyle changes. These strategies aim to mitigate the negative impact of stress on educators' well-being and job performance. Additionally, creating supportive work environments, providing adequate resources, and promoting work-life balance are crucial in enhancing teacher resilience and preventing burnout.

Teacher resilience, defined as the capacity to adapt positively to challenging situations, emerges as a key factor in mitigating the effects of stress and promoting

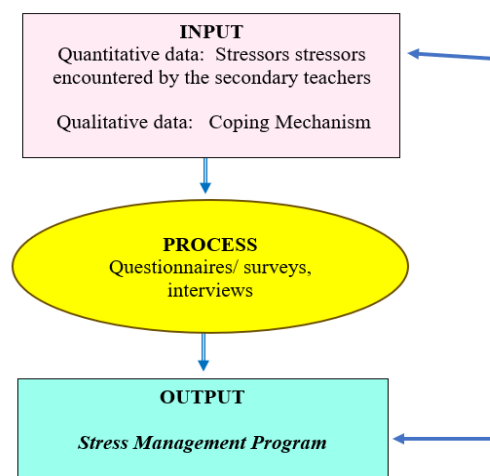


Figure 1. Research Paradigm

job satisfaction and effectiveness. Resilience competencies encompass flexibility, dynamics, and resistance, emphasizing the ability to adapt, embrace change, and recover quickly from adversity. Factors contributing to teacher resilience include coping strategies, social support, teaching skills, personal characteristics, and supportive work environments.

The discourse on stress management and teacher resilience highlights the multifaceted nature of the challenges faced by educators and the importance of establishing effective coping mechanisms within supportive institutional environments. Stress among teachers manifested physically, mentally, and emotionally typically arises from cumulative work demands, interpersonal conflicts, and systemic pressures. This aligns with the findings which emphasized that secondary teachers in San Agustin experience significant stress from family responsibilities, school-based challenges, and administrative requirements.

When teachers consistently navigate these conditions without adequate support, their professional efficacy declines, potentially compromising overall school performance. Adding to this, Chang (2009) reinforces that teacher burnout is often exacerbated by emotional labor the constant requirement for teachers to manage their emotions while supporting students. This is particularly evident in environments where class sizes are large, behavioral problems are persistent, and administrative demands remain high.

Recent literature also emphasizes the role of coping mechanisms in strengthening teacher resilience. A study by Beltman et al. (2011) highlights how collegial relationships, mentorship, and collaborative school environments buffer the negative effects of stress. These findings align with teachers' emphasis on

collaboration and open communication as major coping mechanisms in the local context, particularly when dealing with policy-related stress and school-wide expectations. In addition to interpersonal support, workplace conditions significantly influence stress levels. Skaalvik and Skaalvik (2015) found that school climate, administrative leadership, autonomy, and recognition contribute directly to teacher motivation and well-being. When organizational structures promote clarity, fairness, and participation in decision-making, teachers report higher resilience and lower stress.

The present study reflects similar perceptions from teachers who value supportive leadership and collaborative problem-solving structures within their schools. Taken collectively, these studies reinforce the central idea that stress management and resilience-building are not merely individual responsibilities but institutional imperatives. A holistic approach integrating personal coping strategies, systemic support, and collaborative school culture is essential for ensuring teacher well-being and long-term professional sustainability.

Conceptual Framework

In this study, both quantitative and qualitative data were collected to comprehensively understand the stressors encountered by secondary teachers and the coping mechanisms they employ to build resilience. Quantitative data were gathered through questionnaires and surveys to identify and measure the key stressors faced by secondary teachers in the District of San Agustin. These instruments helped quantify the prevalence and intensity of various stressors, such as balancing work and family responsibilities, large class sizes, limited support, overwhelming workloads, and administrative challenges.

Simultaneously, qualitative data were collected through interviews to explore the coping mechanisms utilized by teachers to manage stress and enhance their resilience. These interviews provided in-depth insights collaboration with colleagues, and seeking support from personal networks.

By analyzing both sets of data, the study was able to identify the most significant stressors and the most effective coping mechanisms. This comprehensive understanding was then used to design a tailored stress management program aimed at enhancing the resilience and well-being of secondary teachers in the District of San Agustin. The program focuses on promoting work-life balance, providing professional development opportunities, behavior management training, and fostering a collaborative work environment to improve teacher resilience, job satisfaction, and ultimately student engagement and achievement. into the strategies teachers use, including task management, self-care, effective communication,

METHODOLOGY

The research utilized a mixed-method approach to provide a comprehensive understanding of the factors influencing the resilience of secondary teachers. This methodology began with the collection and analysis of quantitative data to identify patterns or trends, followed by qualitative methods to delve deeper into the experiences and perceptions of participants (Creswell & Plano Clark, 2018). By integrating both quantitative and qualitative approaches, the study presented a comprehensive understanding of the complex factors affecting teacher resilience (Johnson & Onwuegbuzie, 2019).

For the quantitative phase, data were gathered using a self-constructed questionnaire that was developed based on a review of existing literature and validated resilience and coping theory frameworks. The instrument included sections measuring demographic information, job satisfaction, perceived stressors, coping strategies, and levels of resilience. Prior to full deployment, the instrument underwent content validation by field experts and a pilot testing phase to ensure its reliability and validity. Internal consistency of the scales was assessed using Cronbach's alpha to ensure measurement accuracy.

To determine the relationship between coping mechanisms and overall well-being, statistical analyses such as Pearson correlation and multiple regression analysis were employed. These methods helped identify the strength and nature of relationships between variables such as types of coping strategies (e.g., problem-focused, emotion-focused, avoidant coping) and indicators of well-being and resilience.

In the qualitative phase, data collection involved semi-structured interviews with a purposively selected subset of survey respondents who exhibited either high or low levels of resilience based on the quantitative results. This phase aimed to explore their personal experiences, challenges, and coping strategies in greater depth. The interview guide was self-developed but informed by the initial quantitative findings and relevant literature. All qualitative data were analyzed using thematic analysis, allowing for the identification of recurring themes and insights that further contextualized and enriched the quantitative findings.

RESULTS

The summary provided in Table 1 offers a comprehensive overview of the key stressors encountered by secondary teachers in the District of San Agustin across three distinct areas: Family, School Environment, and Policies and Office Standards.

Table 1. Level of Key Stressors Encountered by the Secondary Teachers

Variables	Mean	SD	Interpretation	Rank
Family	4.45	0.56	Strongly Agree	1
School Environment	4.39	0.61	Strongly Agree	2
Policies and Office Standards	4.38	0.61	Strongly Agree	3
Overall	4.40	0.59	Strongly Agree	

Legend: 4.21 – 5.00 (*Strongly Agree*); 3.41 – 4.20 (*Agree*); 2.61 – 3.40 (*Neutral*); 1.81 – 2.60 (*Disagree*); and 1.00 – 1.80 (*Strongly Disagree*)

Remarkably, across all areas, the mean scores indicate a consensus among teachers, with ratings falling within the "Strongly Agree" category. This consensus underscores the pervasive nature of the challenges faced by educators in the district.

Notably, the highest mean score was recorded in the "Family" domain, with a mean of 4.45, indicating that balancing professional responsibilities with family obligations is a major source of stress for secondary teachers in San Agustin. This finding underscores the critical role of work-family balance in teacher well-being. Teachers often struggle to allocate adequate time for rest, personal care, and quality time with loved ones, which can lead to emotional exhaustion, decreased job satisfaction, and potential burnout. These challenges, if left unaddressed, may negatively affect not only the teacher's performance and mental health but also student outcomes, as emotionally strained educators may find it harder to remain effective and engaged in their instructional roles. This suggests the need for family-friendly workplace policies, such as flexible scheduling, mental health support, and programs that promote work-life harmony.

Conversely, the lowest mean score, though still within the "Strongly Agree" range, was found in the "School Environment" domain, with a mean of 4.39. This suggests that while challenges such as managing disruptive behavior, administrative workload, and school improvement pressures are present, they are perceived as slightly less burdensome compared to family-related stress. However, the consistently high scores across domains still signal a significant level of occupational stress that warrants attention. This finding implies that although school-related stressors are more manageable, there remains a strong need for organizational interventions—such as strengthened behavioral support systems, collaborative leadership, and improved school climate—to mitigate the cumulative stress experienced by teachers.

Together, these results highlight the interconnectedness of personal and professional domains in influencing teacher resilience and well-

being. Addressing both aspects through holistic and sustainable support systems can improve teacher retention, satisfaction, and ultimately the quality of education provided.

