ISSN 2945-4085

Wesleyan Scientific Review

Volume 1, Number 1

WESLEYAN UNIVERSITY-PHILIPPINES
SCHOLARSHIP SERVICE CHARACTER
1946
CABANATUAN CITY

Making Life Better through Scientific Research

Wesleyan Scientific Review (WSR)

Editorial Board

Editor-in-Chief

Dr. Gener S. Subia

Associate Editors

Dr. Carissa Juliana RDL. Balaria

Dr. Ryan John L. De Lara

Managing Editors

Dr. Emmeline T. Arel

Dr. Ali G. Mamaclay

Dr. Rolaila V. Delovino

Language Editors

Dr. John Mark F. Bondoc

Prof. Maureen D. Bondoc

Prof. Allan B. Chavez

Guest Editors

Dr. Greg T. Pawilen

Dr. Ferdinand Bulusan

Dr. Elen Joy Alata-Bruza

Consultant

Prof. April Easter U. Macan

Technical Staff

Romielle Joy P. Sanglay

Layout Artist

Mr. Marx Lenin DV. Capia

Message from the Editor

I am ecstatic to have the opportunity to provide a few words of introduction to this book. The very first issue of the Wesleyan Scientific Review (WSR).

It comes out at a critical juncture. Every university has an obvious need to improve its research outputs, and this First Copy of the WSR will be Wesleyan's method of notifying the academic community that “we will not perish, but will flourish”.

This inaugural issue features nine great articles written by renowned researchers from the country and abroad that shed light on the disciplines of Business, Health, Education, Mathematics, Medicine, and Science.

The idea for an interdisciplinary international research journal came from WUP President Judge Benjamin D. Turgano, and it was brought to completion with the support of the WSR's peer reviewers, editorial board and staff.

There's a lot to do, and this is just the beginning.

Gener S. Subia
Chief Editor

Message
Wesleyan Scientific Review
June 28, 2021
9:30 AM

Another milestone in the history of Wesleyan University - Philippines is achieved - the publication of the Wesleyan Scientific Review (WSR). This used to be only part of a dream of the new administration. But through the joint initiatives and efforts of the hands and minds of our dearly competent writers, contributors, editors and reviewers, we now have a hold of the scientific studies and researches conducted by our peers in the academe.

Being the Vice President for Academic Affairs (VPAA), I would like to express my sincere commendation to the administration of WU-P headed by President Benjamin D. Turgano whose dedication to raise the standard of the University in all aspects, particularly in research and instruction, cannot be discounted. This WSR would have not been possible without the full support from the administration. I also would like to appreciate the Editorial Board whose linkages had reached the researchers to contribute to this new project. I believe that more publications of WSR will be in line as this is a mark of continuous academic growth of our University. I have the confidence that more opportunities of collaborations and partnerships in terms of scholarly endeavors will also emerge.

In this period of digital technology and advancement where we almost always rely for research, it is high time that we bring back the significance of printed outputs to be placed in our library shelves for use of educators and learners. The WSR will certainly serve as wholesome and prolific material to bridge and deliver further learning. This will also serve as a means to share the findings of various researches that will be used for new and additional discoveries in the field of academics. I believe that our esteemed University will continue the legacy of producing this essential material with the burning desire to elevate the level of research culture among our faculty and staff and other stakeholders.

Yours truly and the OVPAA will always be of fundamental support to this undertaking. Congratulations to the people behind the WSR. God bless!

ESTRELLA C. BUENAVENTURA, Ed.D.
Vice President for Academic Affairs

TABLE OF CONTENTS

A CRITICAL ANALYSIS OF CARING THEORIES

THE SELF CARE DEFICIT NURSING THEORY AND THE TEN CARATIVE FACTORS: THE CONCEPTS WITHIN 2

PRACTICAL APPLICATIONS OF THE CARING THEORIES 3

COMPARING THE THEORIES 5

CARING: A BESTOWED BEGINNING IN NURSING 6

REFERENCES 7

JOHN FRANCIS L. FAUSTORILLA JR, DNSC, MDM, MA, DIPCS, RN, RM, BIONOTE 8

EXAMINING BUSINESS CONTINUITY STRATEGIES OF RESTAURANTS IN GUAM: A QUALITATIVE MULTIPLE-CASE STUDY

INTRODUCTION 10

BACKGROUND 10

LITERATURE REVIEW 11

MATERIALS AND METHODS 13

POPULATION AND SAMPLE 13

DATA COLLECTION 14

CONCLUSION 21

ACKNOWLEDGEMENT 22

REFERENCES 22

DR. JAMES A. NILO BIONOTE 28

EXTENT OF KNOWLEDGE AND PRACTICE OF WESLEYAN UNIVERSITY'S CORE VALUES AMONG EMPLOYEES AND STUDENTS

ABSTRACT 30

INTRODUCTION 30

HYPOTHESIS 32

METHODOLOGY 32

RESULTS AND DISCUSSIONS 33

CONCLUSION 47

CONFLICT OF INTEREST 47

REFERENCES: 48

ALI G. MAMACLAY BIONOTE 49

EXPLORING THE COLLABORATIVE PRACTICES IN PROBLEM SOLVING AMONG NON-PHYSICS MAJOR PRE-SERVICE SCIENCE TEACHERS

ABSTRACT 51

INTRODUCTION 51

MATERIALS AND METHODS 53

RESULTS AND DISCUSSION 54

CONCLUSIONS 57

REFERENCES 58

JOEY-NELL T. MARZAN BIONOTE 59

CARING BEHAVIORS AND SPIRITUAL CARE COMPETENCIES OF NURSES IN SELECTED HOSPITALS IN MANILA, PHILIPPINES: A CORRELATIONAL STUDY

ABSTRACT 61

INTRODUCTION 61

METHODS 62

CONCLUSION 65

REFERENCES 66

GIL P. SORIANO, MHPED, RN BIONOTE 69

DR. RONNELL D. DELA ROSA BIONOTE 69

MODULAR AND SOCIAL MEDIA-BASED LEARNING MATERIALS IN BASIC CALCULUS: A QUASI-EXPERIMENTAL STUDY

ABSTRACT 71

INTRODUCTION 71

MATERIALS AND METHODS 73

RESULTS AND DISCUSSION 74

CONCLUSIONS 77

REFERENCES 78

ENGR. JUDD EDWARD Z. HERNANDEZ BIONOTE 82

DR. GENER SANTIAGO SUBIA BIONOTE 82

RAMIL PASCUAL POLINTAN, PHD. BIONOTE 82

DR. PHILIP ERMITA, PIE, ASEAN ENG. BIONOTE 82

"ANG NASAKSIHAN NG MASINAG NA TABING": AN AUTOETHNOGRAPHY OF AN ONLINE EDUCATOR IN THE COVID-19 ERA

ABSTRACT 84

INTRODUCTION 84

MATERIALS AND METHODS 85

RESULTS AND DISCUSSION 86

CONCLUSION 91

REFERENCES 91

DR. JEROME V. CLEOFAST BIONOTE 94

SUSTAINING KANKANA-EY IN THE COMMUNITY AND THE SELECT SCHOOLS IN BAGUIO CITY

ABSTRACT 96

INTRODUCTION 96

MATERIALS AND METHODS 99

RESULTS AND DISCUSSION 100

CONCLUSIONS 101

REFERENCES 102

THE HEART SWELLED WITH A SEA OF TEARS: NURSES CARING FOR HIV-POSITIVE PATIENTS

ABSTRACT 105

INTRODUCTION 105

MATERIALS AND METHODS 106

RESULTS AND DISCUSSION 107

CONCLUSIONS 109

CONFLICT OF INTEREST 110

RECOMMENDATIONS 110

REFERENCES 110

DR. GLENN A. GUIRA BIONOTE 112

WESLEYAN SCIENTIFIC REVIEW LOGO

WESLEYAN SCIENTIFIC REVIEW (WSR) LOGO MEANING 113

A Critical Analysis of Caring Theories

John Francis L. Faustorilla Jr
St. Paul University Philippines

THE SELF CARE DEFICIT NURSING THEORY AND THE TEN CARATIVE FACTORS: THE CONCEPTS WITHIN

While there are three generally acceptable complete or grand theories of caring in nursing, namely Leininger's (1980) Caring: A Central Focus of Nursing and Health Care Services, Orem's (1991) Self-Care Deficit and Watson's (1988; Bottoroff, 1991) Philosophy and Science of Caring, there are many midrange theories of caring in nursing (Boykin and Schoenhofer, 2001; Locsin, 2005; Ray, 2010; Swanson, 1991; Roach, 1987, 2002; Benner and Wrubel; 1989). In this light, I would like to focus on two grand caring theories: the Self Care Deficit Theory and Ten Carative Factors. The figures below quickly present the main concepts of both theories.

- As Jean developed her theory over time, she became to change these carative factors into clinical caritas processes. These included:
  - Formation of humanistic-altruistic system of values, becomes: "Practice of loving-kindness and equanimity within context of caring consciousness
  - Instillation of faith-hope, becomes: "Being authentically present, and enabling and sustaining the deep belief system and subjective life world of self and one-being-cared- for";
  - Cultivation of sensitivity to one's self and to others, becomes: "Cultivation of one's own spiritual practices and transpersonal self, going beyond ego self";
  - Development of a helping-trusting, human caring relationship, becomes: "Developing and sustaining a helping-trusting, authentic caring relationship";
  - Promotion and acceptance of the expression of positive and negative feelings, becomes: "Being present to, and supportive of the expression of positive and negative feelings as a connection with deeper spirit of self and the one-being-cared-for";
  - Systematic use of a creative problem-solving caring process, becomes: "creative use of self and all ways of knowing as part of the caring process; to engage in artistry of caring-healing practices";
  - Promotion of transpersonal teaching-learning, becomes: "Engaging in genuine teaching-learning experience that attends to unity of being and meaning attempting to stay within other's frame of reference";
  - Provision for a supportive, protective, and/or corrective mental, physical, societal, and spiritual environment, becomes: "Creating healing environment at all levels, (physical as well as non-physical, subtle environment of energy and consciousness, whereby wholeness, beauty, comfort, dignity, and peace are potentiated";
  - Assistance with gratification of human needs, becomes: "assisting with basic needs, with an intentional caring consciousness, administering 'human care essentials', which potentiate alignment of mind-body-spirit, wholeness, and unity of being in all aspects of care"; tending to both embodied spirit and evolving spiritual emergence;
  - Allowance for existential-phenomenological-spiritual forces, becomes: "opening and attending to spiritual-mysterious, and existential dimensions of one's own life-death; soul care for self and the one-being-care-for.

Figure 1. Watson's ten carative factors

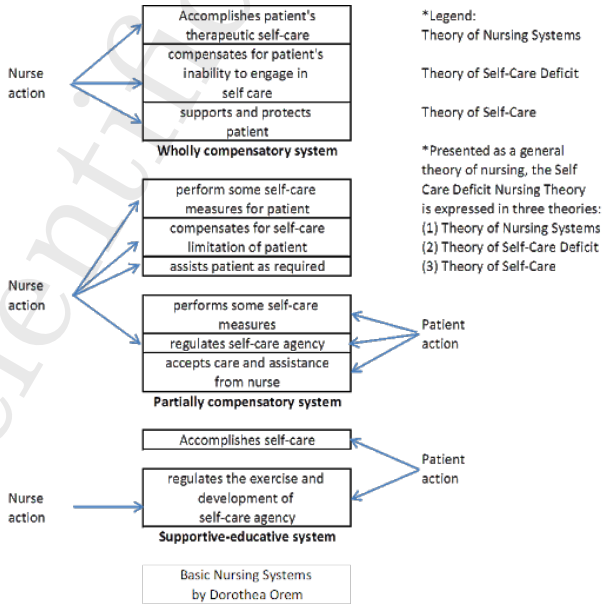


Figure 2. Orem's Self Care Deficit Nursing Theory

Wesleyan Scientific Review

PRACTICAL APPLICATIONS OF THE CARING THEORIES

The 10 Clinical Caritas Processes made by Jean Watson is indeed one of the closest to the heart of the Filipino Nurses in practice since despite all the struggles that we have in the clinical area, we are still tagged as the tender, loving and caring nurses amongst all. This is evident when I had experienced caring for my clients when I was still a student up to when I became a staff nurse even for a short period of time. I attended to my clients, made sure that their physiologic needs are attended to, their emotional needs are asked and thought of plans to improve them and I try to pray for my clients well-being. This is a clear example of how one may be able to apply Jean Watson's theory. More so, the touch that we contribute to our clients in the course of rendering care influences how much healing we are able to give them. As I work in the wards, I realize that day by day I grow excited how they get well under my care, leaving me the attitude that even as I end my day's shift, I grow weary to their status after I am at home and before I get to see them prior to my shift.