Coping Mechanisms Utilized by the Teachers to Manage Stress and Build Resilience

The following are the different themes that emerge from the study:

Theme 1: Family Responsibilities

Balancing the demands of being a teacher while nurturing a fulfilling family life requires a deliberate and proactive approach. Participants shared that they developed a variety of coping strategies, such as task prioritization, open family communication, mindfulness, and delegation, that helped them maintain a functional work-life balance. The effectiveness of these coping mechanisms is evident in how teachers reported feeling more emotionally stable, less overwhelmed, and more capable of managing both professional and personal demands. These strategies align with known protective factors in resilience literature, reinforcing their relevance in reducing stress and promoting well-being.

Theme 2: Scaffolding Matters

Teachers emphasized the importance of having emotional and structural support systems, referred to here as "scaffolding", to manage the dual pressures of work and family. During times of family conflict or emotional strain, strategies such as boundary-setting, seeking advice from trusted peers, and breaking down tasks into manageable parts were reported as highly beneficial. The effectiveness of these approaches was validated by the participants' ability to sustain classroom performance, even in the face of personal stressors. Moreover, these findings support the theory that structured coping and social support enhance an individual's ability to adapt during crises.

Table 2. Proposed Stress Management Program

Training Area	Description	Target	Objectives	Time/Duration
Stress Management Basics	A foundational workshop introducing various stress management techniques such as deep breathing, journaling, and identifying stress triggers.	All Secondary Teachers	To equip teachers with essential knowledge and coping skills for recognizing and managing stress effectively in daily life.	1-day seminar (8 hours)
Family Engagement Strategies	Focuses on equipping teachers with tools for positive family communication, setting emotional boundaries, and maintaining support systems at home.	All Secondary Teachers	To help teachers strengthen family relationships through effective communication, shared expectations, and balance between home and work roles.	1 half-day session (4 hours)
Support for Managing School-Based Stressors	Provides practical strategies for handling common school-related stressors such as classroom management, paperwork, and administrative pressure.	All Secondary Teachers	To empower teachers with solutions such as peer mentoring, classroom behavior plans, and resource management to reduce job-related stress.	2 sessions, 3 hours each
Work-Life Balance and Self-Care	Offers techniques on time management, daily planning, digital detox, and self-care routines to help teachers maintain holistic well-being.	All Secondary Teachers	To enable teachers to set personal/professional boundaries, manage time wisely, and engage in regular self-care activities to avoid burnout.	1-day workshop (6 hours)
Collaboration and Communication Enhancement	Interactive sessions on conflict resolution, assertiveness, and active listening to improve relationships with colleagues and administrators.	All Secondary Teachers	To promote a culture of open communication and collaboration in the school community, reducing interpersonal stress and fostering a more positive work environment.	2 sessions, 2.5 hours each
Follow-up and Reflection Sessions	Reflective check-ins where teachers discuss what techniques worked, peer share, and suggest improvements for ongoing stress management.	All Secondary Teachers	To assess the impact of the program, encourage continuous reflection, and adapt strategies based on real classroom and personal experiences.	Monthly 1-hour sessions (3x)

Theme 3: Maintaining Open Communication

Participants consistently cited open communication as a fundamental coping mechanism in the school environment. Teachers who maintained transparent dialogue with colleagues, administrators, and even students reported feeling more supported and less isolated. This, in turn, contributed to a more collaborative atmosphere and better problem-solving.

The effectiveness of this coping strategy is demonstrated by its positive impact on interpersonal relationships and school climate, as reported in interviews. Teachers noted fewer misunderstandings and greater teamwork, which directly contributed to their resilience and capacity to handle professional stress.

Theme 4: Task and Focus in the School Environment

Teachers employed practical coping strategies such as goal-setting, task prioritization, mindfulness, and feedback-seeking to manage workload and maintain mental clarity. These techniques were seen as effective based on participants' accounts of improved productivity, reduced anxiety, and greater job satisfaction. Additionally, the consistent implementation of these strategies helped teachers feel more in control of their schedules, allowing them to meet demands without burnout. The effectiveness of these coping mechanisms is justified by their alignment with time management and cognitive-behavioral techniques, both of which are widely recognized as effective in stress reduction and performance enhancement.

Theme 5: Collaboration is the Key

Collaboration emerged as a vital coping mechanism, especially when navigating school policies and expectations. Teachers who actively engaged in professional development, sought peer mentorship, and participated in collaborative decision-making processes felt more competent and confident in their roles. The effectiveness of collaboration as a coping mechanism is evident in the shared sense of community and reduced role ambiguity experienced by participants. This aligns with existing research suggesting that collegial support systems are essential in sustaining teacher morale and professional growth.

Proposed Stress Management Program

Based on the comprehensive analysis of the challenges faced by secondary teachers in the District of San Agustín, it is evident that a tailored stress management program is urgently needed to support teacher resilience and well-being. The data highlights the multifaceted nature of the stressors experienced by teachers, ranging from overwhelming workloads to financial constraints and emotional strain. By prioritizing measures to address these challenges, such as improving financial stability, promoting work-life balance, and providing support for managing stressors, the district can create a more sustainable environment for educators. Moreover, supporting teacher well-being not only benefits educators but also positively impacts student success. When teachers feel valued and supported, they are better equipped to create positive learning environments and foster student engagement and achievement. Therefore, addressing the challenges faced by teachers through a stress management program can enhance teacher resilience, job satisfaction, and ultimately, student outcomes.

Tailored interventions are crucial to effectively address the specific needs of teachers in San Agustín. Generic solutions may not adequately tackle the diverse

challenges faced by educators. Hence, collaborative efforts should focus on implementing strategies to manage disruptive behavior, support diverse student needs, and foster partnerships with parents to create a conducive work environment. Additionally, systemic changes are necessary to support teachers in San Agustín comprehensively. From overwhelming workloads to administrative challenges, teachers encounter numerous stressors that require a collective effort from all stakeholders to alleviate. Creating a supportive environment for teaching and learning is essential for both teacher well-being and student success.

Effective communication and collaboration are identified as key components in managing the challenges faced by teachers. Therefore, the proposed stress management program should incorporate strategies for enhancing communication and fostering collaboration among educators, administrators, and other stakeholders.

The proposed stress management program will prioritize a holistic approach to well-being, including task management, self-care, and seeking support from colleagues. By empowering teachers with proactive coping strategies and providing them with the necessary resources and support, the program aims to optimize productivity, enhance resilience, and promote overall well-being among secondary teachers in the District of San Agustín.

CONCLUSION

Secondary teachers in the District of San Agustín face significant stressors, particularly in balancing professional responsibilities with family obligations, managing time effectively, and navigating administrative demands. These stressors impact teachers' emotional well-being and daily functioning, underscoring the urgent need for comprehensive support systems to foster a sustainable teaching environment.

Teachers utilize a range of coping mechanisms to manage stress and build resilience. Key strategies include including task prioritization, practicing self-care, and seeking emotional and professional support from colleagues and family. Additionally, effective communication, collaboration, and breaking down complex tasks into achievable goals emerged as essential strategies that enable teachers to manage stress, prevent burnout, and maintain overall well-being.

In response, a tailored stress management program was proposed to meet the specific needs of secondary teachers in San Agustín. This program emphasizes work-life balance, professional development, behavior management strategies, and fostering a collaborative and supportive school culture. Through the

implementation of this program, the district aims to enhance teacher resilience and job satisfaction, which in turn is expected to improve student engagement and academic performance.

AUTHOR'S CONTRIBUTIONS

The authors declare equal contributions.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185–207. <https://doi.org/10.1016/j.edurev.2011.03.001>
- Chang, M. (2009). An appraisal perspective of teacher burnout: Examining the emotional nature of teachers' work. *Educational Psychology Review*, 21(3), 193–218. <https://doi.org/10.1007/s10648-009-9106-y>
- Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/designing-and-conducting-mixed-methods-research/book241842>
- Johnson, R. B., & Onwuegbuzie, A. J. (2019). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. <https://doi.org/10.3102/0013189X033007014>
- Maslach, C., & Leiter, M. P. (2016). Burnout: A multidimensional perspective. In C. L. Cooper (Ed.), *Theories of organizational stress* (pp. 68–85). Oxford University Press. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911781/>
- Skaalvik, E. M., & Skaalvik, S. (2015). Job Satisfaction, Stress and Coping Strategies in the Teaching Profession-What Do Teachers Say?. *International education studies*, 8(3), 181-192.