In Summer of 2001 the Nurse Governance Council at the Baptist Hospital in Miami adopted Jean Watson's philosophy and theory of caring. The nurses there felt that there were cracks in the health care system for patients, nurses and health care providers. They researched the impact of the role of continuity of care for patients and caring behaviors of nurses. To heal these fracturesfractures, they developed the Patient Care Facilitator. The purpose of PCF is to enact professional nursing practice that exemplify both caring and continuity of care. Caring was identified as a primary need of the patient. PCF is an experienced nurse who provides leadership. Their primary role is to know each patient in that area and serve as an advocate for the course of their stay. He acts as a liaison and becomes a consistent person that the patient and family see daily. While other health care members are concentrating elsewhere, the PCF is working always on care activities. As they developed the role of PCF they researched strategies on how to evaluate the effectiveness of the model and determined that the purpose was to look at the impact of the nursing care delivery model changes on continuity of care since the PCF role. Jean Watson's philosophy and theory of caring guided their research. They compared those patients who had contact with a PCF and those who did not by using questionnaires for those in the health care team who had worked with a PCF. In the study, the PCF role increased the continuity of care for the patients. Patients who had a PCF for their care said that they felt ready to go home earlier that those who did not have a PCF.

I think what Jean Watson wanted was a genuine Nurse-Client Interaction wherein we do not care for them merely because they are our clients, but because the latter become part of the lives we touch and change throughout the course of time. Even if my comparison of experience is something too common and perhaps to mundane for some nurses, I believe that this simple day to day encounter is what makes the application of the theory special as it the core of our nursing practice. What is stressed out in this theory is that there should be continuity of care over our clients, something that is lost over time as management may have focused on work efficiency but lost the essence of rendering genuine nursing care to our clients as in the case of Functional Staffing and voluminous chartings and paper works.

In the end, we are truly one of the best examples of Jean Watson's theory at just a different scenario and a slightly different manner. Hopefully new nurses don't forget this as there is now a paradigm shift in the priorities that nurses are able to experience in the midst of Brain Drain and "commercialization" of Nursing.

On the other hand, I found Orem's theory amazing as to how I was able to transfer such a mindset to my students (or even myself), in the course of rendering care. When I was working as an orientee back then, I was very careful with how I deal with my clients as I always assess first the level of assistance that they will need before I then to carry out any independent nursing functions that I have. With this I was able to avoid making my patients dependent on me. In fact, I was able to assist them on certain bedside care that they needed like ambulatory care, morning care, bedside activities and exercises (PROM and AROM exercises). Even when following up students this semester, I repeated reminded them of how important assessment is in the course of rendering care (or even to alleviating the client's self-care deficit). One's knowledge on skillfully looking into the needs and anticipating whatever the client has to be attended to is a major application of Dorothea Orem's Self Care Deficit Nursing Theory.

In wholly compensatory systems, it can be related to the ICU or trans-out clients from ICU. Just during my last rotation with Ospital ng Muntinlupa at OB-Surgery Ward, we were able to attend to a client with retained placenta. She should be at the ICU at that time, but for some reason she was transferred-out to the OB-Surgery ward. Because of this, we got the chance to handle her case and help out in rendering care to her. Because she can no longer move on her own, the care of doing bed baths, tepid sponge baths, and other self-care was left to the hands of the student nurse assigned to her. In this regard, I realized that back then we were applying Dorothea Orem's SCDNT at the wholly compensatory systems, where we were the ones accomplishing the patient's therapeutic self-care, compensating for the patient's inability to engage in self care, and supporting and protecting the patient.

In partially compensatory systems, this perhaps is one of the most commonly encountered types of patient in the hospital wards. My students and I (or even I when I was still a staff nurse) used to engage in assisting in the performance of the roles that the clients cannot do themselves like ambulating freely after surgery, care of newborns and self, changing of dressings (as to some institutions) and assisted range of motion exercises. These are but some of the many activities that nurses can help clients with partial compensatory systems. What is important to take note there is that nurses perform some of self-care measures to clients, compensates for self- care limitation of patient, assists patients as required, and regulates self-care agency. On the other hand, patients are assigned with performing some self-care measures previously done, regulating self-care agency and accepting care and assistance from nurse.

Lastly, the supportive-educative system can be most related to discharge clients who can at most carry out self-care on their own. The nurses role on this will only be left at health teachings and ensuring that they continue orders given to them and possible lifestyle modifications in order to prevent the recurrence of their illnesses. The patients, however, are the ones accomplishing self-care and regulating the exercise and development of self-care agency.

Ultimately, the Self-Care Deficit Nursing Theory is one of the helpful theories in guiding nurses as to the level of care that may be given to clients. However, we should be wary of the disadvantages and make sure that the client receives holistic care in the event that they may be completely, partially or supportive-educatively needing the assistance of nurses. More so, for a better care rendered, nurses should also take into account how importance collaboration in between fellow health care practitioners so that the patient gets the best care he needs.

COMPARING THE THEORIES

The following key differences can be seen between Self-Care Deficit Theory and Carative Factors:

Table 1. Advantages and Disadvantages between Self-Care Deficit Theory and Carative Factors using key concepts

Self-Care Deficit Theory	Carative Factors
Advantages 1. A more deliberatecaring system. Because Dorothea Orem focused on the importance of being client-centered in the course of rendering care to our clients, she was able to speak through her theory that nurses should be sensitive about the type of care that they will be giving their clients. As one goes on with his activities of daily living, it is just proper that nurses let the patient become independent of the functions that he can do. In such an event that the clients can partially do some of the tasks he is previously doing, nurses should take into account the level of assistance that they will be offering their clients as not to disrupt the normal cycle of one's daily living. In the event that clients can really no longer assume responsibility for his own activities, then the nurse takes the roles of the primary caregiver in helping out the client carry on with his previously independents tasks. 2. Enhances role specifications between nurse and patient. According to the Self Care Deficit Nursing Theory (SCDNT) presented by Dorothea Orem, the nurses are given specific roles to portray once they are assigned to clients and have undergone the nursing process. A nurse undergoes with assessment in order to determine the level of care one needs according to his present condition. After which, the nurse plans on which activities will be most beneficial to the client. In this stage, the client will also be included on what particular activities will he think to be of importance in the course of his recovery, if possible. Then, the actual carrying out of activities takes in play as both the nurse and the client cooperate with certain, if not all tasks that the client needs assistance with. It is also because of this model that the nurses became presumptive of the possible needs of the clients, thus improving the care rendered to our clientele. 3. Includes patients to planning and implementation of care. As mentioned in no. 2, clients are given the chance to interact with the nurse in terms of the care rendered to him. This is evident on certain activities like health or patient teachings to maintain the lifestyle and other modifiable factors that may aggravate the patient's condition; and actual health care interventions given to clients as far as they are religiously or culturally concerned.	**Advantages** 1. A more specific Caring system/Continuity of Care is observed. In the changes done by Jean Watson, the 10 carative factors became the 10 clinical caritas processes. Thus, the previous theory made by Jean Watson is becoming more specific in terms of what she means for each carative factor. In this event, it becomes more possible for the nurse to gauge and assess the possible directions as to how one applies theory into practice. For instance, assistance with gratification of human needs, becomes: "assisting with basic needs, with an intentional caring consciousness, administering 'human care essentials', which potentiate alignment of mind-body-spirit, wholeness, and unity of being in all aspects of care"; tending to both embodied spirit and evolving spiritual emergence. Because of this, instead of merely guessing what to do with human needs, or to which aspects of human needs are we pertaining to, it has been specified to a concentration of assisting our clients with basic human needs pertaining to the mind, body and spirit plus the wholeness and unity of an individual in all physiologic, psychologic and spiritual processes. 2. Geared towards TLC (Tender, Loving Care). Perhaps a coincidence, but the Clinical Caritas Processes is similar in the practice of a tender, loving care, which Filipino nurses are famous to be able to render to their clients despite all the hurdles in the clinical area. Given Watson's theory, she is able to explore more on the practical side of nursing which is service, thus leading to the thinking that nurses are meant to care for clients with all accord in order to put back the patient into his or her previous non-disease state. 3. Targets a holistic approach in caring (nursing) practice. What's good about the Clinical Caritas Processes is that it encompasses on almost all aspects of a human person. As it did not only focus on an illness continuum, it also focuses on caring for a person with a well/healthy state. In this regard, the primary caregivers (nurses) are able to seek out to their clients by using the caring techniques that they can use of in order to uplift the his current status of health.

Self-Care Deficit Theory	Carative Factors
Disadvantages 1. Does not include family systems. Thought the theory has its best intentions, however, it forgot to include the family systems that revolve around the client. The significant ones, family members, relatives, friends and other loved ones will be of much importance in rendering care to the clients and helping out with activities done by the patient. 2. Too rigorous nurse-patient interaction; does not include other health care team members. Although the intent of maximizing nursing care to our clients, the theory tends to forget that there are indeed other health care team members that we are working with so we can achieve our goals of giving out efficient services. The theory lacks in the element of holistic care, as it mainly focused on the client. It could have included other health care team members specially on roles that the nurse can no longer perform in the course of answering the needs of the client. 3. Promotes dependency on the nurse. Some individuals may mistake this theory as nurses being the ones to answer to all of their needs, as nurses in the theory are clearly reflected as the primary caregiver of all of their needs. As stated in the prior number, it is important that other health care team members are included in the care of clients, even in the course of self-care deficit, because nurses are generalists in nature. Understanding this is a very crucial matter as there might be some complicated client needs that can only be addressed by speciavlists.	**Disadvantages** 1. It is highly theoretical that it becomes vague. Because the theory concentrates on the Caring Factors too much, it became highly philosophical that how to get into applying the theory becomes a question. It is too hard to understand how she wants caring to be transmitted to the clients in the clinical area. The words used in the Clinical Caritas Processes are too philosophical that it becomes too difficult for a lay person or even nurses to understand. 2. Theory fails to specify how ends are to be achieved. Although Jean Watson was able to have a direction at how she wants to at least define Caring, she failed to include in her theory how she is planning, to achieve the ends she have been formulated in her theory. Because of this, if one is not sensitive to the needs of the patient, or if they have cross cultural differences, different outputs of caring may be put into practice. In this event, the nurses will have trouble adapting one application of the theory over the other, should generalizability be a concern. It could have been better if Jean Watson was able to explain how she was planning to get at her ends of caring for clients, so that confusion or ambiguities may be avoided in the process. 3. Theory portrays a highly improbable, if not impossible role of a nurse. Again, Jean Watson's theory of Clinical Caring Process is very idealistic, if not perfectionist in nature. Because of this, we encounter the danger of having it at the Marxist Communism's level that though we have the best intention at heart, the possibility of carrying out the theory is near to impossibility, if not improbability. One, for us to be able to take into accord such as role (as indicated in the 10 Clinical Caritas Processes), we have to first make sure that the nurse-client ratio is only at 1:1 up to 1:3. This will be then very impossible in the Philippine setting because of the nurse-clientele ratio, and probably improbable to other countries because we are dealing with additional expenses with the increase of manpower to carry out this kind of setup. As there will be an increase in the nurses giving out TLC/Caring, the hospitals are left the problem of additional manpower pooling, thus eventually leading to more expenses in the institution.