Utilization of Video Blogs (Vlogs) Versus Video Presentations: A Comparison of Learning Gains in Home Economics among Senior High School Learners

Joy G. Galicha¹, and Catherine Bhel Aguila²

ABSTRACT

This study aimed to determine the effectiveness of video blogs compared to video presentations as a teaching method for senior high school students in the Technical-Vocational-Livelihood (TVL) Track, specifically in the Home Economics Strand. Specifically, it assessed the performance of students taught through video presentations (voiceover with animated PowerPoint) and video blogs (educational vlogs or actual demonstration videos), and explored the potential of video blogs as an effective instructional tool, particularly for subjects focused on developing practical skills and knowledge. This study employed a quantitative research design using a quasi-experimental approach. An independent samples t-test was conducted to determine whether there was a significant difference in the performance levels of Grade 12 students between the two teaching methods. Based on the findings, the researcher obtained a p-value of less than 0.001, indicating strong evidence against the null hypothesis and supporting the conclusion that there is a statistically significant difference in post-test scores between the groups studied. The results of the independent samples t-test revealed a computed t-value of -4.914. These findings validate the positive effect of the experimental intervention, which used video blogs, compared to the control group that used video presentations. The experimental group demonstrated significantly higher performance than the control group, suggesting that integrating video blogs into instruction provides students with more realistic and practically relevant learning experiences. This approach fosters enhanced understanding and promotes the application of knowledge in real-life contexts, offering instructional advantages that go beyond those provided by traditional voiceover PowerPoint presentations with animated images.

Keywords: *video blog (vlog), video presentation, teaching method, technical vocational livelihood track, home economics*

INTRODUCTION

Technology has become an essential component of modern education, transforming how students access information, develop skills, and engage with learning materials. The integration of digital tools in teaching fosters interactive, flexible, and innovative learning environments that cater to diverse learning preferences and needs. When thoughtfully applied, technology enhances not only the delivery of instruction but also

students' motivation, comprehension, and retention of knowledge. It supports educators in designing learning experiences that are more engaging and responsive to the demands of 21st-century education, ensuring learners are better prepared for future academic, professional, and personal challenges.

One of the most impactful applications of technology in education is video-based learning. Video provides a multisensory learning experience by combining both visual and auditory elements, making it easier for students to grasp complex concepts and retain information more effectively. Videos can demonstrate processes, present real-life scenarios, and provide clear examples that facilitate comprehension beyond what static images or text alone can achieve. Yousef et al. (2014) emphasized that video-based learning enhances

✉ : joygalicha@gmail.com

¹Sta. Fe National High School, Sta. Fe, Romblon;

²Romblon State University, Odiongan, Romblon

Received 24 March 2025; Revised 21 July 2025; Accepted 15 December 2025



traditional classroom instruction by fostering engagement and improving learning outcomes. Similarly, Farooq and Al-Jandan (2015) and Radianti et al. (2020) highlighted the evolution of integrating audiovisual materials in education, particularly in the post-pandemic context, which has contributed significantly to educational innovations that support both in-person and remote learning environments. Supporting this, Mayer (2009) explained through the Cognitive Theory of Multimedia Learning that students learn more effectively when words and visuals are meaningfully integrated, as this reduces cognitive overload and promotes deeper understanding. Additionally, Guo, Kim, and Rubin (2014) found that shorter, well-structured instructional videos significantly improve learner engagement, emphasizing the importance of video design in maximizing educational impact.

Within this broader use of video, video blogs (vlogs) have emerged as a unique and highly engaging educational tool. Vlogs provide authentic, real-world demonstrations and narratives, making learning experiences more relatable and meaningful for students. Unlike conventional video lectures or animated presentations, vlogs typically showcase practical applications, real-life scenarios, or step-by-step demonstrations in everyday contexts. This authenticity enables learners to observe how theoretical knowledge is applied, particularly in subjects that emphasize the development of practical skills. Kay (2012) further emphasized that video podcasts and vlogs promote learner autonomy and self-paced learning, enabling students to repeatedly access content and reflect on demonstrations, which is especially beneficial for skill-based learning.

In Technical-Vocational-Livelihood (TVL) education, where hands-on training is crucial, vlogs serve as an effective medium to supplement or simulate face-to-face practice. For students in the Home Economics Strand, vlogs can replicate hands-on experiences digitally, providing detailed visual demonstrations of processes such as bread and pastry production, baking, caregiving, cookery, handicraft making, tourism, housekeeping, and dressmaking, along with other practical skills related to home management. These resources enable students to observe and review skills at their own pace, supporting deeper understanding and mastery. The dynamic nature of vlogs, combining real-life demonstrations, authentic scenarios, and relatable content, makes them particularly suited to learners who benefit from visual and practical examples.

Given these considerations, this study specifically aims to examine the effectiveness of video blogs compared to traditional video presentations (voiceover with animated PowerPoint) as teaching methodologies

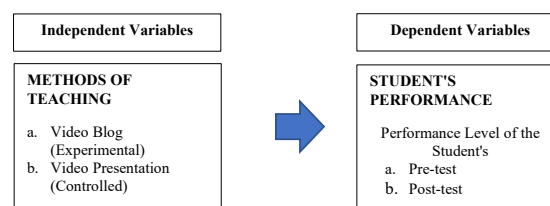


Figure 1. The Conceptual Framework of Independent and Dependent Variables

for Senior High School students in the TVL Track, Home Economics Strand. By analyzing student performance through these two instructional approaches, this research seeks to determine which method more effectively enhances students' engagement, comprehension, and acquisition of practical skills.

Figure 1 illustrates the effects of various teaching methods, including video blogs and video presentations. It also shows the relationship between the teaching method and the students' performance.

The framework shows independent variables and dependent variables. The independent variables are the methods of teaching, which are grouped into two categories: the use of video blogs, which is experimental, and the use of video presentations, which is controlled. The dependent variable is the respondents' performance level.

The general objective of this study is to determine the significant difference between the two teaching methods, which will specifically aim to answer the following:

(1) to measure the performance level of the respondents taught by the video blog and video presentation, and

(2) to consider the video blog and video presentation as effective means to teach as new teaching methods, especially for those subjects that are designed to equip the students with the skills and knowledge they need.

Based on the stated problems, the researcher formulated the following null hypotheses:

HO1: There is no significant difference between the pre-test mean score of the control and experimental groups.

HO2: There is no significant difference between the post-test mean score of the control and experimental groups.

HO3: There is no significant difference between the pre-test and post-test mean scores of the experimental group.

This study will benefit future researchers by providing insights into the processes and methodologies involved, serving as a valuable reference for future studies related to this topic. It can also enhance their

analytical skills and understanding of using digital tools, such as video blogs, in educational research.

Furthermore, this study addresses a practical issue faced by teachers, particularly in delivering hands-on training in Home Economics subjects, where students' time is often constrained by other academic commitments. Educational vlogs provide an accessible and flexible supplement to classroom instruction, enabling students to review complex topics, revisit demonstrations of practical skills, and reinforce their understanding of concepts at their own pace.

Administrators may also benefit from the findings of this study by gaining insights into innovative teaching strategies, such as integrating video blogs and video presentations, which can enhance student learning experiences. Moreover, the results contribute to the development of new approaches for curriculum delivery, improving student engagement, and addressing time-related challenges within the learning environment. These findings may further inform administrative decisions related to resource allocation and the integration of modern educational tools into school programs.

MATERIALS AND METHODOLOGY

Research Design and Approach

This study determines the effectiveness of video blogs and video presentations as a teaching methodology for senior high school learners in the Technical Vocational Livelihood Track for the Home Economics Strand. The study employed quantitative research methods and a quasi-experimental design. The researcher conducted tests for lessons 2 and 3, which will be used as the primary instrument. The respondents of the study are one group of 32 students from Grade 12 TVL HE senior high school. These students are chosen as they are relevant to the study and already enrolled in the specific strand being investigated. Data are collected through assessments administered before and after the intervention to measure students' knowledge and skills. The intervention consisted of two teaching methods: a voiceover PowerPoint presentation and an educational vlog. The pre-test and post-test results were analyzed using quantitative methods, specifically statistical analysis, to determine whether the video blog intervention improves student performance compared to traditional methods. The study was completed at the end of the fourth quarter of the school year. The tests and video interventions were administered over the course of two lessons, with a structured schedule to maintain consistency.