CARING: A BESTOWED BEGINNING IN NURSING

As we proceed with our "nursing" among our clients, let us remember that no matter what framework you use (be it from Orem or Watson), what is important is that we are able to treat the "whole" person. Caring in nursing is indeed a complex thing and we have to understand that there are many dimensions that we need to consider in order to arrive at proper nursing care. There is no single approach that would attest that we are correctly caring in nursing. Hence, we just have to keep in mind that our definition of caring in nursing will greatly affect the message we want to convey to our clients. Thus, as Boykin and Schoenhofer (2001) reiterates, we need to have a clear perspective of caring for persons with focus on living caring and growth in caring. These ingredients will surely combine clearly how caring in nursing would matter in dealing with our clients in the daily rigors of our clinical and academic practice.

REFERENCES

Benner, P. and Wrubel, J. (1989). The primacy of caring: stress and coping in health and illness. United States of America: Addison-Wesley Pub Co.

Bottoroff, J. L. (1991). Nursing: a practical science of caring. ANS Adv Nurs Sci. 14:26-39.

Boykin, A. and Schoenhofer, S. (2001). Nursing as Caring: A Model for Transforming Practice. United States of America: Jones and Bartlett Publications, Inc. and National League for Nursing.

Locsin, R. (2005). Technological Competency as Caring in Nursing. Mandaluyong, Philippines: National Book Store, Inc. and Sigma Theta Tau International.

Leininger, M. M. (1980). Caring: A Central Focus of Nursing and Health Care Services. Westport, Conn: Technomic.

Orem, D. E. (1991). Nursing: Concepts of Practice (4th ed.). St. Louis, Mo: Mosby Year Book.

Ray, M. (2010). Transcultural caring dynamics in nursing and health care. Philadelphia: F.A. Davis Company.

Roach, S. (1987). The Human Act of Caring, A Blueprint for the Health Professions. Ottawa, Canadian Healthcare Association Press.

Roach, S. (2002). Caring, the Human Mode of Being: A Blueprint for the Health Professions (2nd rev. ed.). Ottawa: Canadian Healthcare Association Press

Swanson, K.M. (1991). Empirical Development of a Middle Range Theory of Caring. Nursing Research, 40(3), 161-166.

Watson, J. (1988). Nursing: Human Science and Human Care. New York: National League for Nursing : Pub. No 15-2236.

John Francis L. Faustorilla Jr, DNSc, MDM, MA, DipCS, RN, RM, is currently a part-time a Lecturer at the University of the Philippines Manila (UP Manila) College of Medicine and Professorial Lecturer III at the University of Makati, College of Allied Health Studies. He is also a freelance ISO Auditor and Consultant at TUV Rheinland Philippines. He finished his BS in Nursing from PLM College of Nursing, MA in Nursing from St Paul University Manila, MDM from Asian Institute of Management, Doctor in Nursing Science from St Paul University Philippines and Diploma in Computer Science from the University of the Philippines Open University. His research interests include nursing informatics, entrepreneurship in nursing, quality management system, occupational health and safety management system,environmental management system, information security management system, business continuity management system, and educational organization management system applied to nursing and allied health care practice.

Examining Business Continuity Strategies of Restaurants in Guam:

A Qualitative Multiple-Case Study

Dr. James A. Nilo

Division of Business Administration,
University of the People, Pasadena, California

E-mail: james.nilo@uopeople.edu

ABSTRACT

The closure of nonessential businesses in Guam, including dine-in services for restaurants, threatened the survival of restaurant businesses. Small businesses need a business continuity plan to prepare for any operational disruption. This qualitative multiple-case study examined the business continuity strategies of restaurants in Guam. The study population included 8 owners and managers of restaurants. Data were collected from a survey questionnaire with 6 open-ended questions and a review of company's electronic records, social media, and websites. Data were coded and analyzed using Morse's data analysis process. Four themes emerged from data analysis: reimagining business, government assistance, social media engagement, and promoting employee confidence. Restaurant businesses find new opportunities when a crisis occurs so that they can continue to operate and meet the needs of their customers. Reimagining business includes delivery alternatives such as take-out, curbside, and home/business delivery. New product offerings and pricing/quality are part of reimagining business strategy to include catering. Applying for government assistance is the second business continuity strategy. This includes Paycheck Protection Program (PPP) and Economic Injury Disaster Loans (EIDL) for restaurant owners and Pandemic Unemployment Assistance (PUA) for employees. The third business continuity strategy is social media engagement. Restaurant owners and managers recommended engaging customers through social media and websites to promote new products and delivery alternatives. The fourth business continuity strategy is promoting employee confidence to include implementing safety measures at work and improving employee morale. Small businesses in the restaurant sector will find the study results beneficial in their efforts to survive the threats of COVID-19.

Keywords: Business continuity, small business, COVID-19, reimagining business

INTRODUCTION

The threats of COVID-19 did not spare the island of Guam. The United States territory, located in the Marianas region with 212 square kilometers of land area (Guam Visitors Bureau, 2020), has a population of 159,358 (U.S. Census Bureau, 2020). On March 15, 2020, the island listed its first three COVID-19 infections (Toves, 2020) that prompted Guam Governor Lourdes A. Leon Guerrero to issue Executive Orders 2020-03 to declare a public state of emergency and 2020-05 to mandate closure of nonessential businesses including dine-in services at restaurants (Government of Guam, 2020). As a result, all restaurants closed their dine-in facilities. Amid business disruption, restaurants had to find other ways to continue operating. Other businesses face an impending failure and might completely shut their doors for good unable to recover from the crisis.

BACKGROUND

Guam is home to two large U.S. military bases. Located in the north is Andersen Air Force Base while U.S. Naval Base Guam is in the south. There are at least 16,400 U.S. military members and their families stationed in Guam with 4,100 U.S. Marines expected to arrive in 2022 (WatchBlog, 2017). Service members typically rotate in and out of the island on a 2- to a 3-year

Wesleyan Scientific Review

military order. With the constant departure and arrival of U.S. military families and the influx of 1.6 million visitors throughout the year (Kaur, 2019), restaurants provide useful services for transitioning residents and guests.

With many businesses suddenly closed, island residents found themselves wondering where to get cooked meals. Kaz Endo decided to help by creating a Facebook group called #SupportFoodToGoGuam and connect restaurants offering take-out and delivery services to residents wanting to purchase prepared food (Lloyd, 2020). Endo, who started the group with a few hundred friends, estimated that there are around 400 restaurants in the group. The hashtag became viral in Guam and helped people keep restaurant businesses operating. By sharing posts that incorporate the hashtag #SupportFoodToGoGuam, people could quickly spread and find information on social media of restaurants that continue to operate. This phenomenon became a business continuity strategy for restaurant owners and managers. There are currently almost 8,800 members of the group.

Small businesses are the backbone of most countries' economies. Globally, 95% of enterprises belong to small businesses, and they provide over 35% of their governments' revenues and close to 50% of domestic jobs (Canevari-Luzardo, 2019). In the United States, 99.9% of all firms are small businesses, or organizations with fewer than 500 employees (Office of Advocacy, 2019). There are 3,493 small businesses in Guam generating 1,130 net new jobs and responsible for $1.1 billion in trade (Office of Advocacy, 2019). Accommodation and food services comprise the largest employment provider in Guam with 14,643 jobs and $247,552,000 annual payroll or $16,906 yearly payroll per employee (Office of Advocacy, 2019). Restaurant businesses form part of the largest group of establishments that produce jobs on the island. Their continuity of operations during a public state of emergency is crucial to Guam's economy's survival. The study of business continuity strategies of restaurants in Guam is a significant undertaking.

LITERATURE REVIEW

Business leaders need an established procedure in the event of any crisis or disaster that threatens their businesses. An emergency or disaster does not only involve natural disasters but all types of situations that can disrupt an industry whether coming from threats internally (such as an unethical culture) or externally (Filipović et al., 2018). A Business Continuity Model (BCM) provides the foundation for how business leaders restore operations in the aftermath of business interruptions (Castillo, 2004). The model spells out a Business Continuity Plan (BCP) that businesses can use to activate business units and processes, assess business conditions, and plan for business recovery in emergency (Sambo & Bankole, 2016). Cremonini and Samarati (2008, as cited in Sarmiento et al., 2016) described BCP as "a set of technical, administrative, and management activities aimed at planning the steps to recover and restore critical business assets after an unforeseen event has impaired corporate functions" (p. 78). A BCP includes several strategies put in place to mitigate business collapse and ensure business continuity. These strategies address risk-reduction areas, crisis response, and post-disaster recovery (Cervone, 2017; Filipović et al., 2018). Business leaders anticipate problems before they occur and implement plans for their business to minimize exposure. When disasters happen, business leaders should activate response mechanisms to deal with the disruption and protect their businesses from harm. It is also a vital portion of the strategy to set up a post-disaster system to recover and re-establish business operations.

Disaster resilience is a vital part of BCP. Creating a strong and resilient business that can bounce back from stress and disruption is the first defense line. The pivotal role of any organization's continued survival in the world of competitiveness and looming disasters are disaster resilience and BCP (Jafar & Taneja, 2017). Investing large sums of money in an enterprise would not suffice in helping small businesses survive any event of a disaster as these small businesses need proper training to mitigate failure (Sarmiento et al., 2016). Sarmiento et al. (2016) further warned that 80% of firms that do not recover from any disaster within 30 days would likely shut down for good. Besides, three out of four businesses that do not have an established BCP close within 3 years of a disaster, and they need to resume operations within 10 days to increase their chances of continuance. Being able to recover and continue operations in a timely fashion is crucial to business survival.

There are several ways small businesses can become resilient. Family succession is one strategy of small business resiliency because outgoing leaders pass down knowledge to succeeding leaders (Kativhu et al., 2018). Knowledge preservation and management allows small businesses to continue to operate for a long time. Huang et al. (2018) posited that companies must develop their competitiveness before a disaster to survive the initial impact of a disruption and have a greater chance of sustainable recovery in the long run. Fatoki (2018) discovered in a research study that individual successes and organizational successes contribute to entrepreneurial resilience. Individual successes include business owners having confidence in their success and satisfaction with their lives and business. Moreover, individual successes also include the entrepreneur's ability to set out their personal goals to see their business grow. Organizational successes include profit and sales. Therefore, it is important to prepare the business and the business owner in small business resiliency.

While an organization's survival whent disruptions occur rely on their BCP, it is also vital that their plans are based on business continuity metrics. Paunescu and Argatu (2020) recommended that organizations implement protection measures, mitigation measures, emergency measures, and recovery measures in their BCP. Business leaders establish protection measures for all possible threats that could disrupt before they even occur. Mitigation measures are strategies to minimize the effects of disturbances. Emergency measures come in play when the disturbances are happening, while recovery measures are strategies to restore business functions after a disruption.

Researchers suggested a well-developed business survival and continuity involving trained employees. A plan must include strategies that employees understand and can readily implement. Buntak et al. (2019) favored BCP to support business resilience, create a strategy to respond to disruptions, and implement recovery systems after a disruption. Buntak et al. recommended to include the following in BCP: set up a contact list, define roles and responsibilities for all team members, define different levels of risks, identify appropriate response time, set up a process to evaluate business continuity, define processes, create reporting tools, and train team members (p. 358). Training all the team members from the top executives to the bottom and conducting simulations will allow everyone to execute plans with ease (McKay, 2018). Business leaders need to establish systems and procedures that all team members could understand, implement, and assess. The role of all stakeholders is crucial to the success of BCP.