Participant Selection and Sampling

This study was conducted at Senior High School (SHS). The school offers two tracks: academic and technical vocational. The TVL track is composed of two strands: the home economics and computer servicing systems. The home economics strand comprises three specialized subjects: bread and pastry (G11), cookery (G11 and G12), and food and beverage services (G12 only).

Data Collection Procedures

This study was completed in the fourth quarter of the school year, when the researcher assigned a pre-test activity covering the topic of lesson 2. After that, the students watched the video presentation (voiceover with animated PowerPoint) for 30 minutes, and afterwards, the researcher administered the post-test to determine the study's results. Following the day, to maintain consistency between the two teaching methods, another pre-test and post-test were administered, and a video blog (educational vlog or actual video) covering the topic in Lesson 3 was watched. It was given to the previous group, which conducted the same procedure.

The researcher used two lessons that cover the topic: setting up trays and trolleys, using pre-tests and post-tests, and covering the topic through video presentations (video with voiceover and animated PowerPoint).

On the other hand, the researcher presents another lesson, which is Lesson 3: Presenting food and beverage service orders using pre- and post-tests that cover a topic through a video vlog (an educational vlog and an actual video).

The researcher drafted a 20-item test, composed of multiple-choice questions, for lessons 2 and 3 that covered a specific topic. This topic encompasses the competencies outlined in the TESDA Training Regulation for Food and Beverage Services NC II and the Curriculum Guide of DepEd. The Training Regulations (TR) of TESDA (Technical Education and Skills Development Authority) are standards or guidelines that define the competency requirements for various qualifications in technical and vocational education and training (TVET) programs in the Philippines. These regulations serve as the basis for developing curricula, assessing learners, and certifying individuals who have acquired specific competencies. A curriculum guides the instructional lessons that teachers use. A curriculum defines what the learner will learn and can possibly guide when the learner learns the information from the lesson. A curriculum offers teachers ideas and strategies for assessing student progress. A student must meet specific academic requirements to advance to the next level.

Before finalizing the assessment instruments, the researcher sent them to three experts in the field of

educational technology and instructional design for review. These experts reviewed the test for clarity, relevance to the research questions, and alignment with the learning objectives. They provided valuable feedback on certain questions that could be made clearer, and suggested adding a few more questions related to student engagement with video-based learning.

To ensure the instrument worked effectively, the researcher conducted a pilot test with a small group of 10 students from a grade 11 class in the same strand and at the same school. The students completed the pre-test and post-test while watching a sample video, similar to the lesson in the main study. During the pilot test, the researcher observed students' responses to the questions and gathered feedback on their understanding of the test instructions and the video format.

Based on feedback from experts and the results of the pilot testing, several revisions were made to the instrument. These included adjusting the brightness of the pictures used in the video presentations for both the pre-test and post-test assessments. Additionally, the researcher added frames to each picture in both the video presentations and video blogs to enhance emphasis during the assessments.

Analysis Methods

For this study, the researcher used the Shapiro-Wilk test to check the normality of the data before conducting further statistical analysis. The Shapiro-Wilk test is a parametric test that assesses whether the data follow a normal distribution. A non-significant p-value (greater than 0.05) indicated that the data were normally distributed, allowing me to proceed with parametric tests for reliability.

To assess the reliability of the instrument used in this study, the researcher calculated Cronbach's Alpha to determine the internal consistency of the test items. The Cronbach's Alpha value was obtained using SPSS software. A value above 0.7 was considered acceptable for demonstrating internal consistency, ensuring that the test items were measuring the same construct.

Data were collected and recorded on a sheet of paper, listing student names along with their demographic profiles. These forms of data collection were used with one group of students, who were provided with two different lessons covering the topic, using pre-tests and post-tests to determine which of the two teaching methods was more effective.

RESULTS

Table 1 presents the pre-test mean scores of students in the control group (who used video presentations) and the experimental group (who used video blogs). In the control group, none of the students

Table 1. Pre-Test mean scores of the Controlled and Experimental group

Level of Performance	Score	Video Presentation (Control Group)		Video Vlog (Experimental Group)	
		Pre-Test		Pre-Test	
		F	%	F	%
Excellent	17 – 20	-	-	-	-
Above Average	13 – 16	-	-	-	-
Average	9 – 12	3	9%	-	-
Below Average	5 – 8	13	41%	14	44%
Poor	1 – 4	16	50%	18	56%
Total		32	100%	32	100%

Table 2. Post-Test mean scores of the Controlled and Experimental group

Level of Performance	Score	Video Presentation (Control Group)		Video Blog (Experimental Group)	
		Post Test		Post Test	
		F	%	F	%
Excellent	17 – 20	2	6%	2	6%
Above Average	13 – 16	3	9%	8	25%
Average	9 – 12	13	41%	18	56%
Below Average	5 – 8	14	44%	4	13%
Poor	1 – 4	-	-	-	-
Total		32	100%	32	100.00

scored within the "Excellent" (17-20) or "Above Average" (13-16) categories. Instead, 50% of the students fell into the "Poor" (1-4) category, 41% were in the "Below Average" (5-8) category, and only 9% achieved an "Average" (9-12) score.

Similarly, in the experimental group, none of the students reached the "Excellent" or "Above Average" categories. Instead, 56% were classified as "Poor" and 44% as "Below Average." Both groups consisted of 32 students each.

These results indicate that prior to the intervention, both the control and experimental groups exhibited similarly low performance levels, with the majority of students falling within the "Poor" and "Below Average" categories. This suggests that the students across both groups began the study with comparable academic abilities, establishing a fair baseline for evaluating the impact of the interventions.

Table 3. Significant difference between the mean scores of the Control and Experimental group

Paired Sample Test		Mean	Standard Deviation	t-value	Sig. (2-tailed)	Result
Pair 1	Video Presentation (Pre-test)	.406	2.030	1.132	.266	Not Significant
	Video Blog (Pre-test)					
Paired Sample Test		Mean	Standard Deviation	t-value	Sig. (2-tailed)	Result
Pair 1	Video Presentation (Posttest)	-2.125	2.446	-4.914	.000	Significant
	Video Blog (Posttest)					
Paired Sample Test		Mean	Standard Deviation	t-value	Sig. (2-tailed)	Result
Pair 1	Video Blog (Pre-test)	-7.094	3.335	-12.034	.000	Significant
	Video Blog (Posttest)					

Table 2 shows the post-test mean scores of students in both the control group (using video presentations) and the experimental group (using video blogs). In the control group, 6% of students achieved an "Excellent" (17-20) score, 9% were categorized as "Above Average" (13-16), 41% scored "Average" (9-12), and 44% fell within the "Below Average" (5-8) range. Notably, no students remained in the "Poor" (1-4) category.

In the experimental group, 6% of students scored "Excellent," 25% achieved "Above Average," 56% were "Average," and only 13% were "Below Average." Similar to the control group, none of the students scored in the "Poor" category. Both groups had a total of 32 students each.

These findings suggest that both interventions, video presentations and video blogs, had a positive impact on student performance, as evidenced by the reduction in the number of students in the lower categories. However, the experimental group, which used video blogs, showed a greater shift towards higher performance categories, with a notably larger percentage of students achieving "Above Average" and "Average" scores compared to the control group. This suggests that video blogs may provide a more effective approach to enhancing students' learning outcomes, likely due to their more authentic, engaging, and relatable content, which aligns with existing research on multimedia learning and student engagement.

Table 3 presents the comparison of the pre-test mean scores between the control and experimental groups. The computed t-value of 1.132 yields a p-value of 0.266, which is greater than the 0.05 level of significance. Therefore, the result is not statistically significant. As a result, the null hypothesis is not

rejected. This indicates that there is no significant difference between the pre-test mean scores of the control and experimental groups. This finding implies that, prior to the intervention, both groups had comparable levels of performance.

Table 3 also presents the comparison of the post-test mean scores between the control and experimental groups. The results of the independent samples t-test indicate a computed t-value of -4.914 with a p-value less than 0.001, which is below the 0.05 significance level. This provides strong evidence to reject the null hypothesis, confirming a statistically significant difference in post-test mean scores between the two groups. This finding suggests that the experimental group, which was taught using video blogs, performed significantly better than the control group. These results support the effectiveness of the intervention and validate the positive impact of using video blogs as an instructional strategy compared to traditional video presentations.