When disasters have passed, there might be long-term consequences for businesses. Recovery might not happen quickly. Companies might suffer disruption longer than expected resulting in sustained financial losses, logistical nightmares, and customer fallout (Huang et al., 2018; Velásquez-Moreira & Lema-Moreta, 2019). Business leaders can turn strategies from disaster

preparedness to recovery, restore communications with all stakeholders, connect with community resources, and take care of the employees affected (U.S. Chamber of Commerce Foundation, n. d.). Communicating beforehand all employee responsibilities will prevent duplicity. Keeping records intact will also help in applying for government aids and other private insurance claims during a business disruption such as the COVID-19 pandemic. Business leaders can also implement flexible work schemes to help employees get back to work during the recovery process. Lastly, a more holistic approach to a recovery phase is the involvement of the entire community. Small businesses can team up with all their stakeholders and the community they belong to and serve to bring a sense of normalcy in day-to-day lives.

Small businesses are not immune to all kinds of threats. Business disruptions can happen anytime. While it is vital to prepare for any crisis, small businesses will also benefit from an established BCP and well-trained teams to execute strategies without the guesswork. Disaster recovery in the quickest possible time is crucial to a small business's ability to sustain operations and survive.

MATERIALS AND METHODS

This qualitative multiple-case study examined the business continuity strategies of restaurants in Guam in the light of the Government of Guam's closure order for nonessential businesses, including dine-in services for restaurants as a response to COVID-19 infections. A qualitative method was appropriate over quantitative in exploring processes and people's narratives of their experiences that do not deal with numbers and statistics (Aspers & Corte, 2019). A qualitative researcher examines people's real-life experiences and seeks to understand the meaning of these experiences in certain situations (Al-amer et al., 2018). The case study research design was employed to examine businesses' comprehensive processes and their practical applications (Yin, 2014). A case study researcher takes significance in people's real-life experiences and gathers information (data) from multiple sources for an in-depth analysis and making sense of the case (Hyett et al., 2014). A case study design is appropriate descriptive and exploratory studies that ask "what" questions (de Weerd-Nederhof, 2001). The central research question was: What are the business continuity strategies of restaurants in Guam? This study aimed to explore and examine the broad strategies of restaurant owners and managers to keep their businesses running despite the dine-in restrictions placed by the government and how these strategies can benefit other businesses.

POPULATION AND SAMPLE

The population in this multiple case study included small business restaurant owners and managers in Guam. A population is a researcher's prospective source of data needed to increase the researcher's knowledge (Asiamah et al., 2017). The next step was to identify participation criteria to narrow down the population. Park et al. (2016) recommended employing criteria in selecting participants who could provide pertinent information in the study. This study's participant criteria were small business owners and managers of restaurants who have been in business for a minimum of 5 years and have business continuity strategies in place.

After identifying the population and participant criteria, the next step was to determine how to access the participants. Participant access is a "precondition for the research to be conducted" (Burgess, 1984, as cited in Azungah, 2019, p. 413). An invitation was posted to Facebook groups #SupportFoodToGoGuam and Guam Foodies with a link to Google Forms where participants could find the interview questionnaire. Restaurants actively engaged in these Facebook groups also received invitations through private messages and e-mails. Participants responded by clicking on the Google Forms link and answering the survey questionnaire.

DATA COLLECTION

Due to the restrictions and difficulty imposed by COVID-19 threats, a face-to-face interview was not employed. It was appropriate to create and utilize a survey questionnaire due to government restrictions and restaurant owners' inaccessibility for face-to-face interviews. While face-to-face interviews and observations are the usual data collection methods in qualitative studies, researchers also agree that an alternate to face-to-face and telephone interviews is acceptable on certain situations. For example, Meho (2006) contended that e-mail interviewing for qualitative research is a possible substitute for face-to-face interviews, especially when study participants are otherwise inaccessible. O'Cathain and Thomas (2004) discussed that open-ended questionnaires are acceptable in qualitative research with qualitative analysis techniques. Adamson et al. (2004) argued that there had been growing interest in surveys using questionnaires in qualitative studies. They concluded that the "inclusion of standardised survey questions in qualitative interviews can provide an easy and fruitful method to explore research issues and provide triggers to difficult or contested topics" (p. 139). The semi-structured survey questionnaire listed six open-ended questions:

1. What business continuity strategies have you implemented since the government's order to restrict dine-in services?

2. What resources does your organization provide to help you implement business continuity strategies?

3. What are the primary barriers to implementing business continuity strategies?

4. How did you overcome those primary barriers?

5. How do you determine the effectiveness of implemented business continuity strategies?

6. What other information regarding business continuity strategies can you provide that you have not already included above?

The seventh portion of the questionnaire was the space where respondents wrote the links to their company electronic records, web sites, and social media accounts used in this study to triangulate data. Yin (2014) discussed that a case study researcher could collect data through documents, archival records, interviews, direct observations, participant-observation, and physical

artifacts (p. 106). Snyder (2012) explained that gathering data from multiple sources makes data analysis encompassing and rich. Since the respondents submitted data through written answers to the questionnaire, member checking was not necessary.

To ensure the sufficiency of data collected, a qualitative researcher must achieve data saturation. Data saturation is the "gold standard" in qualitative methods and is met when there is no new information collected by the researcher (Hancock et al., 2016). Aldiabat and Le Navenec (2018) further explained that data saturation happens when a qualitative researcher has "continued sampling and analyzing data until no new data appear and all concepts of the theory are well-developed....and their linkages to other concepts are clearly described" (p. 247). At this stage, the researcher may stop collecting data. This study achieved data saturation after eight study participants. The eighth participant did not provide new information but rather confirmed all data provided by preceding participants. The answers given by eight study participants allowed for the development of all themes.

Data Analysis

Data triangulation was utilized in this study. A qualitative researcher collects data from various sources and perspectives (Tan, 2019) and triangulates information from these sources to generate new information thereby enhancing the research's credibility and dependability (Whitmore et al., 219). The respondents' answers and the review of company's electronic records, web sites, and social media accounts were triangulated and data were gathered from these sources.

Data analysis followed Morse's (1994) stages, which are comprehending, synthesizing, theorizing, and recontextualizing. The comprehending process includes the gathering of data needed by the researcher. The synthesizing stage involved coding, where the researcher assigns symbols and meanings to synthesize the data (Rogers, 2018). Memos were written on these codes to identify probable similarities and connections in meanings. Coding involves rearranging data so that data with similar purposes would form categories, and these categories would be developed in themes that help reflect the theoretical concepts of the study (Snyder, 2012). After the codes were grouped, they were analyzed how they related to each other, and the codes following similar patterns formed the themes (Rogers, 2018; Williams & Moser, 2019). Colors were assigned and used on each code for easier categorization. Codes with similar expressed or implied meanings aided by memos were grouped together.

The theorizing stage involved a thorough assessment of the themes and their relationships (Morse, 1994). A cross-case synthesis was employed wherein the similarities and patterns in themes from all the eight respondents' data were examined and analyzed (Yin, 2014). The themes that emerged answered the central research question of this study and supported the literature review. The recontextualizing stage is the presentation of the results and findings of this study, as discussed below.

Reliability and Validity

A researcher's ability to explain accuracy, methodical processes, and quality of research can be addressed through reliability and validity. Rose and Johnson (2020) called it the trustworthiness of qualitative research. Reliability and validity are explained sets of criteria employed by the qualitative researcher to ensure study rigor (Tuval-Mashiach, 2017). The following research procedures explained precision in the conduct of this study.

Reliability

Reliability is the precise portrayal of methods, as discussed in the research study (Golafshani, 2003). Other researchers must be able to get similar results and consistent findings (Thyer, 2010). Established qualitative research methods were followed in this study. A survey questionnaire was used and made available to all study participants. Since participants deposited their written answers through Google Forms, there was no need for member checking. A triangulation of data sources was done to ensure the richness of data gathered. Data saturation ensured the sufficiency of data that would allow for the development of themes that answer the central research question.

Validity

Validity in qualitative research deals with the researcher's ability to reach a qualitative goal. According to Joppe (2000, as cited in Golafshani, 2003), validity means "whether the research truly measures that which it was intended to measure or how truthful the research results are" (p. 599). Researchers should not misrepresent information, and data analysis must be consistent with the theoretical explanation (Hayashi et al., 2019). The validity of this research study rests on its credibility, confirmability, and transferability.

Credibility. Credibility in a qualitative study is the researcher's descriptive academic rigor and trustworthiness (Stewart & Gapp, 2017). Daniel (2019) explained that credibility in qualitative research is the "'appropriateness' of the tools, processes, and data used in the study" (pp. 120-121). Multiple sources provided the data, and data triangulation was conducted to add credibility to the study (Lemon & Hayes, 2020). A survey questionnaire was used to collect data from small business restaurant owners and managers. Mauceri (2016) supported the use of survey questionnaires in qualitative research as long as the questions are designed to meet the participants' traits that would allow for them to freely express their ideas. Data saturation influences the credibility of a qualitative study (Tran et al., 2016). Data saturation was achieved after the eighth participant provided no new information.

Confirmability. A qualitative researcher must always be objective. Objectivity in the study favors confirmability in a qualitative research (Abdalla et al., 2018). Following the discussion by Abdalla et al. (2018), data triangulation supported neutrality in this research study and provided a factual representation of data. Removing personal bias and opinion allows for a qualitative researcher to become objective (McKibben 2019). The data used in analysis were purely from participant answers and their provided electronic company records, social media, and websites. The themes that emerged from data analysis represent restaurant owners' business continuity strategies in Guam as supported by literature review.

Transferability. Other researchers can follow the methodological procedures detailed in this study and conduct similar studies at different settings. Researchers can replicate the methods, setting, and population in this study in other contexts (Maxwell, 2020). Daniel (2018) explained that transferability means the findings in one study can be applied to different settings and achieve similar results. Lessons from this study can also be learned and used in another context.

RESULTS AND DISCUSSION

The purpose of this qualitative multiple-case study was to examine the business continuity strategies of restaurants in Guam in the light of the Government of Guam's imposed restrictions for dine-in services. A methodological triangulation of all data sources was employed to include survey questionnaires, company's electronic records, social media, and websites. Four themes emerged in the coding of data: (1) reimagining business, (2) government assistance, (3) social media engagement, and (4) employee confidence.

Theme 1: Reimagining Business

The restaurant owners and managers who participated in this study agreed that reimagining business is one business continuity strategy they employ. Three subthemes emerged that fall under reimagining business: product delivery, product pricing and quality, and catering.

Participants confirmed product delivery as important aspect of their strategies. Product delivery includes both take-out and delivery services. Participant 2 cited providing both take out and curbside delivery services. Participant 3 agreed to delivery service while Participant 5 uses a food delivery service. Participant 5 wrote, "the restaurant only offers a take-away service." Participant 6 mentioned door-to-door service as a strategy. Participant 6 further added that "the number of delivery personnel was increased." Participant 8 has been using both curbside and delivery options.

Product pricing and quality is another subtheme under reimagining business. Participant 4 offers discounted packages because they believe that too high costs would result in too few customers. Participant 5 wrote that "there are no administrative fees for ordering on the app." Participant 6 mentioned the importance of improved service quality and food quality.

Catering is the third subtheme of reimagining business. Participant 3 confirmed delivery service for their catering option that gets partial orders. Participant 2 answered that more party trays determine the effectiveness of implemented business continuity strategies, while Participant 5 confirmed the same for catering inquiry. Participant 4 wrote, "I think a catering delivery service is also a good idea." Participant 8 shared that they "have done lunch plates with private businesses that have given us extra income."

Reimagining business is a business continuity strategy. Waddock (2020) contended that companies would not be able to continue to operate in the COVID-19 era without a "paradigm shift" (p. 1) or a change in the way they usually conduct business. Businesses must revamp their processes so that they can meet the needs of their stakeholders. The pandemic caused by COVID-19 disrupted people's way of life, including the normal services provided by restaurants such as

dine-in options. Even the way people eat has changed. People have switched to eating processed food while sheltering-in-place with the closure of restaurants (Ben Hassen et al., 2020). However, Maritz (2020) explained that businesses could find ways to continue operating during a COVID-19 disruption by reimagining business and exploring new opportunities. With the risk of getting exposure to the virus when purchasing food at the grocery stores (Ben Hassen et al., 2020), people can rely on restaurants to provide prepared meals. Businesses can find their new position in the market and implement service adjustment to continue to reach their customers (Obrenovic et al., 2020). While restaurants are unable to offer dine-in services, they can find ways to deliver food to their customers. Curbside delivery, take-out service, home/business delivery, new pricing and quality, and catering services are opportunities to explore.

Theme 2: Government Assistance

The participants agreed that government assistance plays a crucial role in the business continuity of restaurants. Participant 1 wrote, "We applied for PPP (Paycheck Protection Program) and EIDL (Economic Injury Disaster Loans) so that small amount of money aid us to push thru." Participant 1 further added that "the money the Federal (government) offered is not complete enough, but some helped. And for employees, they were encouraged to apply for PUA (Pandemic Unemployment Assistance) benefits." Participant 3 shared that tax relief policy is one resource their organization provides to help implement business continuity strategies. Participant 3 suggested fair help for all businesses.

Government plays a crucial role in the continued operations of businesses, including restaurants. Aside from getting consistent support from the organizations, business leaders must also receive constant and consistent support from the government to become resilient amid many external threats such as the COVID-19 pandemic (Strasser et al., 2020). Even with elections and the possibility of change in leadership, businesses need to get an assurance that government assistance, regardless of who the elected officials would be, would continue while the pandemic exists. Ching-Fun et al. (2020) called for competent governance that protects the vulnerable members of the society as a government strategy to combat COVID-19 repercussions. Local governments (municipalities and states) rely on local taxes and revenues to fund their COVID-19 response projects. With the decline of revenues, they must seek the assistance of the federal government (Gordon et al., 2020). Gordon et al. (2020) explained that the federal government has provided $377 billion in loans and grants to small businesses in the entire country and territories and $280 billion in tax cuts. Individuals received recovery rebates of $290 billion and unemployment insurance extension of $260 billion. Gordon et al. argued that the federal response is still inadequate and warned that further delay of future government assistance could be detrimental. As people and businesses rely on the government, the current political climate makes it difficult for the federal government to implement a timelier response to COVID-19 disruption of the American way of life. With a constant deadlock between a Democratic-controlled House of Representatives and a Republican-controlled Senate, the federal government cannot provide additional financial relief to the American people.

Theme 3: Social Media Engagement

Social media engagement is the third theme that emerged in data analysis. Participant 2 confirmed that electronic media is a useful resource and adds to "eat local, eat and help small businesses." Participant 5 wrote online promotion difficulties as a barrier to business continuity

and shared that they overcame this barrier "through referrals from repeat customers." Participant 6 promotes "discounted events through online and social media." Participant 8 also shared that they have been promoting and are being active in all their social media pages. Participant 7 shared that "efforts have been made to ensure passenger flow" such as adopting some preferential measures to promote consumer confidence.

Social media engagement is another critical business continuity strategy. With the reimagining of business and finding alternative ways to deliver new products to customers, restaurants can utilize information technology to reach their home-bound customers. Social media engagement and other forms of online communication allow businesses to get in touch with their internal and external customers before, during, and after the COVID-19 pandemic (Obrenovic et al., 2020). Alves et al. (2020) posited that COVID-19 challenges should push businesses to be more engaged in social media and other digital channels since there is an increased utilization of social media and smartphones. Leon-Quismondo et al. (2020) discussed that engagement with customers is vital to a business's long-term stability, and businesses can capitalize on the advantages of social networks. More people have been using social media, where they get instant information on virtually any product or service. Home-bound people use social media as one gateway to the world. Restaurant owners and managers can leverage the power of social media to continually engage their customers, feature their new product offerings, and inform the market about their new convenient delivery options.

Theme 4: Promoting Employee Confidence

Promoting employee confidence is the fourth theme that emerged in data analysis. Participant 2 utilizes face masks, gloves, and hand washing. Participant 3 employs "positive communication within the organization," while Participant 7 admitted that "the pay cut for workers has led to a lack of confidence." Participant 7 added that to overcome this, they "increase emotional input to them, improve morale, and let us overcome difficulties together." Participant 6 strengthens protections and suggested to "enhance the awareness of their own service personnel in the prevention and control of the epidemic situation." Participant 8 has "all employees follow all CDC guidelines. Mask wearing, sanitizing, keeping 6 ft. distance when possible."

It is essential to ensure that employees are also well-taken care of. Training of employees for potential business disruption is an essential BCP strategy. When disaster strikes, employees would know how to handle the crisis and help in reopening business. A resilient culture is one where employees possess the necessary knowledge and training to take on leadership roles in times of crisis and execute the same level of confidence even when there is no crisis (Obrenovic et al., 2020). Yoder (2020) discussed that food and beverage businesses could reopen in the new normal with employees at the forefront of instituting safety protocols. Organizations can implement new measures such as 6-feet social distancing, reconfigured workspaces, and even rotating employees to maximize spaces and minimize crowding.

It is also vital to take care of the emotional well-being of the employees. An effective leader is adaptable to varying conditions and can still connect with the employees and help enlist their support for team resilience and flexibility especially during COVID-19 crisis (Kaiser, 2020). Pelczarski (2020) recommended proper employee management during COVID-19 disruption, including following Centers for Disease Control and Prevention (CDC) guidelines of sanitation and social distancing, allowing work-from-home flexibility, and keeping employee morale high through

constant communication and offering proper resources. Abbas and Zhiqiang (2020) reminded business to take care of their aging employees who are not only vulnerable to the COVID-19 infection but worry about their job. Business leaders need to consider assisting their older employees, such as counseling for mental well-being. Online counseling is acceptable. These employees are susceptible to infection and worry about their ability to keep their jobs resulting in anxiety.

Applications to Professional Practice

This qualitative multiple-case study found that reimagining business, government assistance, social media engagement, and promoting employee confidence are business continuity strategies of restaurants in Guam. With the closure of nonessential businesses due to the COVID-19 threat, restaurants face business disruption. It is crucial to business survival in the midst of a crisis to find ways to continue operating. Businesses can learn from the findings of this study and develop their own Business Continuity Plan (BCP), where they will spell out strategies they need in the aftermath of any crisis. Business leaders need to determine how they can deliver their products and services to their customers in any unsettling environment, such as a pandemic (Shibamura et al., 2020). COVID-19 threats call for contingency plans so that organizations can mitigate devastating effects while they assess how they can continue operating (Reuter-Opperman et al., 2020). Restaurant owners can reimagine their businesses by finding ways they can deliver their products. Study participants recommended using take-out, curbside, and home/business deliveries. They can also revisit their product offerings, such as quality and pricing. Party trays and catering are good opportunities to explore. Since there is a restriction in movement and home-bound people resort to processed food (Ben Hassen et al., 2020), businesses can deliver food trays to homes and businesses and help people eat prepared and cooked meals.

Restaurant owners can also take advantage of available government financial assistance. Tax reliefs, paycheck protection, and forgivable loans are some aids and grants available to small businesses. Employees should apply for benefits when furloughed, laid off, or underemployed. While there is no unemployment insurance in Guam, federal government's assistance makes these benefits available.

Restaurant owners and managers can create a more consistent presence online. They can enhance their social media practice and engage their customers. They can communicate their reimagined products and services is social media and their websites. Offering competitive pricing and convenience in delivering food are right strategies to have.

Lastly, restaurant owners and managers must promote confidence in their employees. It is vital to establish safety measures in the workplace, such as wearing facemasks, sanitizing, and maintaining a minimum of six feet distance between people. Taking care of employee morale is a business continuity strategy. Aside from training employees with various duties and responsibilities before, during, and after a business disruption, it is a crucial element to improve employee morale. Communicate vital information and allow for flexible work schemes. The emotional and mental well-being of aging employees is also important. Offer counseling as needed so that they can relieve their anxieties.

Implications for Social Change

The increasing rate of COVID-19 infections in Guam necessitated the restriction of people's movement and closure of nonessential businesses. This affected many firms. The closure of an economy due to COVID-19 has a devastating result on people and businesses as people lose their jobs, businesses cannot make profit, and, eventually, businesses fail (Ehiorobo, 2020). Businesses must find ways to reopen in a timely fashion for a greater chance of surviving the pandemic (Sarmiento et al., 2016). The business continuity strategies, as shared by study participants, can help other restaurant owners in Guam. Implementing BCP can help businesses deal with business disruption. As companies continue to operate, they can help the economy alive. Businesses can also continue to help people generate income as employees receive their salaries. As people continue to work, they can infuse money into the local economy and help businesses thrive. This transactional relationship has a positive social change effect on the economy of Guam. Mamedova et al. (2020) urged to keep the economy and the society alive amid the COVID-19 pandemic. Restoring the economy is a task needed to help people survive this crisis.

Recommendations for Further Research

This study examined the business continuity strategies of restaurants in Guam in the light of COVID-19 restrictions to dine-in services. The population used in this study was the owners and managers of restaurants. It is recommended that further research be conducted on other industries such as the tourism industry in Guam to include accommodations. Tourism is a significant economic contributor to Guam's economy. It is also recommended to replicate this study in other settings or contexts such as in other states, territories, or countries.

CONCLUSION

In March 2020, Guam recorded its first COVID-19 infections. This prompted the Governor of Guam to issue orders placing the entire island in a public state of emergency. Nonessential businesses were ordered closed to include dine-in services in restaurants. This qualitative multiple-case study examined the business continuity strategies of eight owners and managers of small business restaurants in Guam. A survey questionnaire with six open-ended questions was used and a review of electronic company records, social media, and websites. Data triangulation was used, and data saturation was achieved.

Restaurant owners shared four business continuity strategies: reimagining business, government assistance, social media engagement, and promoting employee confidence. Business leaders identified new opportunities by reimagining their business. This includes product delivery alternatives such as take-out, curbside, and home/business delivery. They also revisited the quality and pricing of their products. Party trays and catering are a source of income as well. Government assistance played an essential role in business continuity. Businesses applied for government aids and grants, while employees applied for benefits as well. Business leaders reported social media engagement as a business continuity strategy. Being able to actively post on social media and websites and offer new products and delivery options is one way to keep their customers informed and increase customer flow. Lastly, instilling employee confidence is another business continuity strategy. Businesses implemented safety measures and protocols such as

wearing face masks, sanitizing, and maintaining a minimum of six feet distance between people. Moreover, business leaders shared the importance of keeping employee morale high, including positive and constant communication. Implementing the business continuity strategies shared by the study participants can help other restaurants survive the fallout of the COVID-19 pandemic.

ACKNOWLEDGEMENT

The author wishes to thank the following restaurants for their participation that made this research study possible (listed not in any order that would identify their participant numbers): Singh's Café Kabab & Curry, Guam Nayon Turo Turo Restaurant, Domino's Pizza Store, Mosa's Joint Restaurant, Kadu, CORE BBQ & Seafood Restaurant, Olive Garden, and Pika's Café.

REFERENCES

Abbas, S. M., & Zhiqiang, L. (2020). COVID19, mental wellbeing and work engagement: The psychological resilience of senescent workforce. International Journal of Research in Business and Social Science, 9(4), 356-365. http://dx.doi.org/10.20525/ijrbs.v9i4.760

Abdalla, M., Oliveira, L. G. L., Azevedo, C. E. F., & Gonzalez, R. K. (2018). Quality in qualitative organizational research: Types of triangulation as a methodological alternative. Administração: Ensino e Pesquisa, 19(1), 66-98. http://dx.doi.org/10.13058/raep.2018.v19n1.578

Adamson, J., Gooberman-Hill, R., Woolhead, G., & Donovan, J. (2004). 'Questerviews': Using questionnaires in qualitative interviews as a method of integrating qualitative and quantitative health services research. Journal of Health Services Research & Policy, 9(3), 139-45. http://dx.doi.org/10.1258/1355819041403268

Al-amer , M. R., Ramjan , L., Glew , P., Taysir Darwish , T., Randall , S., & Salamonson , Y. (2018). A reflection on the challenges in interviewing arab participants. Nurse Researcher, 26(1), 19-22. http://dx.doi.org/10.7748/nr.2018.e1559

Aldiabat, K. M., & Le Navenec, C. (2018). Data saturation: The mysterious step in grounded theory methodology. The Qualitative Report, 23(1), 245-261. http://nsuworks.nova.edu

Alves, S. R., Ribeiro, H., & Saravanan, R. (2020). The digital transformation of traditional fashion retail for sustainable growth. Varazdin Development and Entrepreneurship Agency (VADEA).

Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. F. (2017). General, target, and accessible population: Demystifying the concepts for effective sampling. The Qualitative Report, 22, 1607-1622. http://nsuworks.nova.edu

Aspers, P., & Corte, U. (2019). What is qualitative in qualitative research. Qualitative Sociology, 42(2), 139-160. http://dx.doi.org/10.1007/s11133-019-9413-7

Azungah, T. (2019). Challenges in accessing research sites in Ghana: A research note. Qualitative Research in Organizations and Management, 14(4), 410-427. http://dx.doi.org/10.1108/QROM-07-2018-1671

Ben Hassen, T., El Bilali, H., & Allahyari, M. S. (2020). Impact of COVID-19 on food behavior and consumption in Qatar. Sustainability, 12(17), 6973. http://dx.doi.org/10.3390/su12176973

Buntak, K., Kovacic, M., & Sesar, V. (2019). The importance of identifying opportunities and risk in ensuring business continuity. Varazdin Development and Entrepreneurship Agency (VADEA).

Canevari-Luzardo, L. (2019). Value chain climate resilience and adaptive capacity in micro, small and medium agribusiness in Jamaica: A network approach. Regional Environmental Change, 19(8), 2535-2550. http://dx.doi.org2/10.1007/s10113-019-01561-0

Castillo, C. (2004). Disaster preparedness and business continuity planning at Boeing: An integrated model. Journal of Facilities Management, 3(1), 8-26. https://www.emerald.com/insight/publication/issn/1472-5967

Cervone, H. F. (2017). Disaster recovery planning and business continuity for informaticians. Digital Library Perspectives, 33(2), 78-81. http://dx.doi.org/10.1108/DLP-02-2017-0007

Ching-Fu, L., Wu, C., & Chuan-Feng, W. (2020). Reimagining the administrative state in times of global health crisis: An anatomy of Taiwan's regulatory actions in response to the COVID-19 pandemic. European Journal of Risk Regulation, 11(2), 256-272. http://dx.doi.org/10.1017/err.2020.25

Daniel, K. (2019). Using the TACT framework to learn the principles of rigour in qualitative research: EJBRM. Electronic Journal of Business Research Methods, 17(3), 118-129. http://dx.doi.org/10.34190/JBRM.17.3.002

De Weerd-Nederhof, P. C. (2001). Qualitative case study research. the case of a PhD research project on organising and managing new product development systems. Management Decision, 39(7), 513-538. http://dx.doi.org/10.1108/EUM0000000005805

Ehiorobo, O. A. (2020). Strategic agility and AI-enabled resource capabilities for business survival in post-COVID-19 global economy. International Journal of Information, Business and Management, 12(4), 201-213. https://ijibm.elitehall.com/

Fatoki, O. (2018). The impact of entrepreneurial resilience on the success of small and medium enterprises in South Africa. Sustainability, 10(7), 1-12. http://dx.doi.org/10.3390/su10072527

Filipović, D., Krišto, M., & Podrug, N. (2018). Impact of crisis situations on development of business continuity management in Croatia. Management: Journal of Contemporary Management Issues, 23(1), 99-122. http://dx.doi.org/10.30924/mjcmi/2018.23.1.99

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. The Qualitative Report, 8(4). 597-607. http://nsuworks.nova.edu

Gordon, T., Dadayan, L., & Rueben, K. (2020). State and local government finances in the COVID-19 era. National Tax Journal, 73(3), 733-757. http://dx.doi.org/10.17310/ntj.2020.3.05

Government of Guam. (2020). Executive order page. https://governor.guam.gov

Guam Visitors Bureau. (2020). Visit Guam. https://www.visitguam.com

Hancock, M. E., Amankwaa, L., Revell, M. A., & Mueller, D. (2016). Focus group data saturation: A new approach to data analysis. The Qualitative Report, 21, 2124-2130. http://nsuworks.nova.edu

Hayashi, P.,Jr, Abib, G., & Hoppen, N. (2019). Validity in qualitative research: A processual approach. The Qualitative Report, 24(1), 98-112. http://nsuworks.nova.edu

Huang, L., Wang, L., & Song, J. (2018). Post-disaster business recovery and sustainable development: A study of 2008 Wenchuan earthquake. Sustainability, 10(3), 651. http://dx.doi.org/10.3390/su10030651

Hyett, N., Kenny, A., & Dickson-Swift, V. (2014). Methodology or method? A critical review of qualitative case study reports. International Journal of Qualitative Studies on Health and Well-being, 9(1), 1-12. http://dx.doi.org/10.3402/qhw.v9.23606

Jafar, E., & Taneja, U. (2017). Business continuity planning—a survey of hospitals in Delhi. Journal of Public Health, 25(6), 699-709. http://dx.doi.org/10.1007/s10389-017-0830-3

Kaiser, R. B. (2020). Leading in an unprecedented global crisis: The heightened importance of versatility. Consulting Psychology Journal: Practice and Research, 72(3), 135-154. http://dx.doi.org/10.1037/cpb0000186

Kativhu, S., Mwale, M., & Francis, J. (2018). Approaches to measuring resilience and their applicability to small retail business resilience. Problems and Perspectives in Management, 16(4), 275-284. http://dx.doi.org/10.21511/ppm.16(4).2018.23

Kaur, A. (2019, October 21). 2019 was the best fiscal year in Guam's tourism history. SC Times. https://www.sctimes.com

Lemon, L. L., & Hayes, J. (2020). Enhancing trustworthiness of qualitative findings: Using Leximancer for qualitative data analysis triangulation. The Qualitative Report, 25(3), 604-614. http://nsuworks.nova.edu

León-Quismondo, J., García-Unanue, J., & Burillo, P. (2020). Best practices for fitness center business sustainability: A qualitative vision. Sustainability, 12(12), 1-17. http://dx.doi.org/10.3390/su12125067

Lloyd, B. (2020, May 15). Facebook group #SupportFoodToGoGuam helps restaurants feed locked down Guam residents. Pacific Daily News. https://www.guampdn.com/

Mamedova, S., Bagautdinova, I., & Vasiltsov, V. (2020). The Coronavirus Epidemic As A Way To Influence Total World Economy's Transformation: Analysis And Forecast. Varazdin: Varazdin Development and Entrepreneurship Agency (VADEA).

Maritz, A. (2020). A multi-disciplinary business approach to COVID-19: La Trobe Business School perspectives. International Journal of Organizational Innovation, 13(1), 45-62. https://www.ijoi-online.org/

Mauceri, S. (2016). Integrating quality into quantity: Survey research in the era of mixed methods. Quality and Quantity, 50(3), 1213-1231. http://dx.doi.org/10.1007/s11135-015-0199-8

Maxwell, J. A. (2020). Why qualitative methods are necessary for generalization. Qualitative Psychology. http://dx.doi.org/10.1037/qup0000173

McKay, J. (2018, July 26). Small businesses are a vital part of community resiliency but often overlook vulnerabilities. Government Technology. https://www.govtech.com

McKibben, L. (2019). Exploring the value of reflexivity in learning disability research. Learning Disability Practice, 22(6). 29-35. https://doi.org/10.7748/ldp.2019.e1977

Meho, L. I. (2006). E=Mail interviewing in qualitative research: A methodological discussion. Journal of the American Society for Information Science and Technology, 75, 1284-1295. https://doi.org/10.1002/asi.20416

Morse, J. M. (1994). Critical issues in qualitative research methods. SAGE Publications, Inc.

Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Muhammad Aamir, S. K., & Jakhongirov, I. (2020). Sustaining enterprise operations and productivity during the COVID-19 pandemic: "Enterprise effectiveness and sustainability model". Sustainability, 12(15), 1-27. http://dx.doi.org/10.3390/su12155981

O'Cathain, A., & Thomas, K. J. (2004). "Another other comments?" Open questions on questionnaires-a bane or a bonus to research? BMC Medical Research Methodology, 4. https://doi.org/10.1186/1471-2288-4-25

Office of Advocacy. (2019, September). 2019 small business profile. U.S. Small Business Administration. https://advocacy.sba.gov/

Office of Advocacy. (2019, September). Frequently asked questions about small business. U.S. Small Business Administration. https://advocacy.sba.gov/

Park, H., Sha, M. M., & Olmsted, M. (2016). Research participant selection in non-English language questionnaire pretesting: Findings from Chinese and Korean cognitive interviews. Quality and Quantity, 50(3), 1385-1398. http://dx.doi.org/10.1007/s11135-015-0211-3

Paunescu, C., & Argatu, R. (2020). Critical functions in ensuring effective business continuity management. Evidence from Romanian companies. Journal of Business Economics and Management, 21(2), 497-520. https://doi.org/10.3846/jbem.2020.12205

Pelczarski, K. (2020). Lubricant industry feeling the disruptions of COVID-19. Tribology & Lubrication Technology, 76(7), 60-64, 66, 68-71. https://www.stle.org/files/Technical_Library/TLT/files/Publications/TLT_Magazine.aspx

Reuter-Oppermann, M., Müller-Polyzou, R., Wirtz, H., & Georgiadis, A. (2020). Influence of the pandemic dissemination of COVID-19 on radiotherapy practice: A flash survey in Germany, Austria and Switzerland. PLoS One, 15(5), 1-17. http://dx.doi.org/10.1371/journal.pone.0233330

Rogers, R. H. (2018). Coding and writing analytic memos on qualitative data: A review of johnny saldaña's the coding manual for qualitative researchers. The Qualitative Report, 23(4), 889-892. http://nsuworks.nova.edu

Rose, J., & Johnson, C. W. (2020). Contextualizing reliability and validity in qualitative research: Toward more rigorous and trustworthy qualitative social science in leisure research. Journal of Leisure Research, 51(4), 432-451. http://dx.doi.org/10.1080/00222216.2020.1722042

Sambo, F., & Bankole, F. O. (2016). A normative process model for ICT business continuity plan for disaster event in small, medium and large enterprises. International Journal of Electrical and Computer Engineering, 6, 2425-2431. http://ijece.iaescore.com/index.php/IJECE

Sarmiento, J. P., Hoberman, G., Jerath, M., & Jordao, G. F. (2016). Disaster risk management and business education: The case of small and medium enterprises. Ad-Minister, (28), 73-90. http://dx.doi.org/10.17230/ad-minister.28.4

Shibamura, Y., Sudo, N., Mashiro, G., Beppu, S., Hakamata, R., & Saito, K. (2020). Personnel training course for businesses regarding the response to stranded persons focusing on vulnerable people from the perspective of business continuity. International Journal of Environmental Research and Public Health, 17(12), 4263. http://dx.doi.org/10.3390/ijerph17124263

Snyder, C. (2012). A case study of a case study: Analysis of a robust qualitative research methodology. The Qualitative Report, 17(13), 1-21. http://nsuworks.nova.edu

Stewart, H., & Gapp, R. (2017). Exploring the alchemy of qualitative management research: Seeking trustworthiness, credibility and rigor through crystallization. The Qualitative Report, 22(1), 1-19. http://nsuworks.nova.edu

Strasser, T., de Kraker, J., & Kemp, R. (2020). Three dimensions of transformative impact and capacity: A conceptual framework applied in social innovation practice. Sustainability, 12(11), 1-40. http://dx.doi.org/10.3390/su12114742

Tan, E. (2019). Source triangulation as an instrument of research on North Korea. North Korean Review, 15(1), 34-50. https://www.northkoreanreview.net/

Thyer, B. (2010). The handbook of social work research methods (2nd ed.). SAGE Publications, Inc.