Table 3 also presents the significant difference between the pre-test and post-test mean scores of the experimental group. Based on the results of the paired t-test ($t = -12.034$), with a mean difference of -7.094 and a standard deviation of 3.335, the p-value was found to be .0000, which is less than the 5% level of significance. This extremely low p-value indicates strong evidence against the null hypothesis, leading to its rejection. Therefore, there is a statistically significant difference between the pre-test and post-test mean scores of the experimental group.

This result suggests that the students' post-test scores improved significantly after the intervention, providing strong support for the effectiveness of the

video blog intervention when compared to their pre-test performance.

DISCUSSIONS

The findings of this study reveal that both teaching methodologies, video presentations with animated PowerPoint and video blogs featuring real-life demonstrations, had a positive impact on student performance. However, the experimental group, which utilized video blogs, demonstrated significantly greater improvement compared to the control group. Specifically, 25% of students in the experimental group achieved "Above Average" scores, while only 9% of students in the control group reached this category. Moreover, the proportion of students in the "Below Average" category was notably lower in the experimental group (13%) compared to the control group (44%). These results suggest that the use of video blogs offers a more effective instructional approach for enhancing student learning outcomes.

A key factor contributing to this outcome is the level of student engagement. Students in the experimental group responded more positively to video blogs because these materials presented authentic, real-life scenarios directly related to the lesson content. This aligns with the Cognitive Theory of Multimedia Learning (Mayer, 2005), which emphasizes that learning is more effective when learners can integrate verbal and visual information within meaningful contexts. The dynamic and relevant nature of video blogs likely increased students' motivation and attention, resulting in deeper comprehension and improved retention of knowledge.

In contrast, while animated PowerPoint presentations can convey information effectively, they may not sustain student attention to the same degree. Some students in the control group reportedly lost focus during the presentations, which may explain the higher proportion of lower scores. The multisensory experience offered by video blogs, combining audio and practical demonstrations, better supports various learning preferences and creates a richer, more immersive learning environment compared to narrated, slide-based presentations.

Furthermore, video blogs often simulate real-world applications, providing students with clearer examples of how concepts can be applied in practical settings outside the classroom. This strengthens knowledge transfer, a key goal in vocational education, as students are better able to see the relevance of their learning to future professional contexts.

Beyond cognitive engagement, video blogs also appeal to students' emotional and social interests by featuring engaging scenarios or personalities. This

connection fosters a sense of familiarity and trust, which can increase willingness to learn and apply new information. In vocational subjects such as bread and pastry production, caregiving, cookery, and housekeeping, where procedures must often be observed in detail, video blogs offer students the opportunity to revisit demonstrations multiple times, thereby enhancing their mastery.

However, it is important to consider potential confounding variables that may have influenced the results. These include students' prior familiarity with vlog-style content, differences in individual learning styles, and varying levels of interest or motivation unrelated to the instructional method. Additionally, the delivery style and personality of the individuals featured in the video blogs may have contributed to increased engagement, which could not be fully controlled in this study.

This study also has certain limitations. The sample size was relatively small, consisting of only 32 students per group, and the participants were drawn from a single strand within the TVL track (Home Economics). Therefore, the findings may not be generalizable to other strands, schools, or educational contexts. Moreover, the duration of the intervention was limited, and long-term retention of knowledge was not assessed.

Despite these limitations, the study provides valuable insights into the potential of video blogs as an effective instructional tool. The results suggest that integrating real-world, accessible content through video blogs can enhance student performance by fostering greater engagement, deeper comprehension, and improved knowledge transfer compared to more traditional animated PowerPoint presentations.

CONCLUSION

This study aimed to determine the effectiveness of video blogs compared to video presentations as a teaching method for senior high school students in the Technical-Vocational-Livelihood (TVL) Track, specifically in the Home Economics Strand. Specifically, it aimed to evaluate the performance of students taught through animated PowerPoint presentations and video blogs, and to explore the potential of video blogs as an effective instructional tool for subjects emphasizing practical skills and knowledge. The findings confirmed that both teaching methods had a positive impact on student learning outcomes. However, the experimental group, which was taught using video blogs, demonstrated significantly higher post-test performance compared to the control group. This result confirms the initial objectives of the study, which is to determine whether video blogs could improve student performance more effectively than traditional video presentations. The statistically

significant differences between the groups confirm the advantage of using video blogs in instruction, particularly in enhancing the comprehension and retention of practical skills in Home Economics.

Furthermore, the study highlights the importance of using modern, context-rich, and accessible digital tools to engage students and support vocational education. Integrating video blogs into teaching practices provides students with opportunities to revisit complex topics and observe real-life demonstrations, which are crucial in skill-based learning.

The study concludes that video blogs serve as a valuable addition to instructional strategies in the TVL context, complementing traditional methods and addressing challenges related to time constraints and varied learning preferences. Future research is recommended to investigate the long-term retention of knowledge gained through video blogs and to assess their effectiveness across other strands of the TVL track or in different educational settings.

immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers & education*, 147, 103778.

Yousef, A. M. F., Chatti, M. A., & Schroeder, U. (2014). Video-based learning: A critical analysis of the research published in 2003-2013 and future visions. In *eLmL 2014, The Sixth International Conference on Mobile, Hybrid, and On-line Learning* (pp. 112-119).

AUTHOR'S CONTRIBUTIONS

The authors declare equal contributions.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Cain, S. (2012). *Quiet: The power of introverts in a world that can't stop talking*. Crown Publishing Group.
- Farooq, I., & Al-Jandan, B. A. (2015). Effect of video triggering during conventional lectures on final grades of dental students in an oral biology course: A two-year retrospective study. *Journal of dental education*, 79(12), 1467-1470.
- Guo, P. J., Kim, J., & Rubin, R. (2014, March). How video production affects student engagement: An empirical study of MOOC videos. In *Proceedings of the first ACM conference on Learning@ scale conference* (pp. 41-50).
- Kay, R. H. (2012). Exploring the use of video podcasts in education: A comprehensive review of the literature. *Computers in human behavior*, 28(3), 820-831.
<https://doi.org/10.1016/j.chb.2012.01.011>
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020). A systematic review of

Perception, Employability, and Challenges of Master of Arts in Education-Major in Home Economics Graduates

Carren May M. Juanzo

ABSTRACT

The study was conducted to determine the Master of Arts in Education Major In Home Economics graduates' perception, employability, and challenges. This study used the quantitative methodology research design. It was conducted in Romblon State University, Main Campus, Odiongan, Romblon during the second semester of the SY 2021-2022. The profile of the respondents reveals a critical fact that a very limited number of students took interest in pursuing the program for the last 10 years. The respondents rated the indicator of learning efficiency as the topmost highly contributive to their personal and professional growth. They considered the teacher-students relationship as the topmost for being highly contributive to the program majority of the respondents have considered time or time management as the key challenge in the pursuit of this program.

Keywords: *MAEd Home Economics, employability, master's degree*

INTRODUCTION

In an ever-evolving landscape of human resource competencies, young individuals are increasingly prioritizing advanced education and training, such as pursuing postgraduate degrees (master's and doctoral degrees), to enhance their readiness for the labor market. This not only enables them to contribute effectively to the success of the organizations they join but also fosters their own professional and personal growth.

According to the National Center for Education Statistics of the United States Department of Education (2019), the landscape of master's degree programs has witnessed significant shifts over the past decade. In the academic year 2015–16 alone, approximately 785,000 master's degrees were conferred, indicating a rate of about two master's degrees awarded for every five bachelor's degrees. Some journalists have even dubbed the master's degree as “the new bachelor's degree,” particularly for young professionals seeking to

distinguish themselves in a competitive job market.

The demand for educators with master's degrees is notably significant in the field of education due to the numerous benefits these advanced qualifications provide. Graduates with a master's degree gain enhanced credibility and a competitive edge in the job market. This advanced level of education allows for in-depth specialization, career advancement, and valuable networking opportunities with industry leaders.

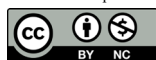
Studies have highlighted that teachers with master's degrees are in high demand for their specialized knowledge and skills, which contribute to improved educational outcomes and enhanced leadership capabilities. Institutions like the Harvard Graduate School of Education emphasize that master's programs in education offer specialized tracks, such as educational leadership, policy analysis, and teaching innovation, which prepare graduates for advanced roles and career progression (Harvard Graduate School of Education, n.d.).

Moreover, online master's programs have become increasingly accessible, providing flexible options for working professionals. These programs often offer financial assistance through scholarships, grants, and federal loans, making them more attainable for educators looking to advance their qualifications (Gaines, 2023).