Toves, J. (2020, March 15). Guam records its first 3 cases of COVID-19. Sorensen Media Group. https://www.pncguam.com

Tran, V., Porcher, R., Falissard, B., & Ravaud, P. (2016). Point of data saturation was assessed using resampling methods in a survey with open-ended questions. Journal of Clinical Epidemiology, 80, 88-96. http://dx.doi.org/10.1016/j.jclinepi.2016.07.014

Tuval-Mashiach, R. (2017). Raising the curtain: The importance of transparency in qualitative research. Qualitative Psychology, 4(2), 126-138. http://dx.doi.org/10.1037/qup0000062

U.S. Census Bureau. (2020). SIS K-12 map: Understanding the population of Guam. https://www.census.gov/en.html

U.S. Chamber of Commerce Foundation. (n.d.). Small business recovery guide. https://www.uschamberfoundation.org

Velásquez-Moreira, G., & Lema-Moreta, L. (2019). Evaluation of the business continuity management of IT areas in the industrial and fishing sector of the city of Manta: 16A earthquake study case. Revista Ibérica De Sistemas e Tecnologias De Informação, (19), 671-682. http://risti.xyz

Waddock, S. (2020). Will businesses and business schools meet the grand challenges of the era? Sustainability, 12(15), 6083. http://dx.doi.org/10.3390/su12156083

WatchBlog. (2017, June 15). The evolving U.S. military presence on Guam. U.S. Government Accountability Office. https://blog.gao.gov/

Whitmore, R., Crooks, V. A., & Snyder, J. (2019). Exploring informal caregivers' roles in medical tourism through qualitative data triangulation. The Qualitative Report, 24(8), 1852-1865. http://nsuworks.nova.edu

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. International Management Review, 15(1), 45-55,71-72. http://www.imrjournal.org/

Yin, R. K. (2014). Case study research. Design and methods. SAGE Publications, Inc.

Yoder, K. (2020). Reopening & operating facilities in the age of COVID-19. Professional Safety, 65(9). 20-21. https://www.assp.org/publications/professional-safety

Dr. James A. Nilo, an entrepreneur who founded SELFIES Travel and Tours, currently serves as an Industry Lecturer at Wesleyan University-Philippines' Graduate School (Cabanatuan City), facilitating courses in the Ph.D. in Business Administration and Professional Master's in Educational Leadership programs. He is also an MBA faculty member at the University of the People (California), mentoring students from all over the world. He is an alumnus of WU-P, having earned his BA in Political Science degree. He also finished his MBA in Human Resource Management (Summa Cum Laude) from Trident International University (California), MA in Management (with Honors) from American Public University (West Virginia), and Doctor of Business Administration with a specialization in Leadership from Walden University (Minnesota). He is inducted into several international honor societies and a proud senior member of the International Order of DeMolay.

James is a staunch advocate of academic rigor and integrity. He helps his students improve their work by providing mentoring in academic writing. James has held university-wide presentations in Essential Skills in Academic Writing for Student Researchers focusing on proper citations, synthesizing and paragraphing using the MEAL Plan format, APA 7th Edition, and anti-plagiarism. He also holds one-on-one and group training sessions in an effort to help develop the scholarly voice of the students. His students laud his initiatives that resulted in building confidence and preparation for dissertation writing. He currently sits as a Language Expert for WU-P Graduate School's Ph.D. in Business Administration dissertation panel helping students refine manuscripts that meet international standards. His research interests revolve around motivating millennial workers and helping small businesses thrive in the new normal.

Extent of Knowledge and Practice of Wesleyan University's Core Values Among Employees and Students

Ali G. Mamaclay, Ph.D.[1], [2]

[1]Research Associate, Social/Behavioral Sciences and Business Management
Research Development and Productivity Office
[2]Faculty, Graduate School, College of Business and Accountancy.
College of Hospitality and Tourism Management and Criminal Justice Education

email: mcgior2002@yahoo.com

ABSTRACT

This study assessed the extent of knowledge and practice of Wesleyan University core values among employees and students. The research useuse d descriptive methods of research, and the data were collected using the researcher-made questionnaire. Respondents of the study were 320 employees and 707 students from different colleges enrolled during the 1st semester of the school year 2018-2019.

The result showed that both sets of respondents were familiar with the core values of the University. Similarly, competence is the top-ranked core value identified by the employee-respondents, while the least was accountability. Meanwhile, competence is the top-ranked core value identified by the student-respondents while unity got the least.

The core values were visible and strategically placed within school premises. Likewise, both sets of respondents have "very good" level of awareness on the content of the core values.

As to the extent of practices, the employee-respondents they strongly agreed or to a very great extent the practices of WUP core values in terms of competence and compassion. As to unity and spirituality both sets of respondents strongly agreed or to a very great extent, while accountability both sets of respondents agreed or to a great extent on the practice of WUP core values.

The correlation analysis showed that profile variables of the employee-respondents found to significantly correlated with the extent of practices of WUP core values. Likewise, among the profile variables of the student-respondents tested for correlation three were significantly correlated with the extent of practices of WUP core values.

Keywords: core values, competence, compassion, unity, spirituality, accountability

INTRODUCTION

For many centuries, education has been a valuable and invasive event in the total collective transformation and development of an individual. Birth of fast-paced industries presented vast opportunities for life improvement as well as economic status. However, as evident in the history of humanity, human advancement most often than not, made them thirst for power putting aside conscience, social and human responsibilities and developed no remorse for the destruction of environmental resources for personal gain. This has been the longest battle the educational system had been struggling to lessen if not eradicate to achieve a balanced mindset.

Moreover, educators are part of the major machinery of progress. They have the power to influence learners' holistic development. Who and what they become in the future depends largely from all the teaching ideologies they have imparted and how these ideologies manifest once learners go out in the real world. As educators, therefore, must embrace and embody the core values is able to positively transmit genuine principles that can help build a better generation and eventually break the cycle of knowledge = power = greed that had long been an advocate of human destruction. The challenge to take part in the life-long battle to produce productive citizens that will personify the true essence of the core values is an arduous task but not impossible. It takes a

Wesleyan Scientific Review

lot of "heartHEART" and a positive mindset, plus an endless amount of faith (Ignacio, 2017).

According to Your Dictionary (2018), core values are the fundamental beliefs of a person or organization. These guiding principles dictate behavior and can help people understand the difference between right and wrong. Core values also help the organization to determine if they are on the right path and fulfilling their goals by creating an unwavering guide.

Further, Heathfield (2018) stated that core values are traits or qualities consider not just worthwhile, they represent an individual's or an organization's highest priorities, deeply held beliefs, and core, fundamental driving forces. They are the heart of what's the organization and its employees stand for in the world. They, too, are

In like manner, core values are intrinsic to form the vision of the organization that present to the world outside of the organization. The core values are fundamental to attracting and retaining the best, most contributing employees. Likewise, core values define what's the organization believes and how the organization is resonating with and appealing to employees and the external world. The core values should integrate into the employees' and their belief systems and actions that clients, customers, and vendors see the values in action.

Similarly, a set of core values is the bedrock of a company's culture. They establish standards for ethical decision making that contribute to a company's code of ethics. Grounding policies and training programs in core values help employees understand why certain rules are in place so that they can internalize those expectations. And as the company grows, core values can help it manage change without compromising the factors that have made it successful (Conversent, 2013).

The Filipino values must be reinforced with a core value, and this core value is an important value to achieve a positive approach of all the values instill majority in Filipino. With these core values, nation-building will be part of the objective, inspiration, and targets of each of the Filipino citizen ((Llego, 2016).

Moreover, the teacher has varied ways on how to incorporate the four important core values of being a bona fide Filipino in the lives of our students. A teacher speaks wisdom, a teacher instills values, and a teacher acts as second parents inside the classroom whereas giving the chance to be the epitome of a role model to them.

As the maxim goes by Billy Graham, 'the greatest legacy one can pass on to one's children is not money or other material things accumulated in one's life, but rather a legacy of character and faith', thus saying that the most wondrous and marvelous thing you could ever do as a teacher is to hone and mold your students to be a better individual of this world (Ignacio, 2018).

Likewise, the institutions' Vision, "envision God's reign through a Christian institution of learning inspired by Methodist tradition for the transformation of society."ItsMission, "to participate in the transformation of society through academic excellence and service sustained by Christian values" and Goal "to undergird scholarship, character, and service with a lively faith in God."

Further, the Philosophy of WUP (Scholarship, Character and Service) and the Wesleyan principles - Do No Harm, Do Good, Stay in Love with God, the following core values were

formulated: (1) Competence - promotes high academic standards carried out by highly capable faculty members in equipping the academic community with cutting-edge knowledge and skills responsive to community and global development, (2) Compassion - dedicated to be responsive to the needs of people within and beyond Wesleyan community, (3) Unity - fosters the spirit of harmony through mutual respect and understanding, (4) Spirituality- affirms that education is both brilliance and character which is acquisition of wisdom anchored on the teachings of Jesus Christ, and (5)Accountability - upholds responsibility in all the actions to be taken; stewardship in utilizing resources; and integrity in fulfilling her roles and capacities as models of servant-leadership.

This study aimeds to determine the extent of knowledge and practice of Wesleyan University's core values among employees and students and how they are practicing these core values. Likewise, it will also assess how are these core values impacted their lives as they consciously lived their experiences in the workplace as an employee and in the teaching and learning process of the students in the classroom. This study sought to (1) to describe the profile of the employee-respondents and student-respondents, (2) to determine the knowledge of the respondents on WUP core values, (3) to determine the extent of practices of both sets of respondents on WUP core values, and (4) to determine the significant relationship between the profile of both sets of respondents on the practice of WUP core values.

HYPOTHESIS

There is no significant relationship between the profile of both sets of respondents on the practice of WUP core values

METHODOLOGY

The researchers used the descriptive method of research in conducting the study. Shuttleworth (2008), defined descriptive as research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. Likewise, Leedy and Ormrod (2001) described a descriptive research approach as a basic research method that examines the situation, as it exists in its current state. Descriptive research involves identification of attributes of a particular phenomenon based on an observational basis or the exploration of correlation between two or more phenomena.

Specifically, this study used the descriptive method called correlational research. Correlational research is a type of non-experimental research in which the researcher measures two variables and assesses the statistical relationship (i.e., the correlation) between them with little or no effort to control extraneous variables (Price, Jhangiani and Chiang, 2016).

Further, the respondents of this study were employees and students of Wesleyan University-Philippines during the 1st semester of the school year 2018-2019 were chosen via random sampling.

In this study, the relationship between the profile, and extent of the practice of WUP core values were tested.

The researchers used a researcher-made questionnaire to solicit data from the respondents. The data collected was statistically treated with the use of descriptive statistics like frequency, percentage, and weighted mean. Furthermore, inferential statistics like Spearman rho were utilized.

RESULTS AND DISCUSSIONS

1. Profile of the employee-respondents

The data gathered on the profile of the employee-respondents which includesd: their age, sex, civil status, and religion.