✉ : carrenmayjuanzo@gmail.com

Romblon State University, Odiongan, Philippines

Received 20 April 2024; Revised 5 July 2025; Accepted 5 December 2025



Furthermore, pursuing a master's degree in education not only opens doors to higher salaries and leadership positions but also equips educators with the tools to impact policy and practice effectively within the education sector (AACN) (Harvard Graduate School of Education, 2024).

This trend is reflected in the Philippines' educational landscape, where numerous higher education institutions offer a diverse range of postgraduate programs across various disciplines. For instance, Romblon State University, as the sole higher education institution in Romblon, offers ten postgraduate programs through its Graduate Education and Professional Studies (GEPS) department. Among these programs is the Master of Arts in Education, majoring in Home Economics, which has garnered significant enrollment due to the increasing demand for K-12 educators in both junior and senior high schools, as well as tertiary institutions that require master's degrees for entry-level positions.

While there is an evident increasing demand for K-12 educators and tertiary institution faculty with master's degrees in the Philippines, specifically for programs like the Master of Arts in Education majoring in Home Economics offered by Romblon State University, there is limited research on the specific factors driving this demand and the corresponding impact on enrollment trends.

Furthermore, little is known about the subsequent career trajectories and challenges of graduates from such programs. Additionally, there is a need for comparative studies between graduates from Romblon State University and those from other higher education institutions in different regions of the Philippines to understand the broader implications of the increasing demand for postgraduate education in Home Economics. This study may provide valuable data which can be used for the comparative studies of the future researchers. Addressing these gaps could provide insights into the effectiveness of postgraduate programs in meeting the demands of the education sector and help identify areas for improvement in curriculum and support services.

Literature Synthesis

Today's challenging economic situation means that it is no longer sufficient for a new graduate to have knowledge of an academic subject; increasingly it is necessary for students to gain skills which will enhance their prospects of employment. According to the U.S. Bureau of Labor Statistics (Shulsinger, 2017), jobs requiring a master's degree are projected to increase by 18 percent from 2012 to 2022. In today's increasingly competitive job market, the benefits of a master's degree helps differentiate oneself and remain a valuable employee.

Historically, academic institutions have traditionally served as centers for moral and intellectual development, as well as centers of civilization. With rapid economic development, they are now more utilitarian with emphasis on professional training. Their prime task is to ensure that education and training are market driven and responsive to the changing needs of the various sectors of an economy. In connection with this, Mercado (2009) mentioned the initiative of the Commission on Higher Education in the Philippines to spearhead the conduct of GTS among selected Higher Education Institutions in order to obtain data that would show if HEI's are offering courses or programs that produce graduates to meet the needs of industry and society. Likewise, through the GTS, HEIs would be able to align their efforts with the manpower needs of industry (CHED CMO #s 38, s. 2006, #11, s. 1999).

Meanwhile, towards the end of the 20th Century, European Universities embraced the use of tracer studies for a plethora of reasons; especially to accredit their study programs; to explain the link between study programs and the job market; to show uniqueness and positioning of individual universities; and also to enable universities and institutions managing higher education in their respective countries make informed and evidence based decisions about improvements and quality education and services in higher education (Schomburg et al., 2011).

Upon the rise of the challenges encountered, on solution among the HEIs would be to reevaluate the curriculum, hire more qualified teachers, improve the facilities or simply by conducting extension activities. Extension and community involvement is the key result area which makes the community feels the presence of the institution. There is an increasing appreciation of the impact of higher education extension in the teaching and learning process as students apply their disciplinary knowledge to help address real-world problems. This work may be of interest to higher education institutions (HEIs) which are designing community extension programs with optimized societal outcome (Llenares & Deocarís 2018). It serves as the link between the institution and the community. It is the avenue where higher educational institution extends its expertise in line with its programs. It shares the transfer of technology and other extension programs which would assist to alleviate the economic status of its beneficiaries. This extension and linkages is not only intended for the community outside the campus, but it is done also within the campus of the institution itself.

Theoretical Framework of the Study

This study is grounded in Human Capital Theory, originally proposed by Gary Becker in 1962. Human Capital Theory posits that formal education

significantly enhances the productive capacity of a population. It suggests that investing in education is one of the most effective strategies for resource advancement. According to this theory, the more individuals pursue education, the more competent they become in their career fields, leading to increased productivity. Additionally, the theory postulates that the most efficient path to national development lies in the improvement of its human capital (Becker, 1993; Fagerlind & Saha, 1989 as cited in Tan, E., & Ho, C. M. 2020).

Objectives of the Study

The figure below shows the general objectives of the study. This study sought to trace the employment characteristics and transition to the employment of the graduates of MAED-H.E. during the SY 2009-2020.

This study sought to investigate the relevance of the curriculum of MAED Home Economics programs through the graduates of selected campuses of Romblon State University from the batch 2009-2020.

Specifically, it attempted to answer the following questions:

1. What is the profile of the respondents in terms of :
 - 1.1 age;
 - 1.2 gender;
 - 1.3. civil status; and
 - 1.4. educational background?
2. What is the employment information of the respondents in terms of:
 - 2.1. name of organization/employer;
 - 2.2. type of organization;
 - 2.3. employment type; and
 - 2.4. occupational classification?
3. What are the challenges (if any) experienced by graduate students in the pursuit of their degrees?

METHODOLOGY

Research Design

This study used the quantitative research design. This involves the process of collecting and analyzing numerical data which can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.

Research Method

The quantitative-descriptive research method was used in the study as it attempts to collect quantifiable information for statistical analysis of the population sample. The questionnaire was used for gathering data which is most suited for the quantitative design investigation. This design was appropriate since the objective was to gather valuable data coming from the

very limited number of graduates of the program - Masters in Education-Major in Home Economics from the Graduate Education Professional Studies (GEPS) during the SY. 2009-2020. Messenger application or other means of social media platform were employed.

Data Gathering Procedure

The researcher started by requesting the University Registrar the list of all graduates during the Academic Year 2009-2020. Incorporating demographic data from the last ten years is crucial. Demographic data helps in analyzing employment trends and outcomes for graduates. By examining the employment data across different demographic groups, institutions can better understand the effectiveness of their programs in preparing students for the job market (Bureau of Labor Statistics, 2022); Schomburg, H., 2016). Meanwhile, for Teichler, U. (2023) and Coates, H., & Edwards, D. (2023), detailed demographic insights allow institutions to tailor the programs of the university to better meet the needs of diverse student populations. It can highlight areas where additional support or resources may be necessary, leading to improved curriculum design and better student support services. Monitoring demographic changes over time helps ensure diversity and inclusion within educational programs. Understanding enrollment patterns among different demographic groups can identify disparities and prompt institutions to address these issues, creating a more inclusive environment for all students. Brennan, J., Kogan, M., & Teichler, U. (2023). Coates, H., & Edwards, D. (2023). Finally, long-term demographic data enables longitudinal analysis, revealing trends that may not be immediately apparent in short-term data. This includes shifts in labor market demands and the long-term career trajectories of graduates, providing a deeper understanding of the program's impact over time (Teichler, U. 2023) & Schomburg, H. 2023).

From the list of all graduates during the Academic Year 2009-2020, the total number of graduates was determined. The researcher collected all the information of the participants and sent a data invitation email to the graduates who work locally or abroad and also contacted the graduates who are working in different fields. Upon approval of the respondents, an informed consent was requested for signature. Then, the questionnaires were distributed. For those participants who were abroad, questionnaires were sent through email and were followed up by the researcher. The retrieval of questionnaires followed. Tabulation of the data was followed by analysis and interpretation.

Data Analysis

Table 1. Profile of the respondents

Demographic	Frequency	%	Valid %	Cumulative %
Age				
30	1	10.0	20.0	20.0
51	1	10.0	20.0	40.0
52	1	10.0	20.0	60.0
62	1	10.0	20.0	80.0
65	1	10.0	20.0	100.0
No Answer	5	50.0		
Total	10	100.0		
Gender				
F	10	100.0	100.0	100.0
M	0	0.0	0.0	0.0
Total	10	100.0	100.0	
Civil Status				
Married	9	90.0	90.0	90.0
Widowed	1	10.0	10.0	10.0
Total	10	100.0	100.0	
Educational Background				
MAEd-HE (2009)-RSU	2	20.0	20.0	20.0
MAEd-HE (2010)-RSU	3	30.0	30.0	50.0
MAEd-HE (2014)-RSU	1	10.0	10.0	60.0
MAEd-HE (2019)-RSU	3	30.0	30.0	90.0
MAEd-HE (2020)-RSU	1	10.0	10.0	100.0
Total	10			

Table 2. Employment Information of the Respondents

Variable	Frequency	%	Valid %	Cumulative %
Name of organization/employer				
Department of Education	1	10.0	10.0	10.0
Romblon State University	9	90.0	90.0	100.0
Total	10	100.0	100.0	
Type of Organization				
Public	10	100.0	100.0	100.0
Employment Type				
Working Fulltime	10	100.0	100.0	100.0
Occupational Classification				
Secondary Education Teachers	1	10.0	10.0	10.0
University And Higher Education Teachers	9	90.0	90.0	100.0
Total	10	100.0	100.0	

Statistical tools were utilized to interpret the collected data in the study. The Statistical Package for Social Sciences (SPSS) was also used.

Frequency, Percentage, and Ranking. To determine the most frequent response in each question that comprises the demographic profile of the responses. Each response was counted and then its equivalent percentage was computed. Ranking was used to provide a more comprehensible result on which response/s stood out from the rest.

Mean. To determine the respondent's rating on the contribution of the program of the study at the RSU

Graduate School to their personal and professional growth.

RESULTS AND DISCUSSION

This portion presents the results and discussion on the gathered data of the study.

Results

As to the profile of the respondents, it shows in table 1 that in terms of age, each age range is represented by at least one respondent. Half of the respondents did not disclose their age. In terms of

Table 3. Respondents' rate on the contribution of the program of the program to their personal and professional growth

Personal and Professional Growth Indicators				Verbal Interpretation
	N	Std. Deviation	Mean	
1. Academic Profession	10	.738	4.10	Highly Contributive
2. Research Capability	10	.632	3.80	Highly Contributive
3. Learning Efficiency	10	.632	4.20	Highly Contributive
4. Communication skills	9	.601	4.11	Highly Contributive
5. People Skills	10	.738	4.10	Highly Contributive
6. Problem Solving Skills	10	.949	3.70	Highly Contributive
7. Information Technology Skills	9	.866	3.67	Highly Contributive
8. Meeting Present and Future Professional Needs	10	.789	3.80	Highly Contributive
9. Exposure to Local Community within Field of Specialization	10	1.135	3.80	Highly Contributive
10. Exposure to International Community within Field of Specialization	10	1.197	3.10	Moderately Contributive
11. Critical Thinking Skills	10	.823	3.70	Highly Contributive
12. Salary improvement and Promotion	10	.876	4.10	Highly Contributive
13. Opportunities Abroad	9	1.093	3.22	Moderately Contributive
14. Personality Development	9	.866	4.00	Highly Contributive
15. RSU Values Formation	9	.928	3.89	Highly Contributive
Overall		3.819333	0.857533	Highly Contributive

Legend: 1:00 – 1:80 Not contributive; 1.81 – 2.60 Less Contributive; 2.61 – 3.40 Moderately Contributive; 3.41 – 4.20 Highly Contributive; 4.21 – 5.00 Very Highly Contributive

gender, table 1 reveals that all of the participants were females. In terms of civil status, table 1 reveals that nine (9) participants were married, while there was only one (1) who was already widowed. The presence of one widowed participant emphasizes the necessity to consider this group's unique difficulties and requirements in the context of home economics employability. Marital status often correlates with life stage and responsibilities. For instance, married individuals may have different priorities and challenges compared to single individuals. Understanding how marital status influences decisions regarding educational pursuits and career paths provides a nuanced view of student motivations and barriers. It can also indicate the availability of support systems for students. Married individuals may have additional family responsibilities and support networks, which could impact their ability to dedicate time and resources to their studies. This insight is crucial for designing support services that accommodate diverse student needs (Musick, K., Meier, A., & Flood, S. 2016). In terms of the educational background, table 4 reveals that three (3) students graduated in 2010. Similarly, there were also three (3) graduates in 2019.

Meanwhile, there were two (2) graduates in 2009 while in 2014 and 2020, their was only one (1) graduate. This result is evident that only few students graduate from the MAED-Home Economics program every school year.

As to the employment information of the respondents in terms of the name of the organization/employer, table 2 reveals that the majority of nine (9) of the respondents are employed at RSU while one (1) of the respondents is employed at DepEd. This means that all the respondents from the Master of Arts in Education majoring in Home Economics (MAEd H.E.) program are employed in public institutions as reflected in Table 2. This indicates high employability of graduates in the public sector, suggesting that the MAEd H.E. program equips students with valuable skills and knowledge sought after by public organizations. For potential students considering enrolling in the program, this serves as a positive indicator, indicating that completing the degree enhances their chances of securing employment within the public sector. The fact that all the respondents in the MAEd H.E. program are employed in public institutions reinforces the notion that there is

Table 4. Respondents' rate on the degree program at the RSU graduate school

Degree program Indicators	Mean	Standard Deviation	Rank	Verbal Interpretation
1. Range of Courses	3.60	.843	3	Highly Contributive
2. Relevance to your Profession	4.20	.632	11	Highly Contributive
3. Extracurricular Activities	3.70	.949	4	Highly Contributive
4. Premium given to Research	3.80	.789	5	Highly Contributive
5. Interdisciplinary Learning	3.90	.738	6	Highly Contributive
6. Teaching and Learning Environment	4.10	.568	8	Highly Contributive
7. Quality of Instruction	4.20	.632	11	Highly Contributive
8. Teacher- Student Relationships	4.50	.707	13	Very Highly Contributive
9. Library Resources	3.20	.789	1.5	Moderately Contributive
10. Laboratory Resources	3.20	.789	1.5	Moderately Contributive
11. Class Size	4.10	.738	8	Highly Contributive
12. Teacher's Pedagogical Expertise	4.20	.632	11	Highly Contributive
13. Teacher's Knowledge of Subject Matter	4.10	.568	8	Highly Contributive
Overall	3.9077	0.7211		Highly Contributive

Legend: 1:00 – 1:80 Not contributive; 1.81 – 2.60 Less Contributive; 2.61 – 3.40 Moderately Contributive; 3.41 – 4.20 Highly Contributive; 4.21 – 5.00 Very Highly Contributive

a demand for professionals with expertise in Home Economics within these organizations. This recognition by public institutions signifies the value they place on Home Economics education and its potential contributions to various aspects of their operations.

Furthermore, table 2 reveals that all respondents in the MAEd H.E. program are working full-time, which suggests a departure from the traditional single-breadwinner model in family dynamics. Nowadays, both men and women are actively engaged in the workforce, indicating a shift in gender roles. Women are increasingly returning to work after giving birth, while men are more willing to pause their jobs to take care of children or older family members. This shift challenges traditional gender stereotypes and promotes a more egalitarian approach to family responsibilities (OECD, 2017). The fact that both men and women in

the program are working full-time indicates that the MAEd H.E. curriculum equips graduates with valuable skills that are highly sought after in the workforce, irrespective of gender. This aligns with the goal of promoting gender equality in the workplace. The program's emphasis on preparing both men and women for successful full-time employment reflects the changing dynamics of modern families and their need for dual-income households. The MAEd H.E. program's role in equipping graduates with valuable skills that contribute to their successful full-time employment aligns to break down traditional gender stereotypes and promoting equality in the workplace.

Table 2 also reveals that the majority of the respondents from the MAEd H.E. program are teachers at universities and higher education institutions, comprising nine (9) individuals. Additionally, one (1)

Table 5. Challenges (if any) experienced by the graduate students in the pursuit of their degrees

Comments	Frequency	Percent	Valid Percent	Cumulative Percent
No Answer	3	30.0	30.0	30.0
Difficulty in handling stress caused by the duties that have to fulfil with school, work and taking care of children	1	10.0	10.0	40.0
Financial and Schedule	1	10.0	10.0	50.0
None	1	10.0	10.0	60.0
Some of the teachers are not IT experts and references are obsolete	1	10.0	10.0	70.0
The availability of reading materials/lack of laboratory resources	1	10.0	10.0	80.0
Time and other school activities	1	10.0	10.0	90.0
Time/ Duration to finish my degree	1	10.0	10.0	100.0
Total	10	100.0	100.0	

respondent works as a secondary education teacher. This occupational classification of the respondents highlights the program's focus on preparing graduates for careers in academia and higher-level educational settings. The significant presence of teachers in universities and higher education institutions suggests that the MAEd H.E. program is effective in equipping students with the necessary skills and knowledge to pursue careers in these specific areas. The program's alignment with the needs of the education sector is evident, as it caters to the professional development of educators who aspire to work in higher-level academic environments. Furthermore, the presence of respondents working in universities and higher education institutions also indicates potential opportunities for career advancement within the education sector. Graduates of the MAEd H.E. program may have access to higher-level teaching positions, administrative roles, or opportunities for specialization and research within the academic environment. This provides a promising pathway for career growth and professional development for program graduates.

As to the rate of the contribution of the program of study at the RSU Graduate School to the respondents' personal and professional growth, table 3 reveals that the indicator learning efficiency was the topmost highly contributive to their personal and

professional growth having a mean of 4.20. Communication skills with a mean of 4.11, were rated as the second most highly contributive, and lastly, the academic profession, people skills, and salary for improvement were the third indicators which all received a mean of 4.10. Meanwhile, the indicator exposure to the international community within the field of specialization was rated the lowest gaining a mean of 3.10 or moderately contributive. Overall, it shows that the respondents have rated the program to be highly contributive to their personal and professional growth.

As to the rate of the degree program finished by the respondents at the RSU Graduate School, table 4 reveals that in terms of the range of courses, the respondents rated the teacher-student relationships as the number 1 highly contributive to the program with a mean of 4.50 While, the indicators such as relevance to the profession, quality of instruction, teacher's pedagogical expertise were rated as 2nd for being highly contributive to the program with a mean of 4.20. Meanwhile, the indicators such as library resources and laboratory resources received the lowest rating with a mean of 3.20.

For the challenges faced by the respondents in the pursuit of their degree, table 5 reveals that three (3) respondents have not responded. Furthermore, the following were found to be the challenges experienced

by the respondents which obtained a frequency of one (1): difficulty in handling stress caused by the duties that have to be fulfilled with school, work, and taking care of children, financial and schedule, some of the teachers are not it experts and references are obsolete, the availability of reading materials/lack of laboratory resources, time and other school activities, time/duration to finish my degree. To conclude, the majority of the respondents have considered time or time management as the key challenge in the pursuit of this program. This implies that though the majority are motivated to pursue their graduate studies, however, their personal life influences have impacted their decision to attend graduate school. On the other hand, even though the respondents rated the laboratories and library resources the lowest, well-equipped Home Economics laboratories and up-to-date textbooks in the library will go a long way in enhancing the teaching and learning of the subject. This will also motivate more students to enroll to study Home Economics at the University.

CONCLUSION

Based on the findings of the study, the following conclusions were hereby drawn: a) the profile of the respondents reveals a critical fact that a very limited number of students took an interest in pursuing the program for the last 10 years with 30 years old as the youngest while the rest are nearly on their retirement; only females have graduated for the degree and all of them were already married; as to educational background, only a few students graduate to the MAED-Home Economics program every school year. Thus it can be concluded that the program might be attracting only female students, possibly due to societal norms, career interests, or perceptions about the field of Home Economics being more suitable or relevant for women. Meanwhile, the fact that all female graduates were married suggests that marital status did not prevent them from completing their degree. This might indicate a supportive environment for married women within this program, or it could reflect a societal expectation that women marry by a certain age, including those pursuing higher education; b) The university has employed many of its own graduates, indicating a practice known as "faculty in-breeding." This means that the institution prefers to hire its alumni for faculty positions. While this practice can ensure continuity and maintain the institution's culture, it can also limit diversity of thought and innovation that might come from hiring individuals from different educational backgrounds; c) the respondents have rated

the MAED Home Economics program to be highly contributive to their personal and professional growth. This suggests that graduates feel the program has significantly enhanced their skills, knowledge, and overall development, both in their personal lives and in their careers; d) the respondents' rate on the degree program at the RSU graduate school on the different indicators is highly contributive. They considered teacher-student relationship as the topmost for being highly contributive to the program while library and laboratory resources received the lowest rating or only moderately contributive to the program. This highlights the importance of mentorship and support from faculty. On the other hand, the library and laboratory resources of the university proves as one of the weaknesses in the program that might need improvement; e) majority of the respondents have considered time or time management as the key challenge in the pursuit of this program. This implies that though the majority are motivated to pursue their graduate studies, however, their personal life influences have impacted their decision to attend graduate school. This suggests that balancing academic requirements with personal and possibly professional responsibilities is a significant issue for students in this program. This could point to the need for better time management resources, flexible scheduling, or additional support for students to help them manage their time effectively.

ACKNOWLEDGMENT

The author would like to thank the Graduate Education for Professional Studies, her adviser, panel members, statistician, grammar critic, and loved ones for the utmost support to this endeavor. Likewise, gratitude is also due to all the respondents who took the time to participate in this study. Without their participation, this study would not have been possible. The researchers would also like to thank the university for granting the conduct of this study at the University for the benefit of the MAED H.E. students and the institution.

AUTHOR'S CONTRIBUTIONS

The author conducted all aspects of this research independently, from conceptualization to data collection. The author designed the study, developed the research methodology, and implemented the procedures. Additionally, the author wrote the manuscript, including drafting, revising, and finalizing the content for publication. Overall, the author take full

responsibility for the intellectual content and integrity of this research.

CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

- Becker, G. S. (2019). *Human capital: A theoretical and empirical analysis, with special reference to education* (4th ed.). University of Chicago Press.
- Brennan, J., Kogan, M., & Teichler, U. (2023). *Higher education and work*. Jessica Kingsley Publishers.
- Bureau of Labor Statistics. (2022). *Employment projections*. U.S. Department of Labor. <https://www.bls.gov/emp/>
- Coates, H., & Edwards, D. (2023). The graduate pathways survey. *Higher Education Research & Development*.
- Commission on Higher Education. (1999). *Revised policies and standards for teacher education* (CMO No. 11, s. 1999).
- Commission on Higher Education. (2006). *Policies, standards and guidelines for BSBA* (CMO No. 38, s. 2006).
- Gaines, K. (2023). *Ultimate guide to online master's in education programs*. Universities.com. <https://www.universities.com/education/online-masters-in-education>
- Harvard Graduate School of Education. (n.d.). *Master's programs in education*. Retrieved January 5, 2024, from <https://www.gse.harvard.edu/degrees/masters>
- Llenares, I. I., & Deocaris, C. C. (2018). Measuring the impact of an academe community extension program in the Philippines. *Malaysian Journal of Learning and Instruction*, 15(1), 35–55.
- Mercado, F. (2009). *A tracer study of MSEUF graduates*. Manuel S. Enverga University Foundation.
- Musick, K., Meier, A., & Flood, S. (2016). How parents fare: Mothers' and fathers' subjective well-being in time with children. *American Sociological Review*, 81(5), 1069–1095. <https://doi.org/10.1177/0003122416663917>
- OECD. (2017). *Preventing ageing unequally*. OECD Publishing. <https://doi.org/10.1787/9789264279087-en>
- Schomburg, H. (2016). *Handbook for graduate tracer studies*. Centre for Higher Education Research and Information.
- Schomburg, H., & Teichler, U. (2011). *Employability and mobility of bachelor graduates in Europe: Key results of the Bologna process*. Springer. <https://doi.org/10.1007/978-94-6091-570-3>
- Schomburg, H., & Teichler, U. (2023). *Higher education and graduate employment in Europe: Results from graduate surveys from twelve countries*. Springer.
- Shulsinger, T. (2017). *The benefits of a master's degree in today's job market*. Northeastern University Graduate Programs. <https://graduate.northeastern.edu/resources/masters-degree-benefits/>
- Teichler, U. (2023). *Careers of university graduates: Views and experiences in comparative perspectives*. Springer.

ABOUT THE COVER

SMALL HANDS, GREAT HEIGHTS. The journey to Layag Cultural Minority School mirrors the journey of education itself: a steady climb through challenging terrain toward broader horizons. Featured on the front cover, Sitio Layag in San Fernando, Sibuyan Island, stands as testament to the resilience of the Mangyan Taga-Bukid people. They have carved out spaces for learning at the foot of Mount Guiting-Guiting, where pristine forests meet indigenous wisdom. On the back cover, small hands rise in eager participation; the hands of children who traverse mountains to reach their classroom, carrying both their ancestral language and dreams of the future. These raised hands embody hope, determination, and the transformative power of education that honors indigenous identity while opening pathways to opportunity. This is a vision that drives our commitment to research that serves, uplifts, and amplifies indigenous voices.

 Kenneth Dave Castillon/REDI Media Officer



Research, Extension, Development and Innovation
Romblon State University
Odiongan, Romblon