Table 1. Profile of the employee-respondents

Age	**f**	**%**
18 - 25	100	31.25
26 - 33	63	19.69
34 - 41	45	14.06
42 - 49	34	10.63
50 - 57	32	10.00
58 - 65	25	7.81
66 - above	6	1.88
No data are given	15	4.69
Total	**320**	**100.00**
Sex	**f**	**%**
Male	167	52.19
Female	153	47.81
Total	**320**	**100.00**
Civil Status	**f**	**%**
Single	139	43.44
Married	181	56.56
Total	**320**	**100.00**
Religion	**f**	**%**
Apostolic Faith	2	0.63
Baptist	6	1.88
Born Again	7	2.19
Christian	2	0.63
Evangelical	3	0.94
Iglesia Ni Cristo	12	3.75
IEMELIF	3	0.94
Jehovah's Witness	5	1.56
Methodist	34	10.63
Protestant	8	2.50
Roman Catholic	187	58.44
No data are given	51	15.94
Total	**320**	**100.00**

About 100 or 31.25% belonged within the age bracket of 18 – 25, followed by 63 or 19.69% within 26 – 33 and 45 or 14.06% within the age range of 34-41 years old. The result indicates that most of the employee-respondents belonged to young adults.

Moreover, there were 167 or 52.19% male and 153 or 47.81% female employees who composed the academic and non-academic personnel of the institution. In terms of the civil status of the employee-respondents, there were 181 or 56.56% were married while 139, or 43.14% were single. These findings indicate that there were more married employees compare to single employees counterpart. Meanwhile, as to the religion of the employee-respondents, there were 187 or 58.14% were Roman Catholic, followed by 34 or 10.63% Methodist and 12 or 3.75% were Iglesia Ni Cristo. These findings indicate that religion is not a pre-requisite in terms of employment in the

2. Profile of the student-respondents

The data gathered on the profile of the student-respondents which included theirs course, age, sex, civil status, religion, year level and membership to student's organizations.

Table 2. Profile of the student-respondents

Courses	f	%
BS Accountancy	68	9.62
BS Business Administration	60	8.49
BS Criminology	61	8.63
BS in Computer Engineering	20	2.83
BS Electronics and Communications Engineering	49	6.93
BS Secondary Education	48	6.79
BS Elementary Education	10	1.41
BS Information Technology	63	8.91
BS Nursing	41	5.80
BS Tourism	63	8.91
Bachelor of Arts	69	9.76
BS Hotel Restaurant Management	53	7.50
BS Medical Technology	42	5.94
BS Radiologic Technology	60	8.49
Total	**707**	**100.0 0**

Age	f	%
17 - 22	591	83.59
23 - 28	67	9.48
29 - 34	15	2.12
35 - 40	7	0.99
41 - above	3	0.42
No data are given	24	3.39
Total	**707**	**100.0 0**

Sex	f	%
Male	338	47.81
Female	369	52.19
Total	**707**	**100.0 0**

Civil Status	f	%
Single	647	91.51
Married	19	2.69
No data are given	41	5.80
Total	**707**	**100.0 0**

Religion	f	%
Baptist	11	1.56
Born Again	37	5.23
Christian	26	3.68
Iglesia Filipina Independiente	2	0.28
Iglesia ng Dios	5	0.71
Iglesia Ni Cristo	43	6.08
Islam	2	0.28
Jehovah's Witness	3	0.42
Methodist	39	5.52
Protestant	3	0.42
Roman Catholic	456	64.50
Seventh Day Adventist	3	0.42
No data are given	77	10.89
Total	**707**	**100.0 0**

Year level	f	%
1st year	192	27.16
2nd year	182	25.74
3rd year	121	17.11
4th year	212	29.99
Total	**707**	**100.0 0**

Membership to student's organization	f	%
Yes	44	6.22
No	663	93.78
Total	**707**	**100.0 0**

About 69 or 9.67% were Bachelor of Arts, followed by 68 or 9.62% Bachelor of Science in Accountancy and 63 or 8.91% Bachelor of Science in Tourism Management composed most of the student-respondents. As to the age of the student-respondents, there were 591 or 83.59% was within the age range of 17-22 years old, followed by 67 or 9.48 within 23 – 28, and 15 or 2.12% was belonged to 29-34 years old. Moreover, there were 647 or 91.51% were single awhile 19 or 2.69% were married. Out of 707 student-respondents, there were 456 or 64.50% were Roman Catholic, followed by 43 or 6.08% Iglesia ni Cristo and 37 or 5.23% were Born Again.

In terms of year level of the student-respondents, there were 212 or 29.99% fourth year, followed by 192 or 27.16% first year, 182 and 25.74% were the second year, and 121 or 17.11% were the first year.

3. Knowledge of the Respondents on Wesleyan Core Values

This section presents the knowledge of both sets of respondents on the University core values as to familiarity, dissemination, their level of knowledge, level of awareness on the component and content, usefulness in the execution to their job and academic endeavor.

When asked if they know the University core values, 275 of the employee-respondents and 487 of the student-respondents responded "Yes." It indicates that both sets of respondents were familiar with the core values of the institution. Likewise, a small number of the employee-respondents (n=9) and student-respondents (n=41) responded "No."

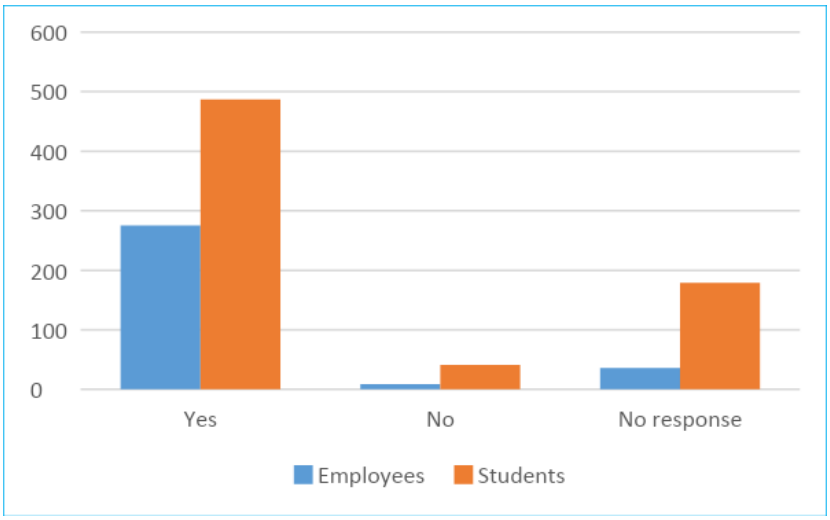


Fig. 1. Familiarity with the University core values

Moreover, when the employee-respondents asked to enumerate these core values the top rank identified by them were competence (n=275) while accountability obtained the least rank.

Similarly, the top-ranked identified by the student-respondents were unity (n=461) while the least rank was spirituality. The result indicates that employee-respondents demonstrated a higher level of competence when they are executing their job roles. They were able to apply this core competency when accomplishing their job. Their skills, abilities, knowledge, and attitudes towards work contributed to the overall performance of the University.

On the other hand, the students affirm that fostering unity is the best core values they can use in their academic endeavor. They believe that having unity both in academic and non-academic student related-activities they will strengthen their sense of academic leadership and recognizes that education plays a vital role in achieving academic excellence through a culture of mutual responsibility in the classroom, in which they can exchange ideas for their learnings and experiences as they exhibit unity in their academic work.

Table 1. University core values as identified by both sets of respondents

Core Values	Employees				Students			
	Identified	Rank	Unable to identified	Rank	Identified	Rank	Unable to identified	Rank
Competence	275	1	45	4.5	487	1	220	5
Compassion	234	3	86	3	376	3	331	3
Unity	187	4	133	2	246	5	461	1
Spirituality	275	2	45	4.5	393	2	314	4
Accountability	156	5	164	1	256	4	451	2

**multiple responses*

Meanwhile, when asked abouton how the University core values willbeare disseminated, they stated that during the first day of class this would be part of the orientation on the course content of each subject. Posted on the strategic place is other suggestions to make the students acquainted and familiarized on the core values of the University. Also, to test their knowledge on the core values, other suggested that this will be part of the term examination to make the students exert efforts in memorizing the core values to attest that they know it and later they will put this in action.

Table 2. Suggestions/Recommendations to disseminate the University Core values

The suggested way of dissemination of the University core values	f	Rank
Discuss the core values of the University during orientation of freshmen	78	3
Discuss the core values during the first day of class	103	1
Display in a strategic place in the University	56	5
Require students to memorize the core values	34	6
University core values will be disseminated by showing them in action	12	7
Include the core values in every examination to attest the knowledge of the students	59	4
Core values maybe posted at the strategic place in the main gate	89	2

**multiple responses*

When asked about when they usually saw the University core values, the top responses of the employee-respondents were: wall hanging/display at the school premise (n=265), University website (n=151) and bulletin of information (n=90). Similarly, the student-respondents top responses were: wall hanging/display at the school premise (n=448), University website (n=265) and bulletin of information (n=159). These data show that the University core values properly placed in strategic places wherein the faculty/staff and students and other stakeholders wereable to see the guiding principles and unwavering guide of the University's highest priorities to transform the society through academic excellence and service sustained by Christian values.

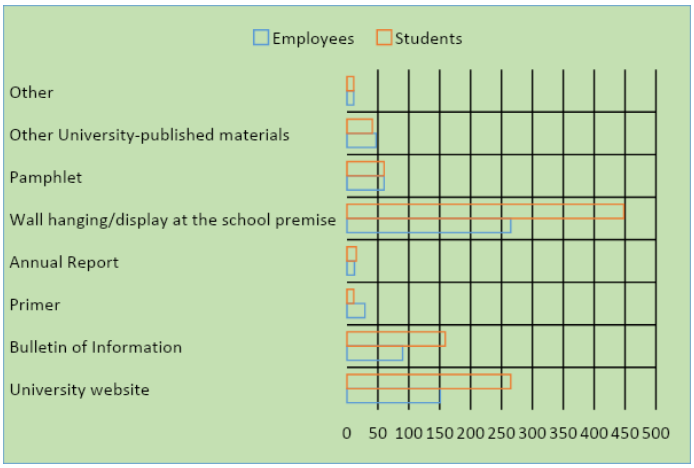


Fig. 2. University core values as placed in different reading materials and other forms of dissemination

When asked how they frequently saw the University core values, most of the employee-respondents responded "always" (n=228), "seldom" (n=72) and "occasionally" (n=17). Moreover, the student-respondents responded "always" (n=278), "seldom" (n=234) and "occasionally" (n=183).

The data affirms that the core values were visible within the school premises. It indicates that the administration exerts efforts to provide offices and classroom to have printed copies of these core values to guide the teachers and students to uphold, practice and enliven these core values within and outside the institution.

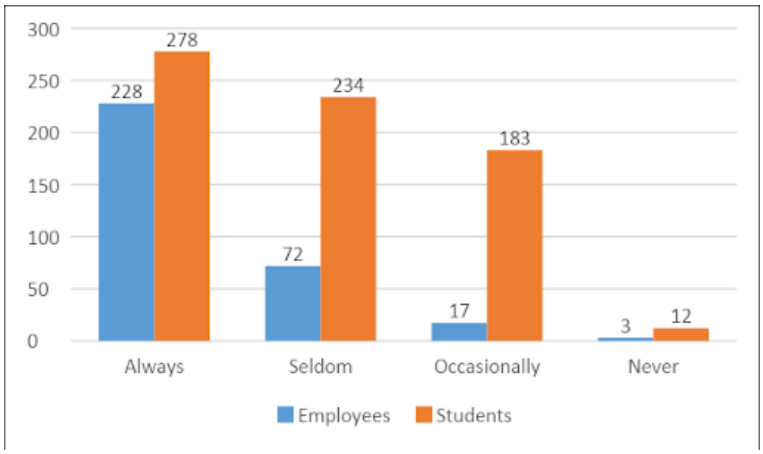


Fig. 3. The frequency of seeing the University core values

When asked on the level of knowledge on the purpose of the University core values, most of the employee-respondents responded "very good" (n=174), "excellent"(n=98), "average" (n=37). Further, the student-respondents responded "very good" (n=250), "average" (n=225) and poor (n=141). The data confirm that most of the respondents need to exert more efforts to understand the main point of the core values of the University. Strengthening their knowledge on these core values will lead to fundamental driving forces to inculcate wisdom, instilling values, and character of faith to others.

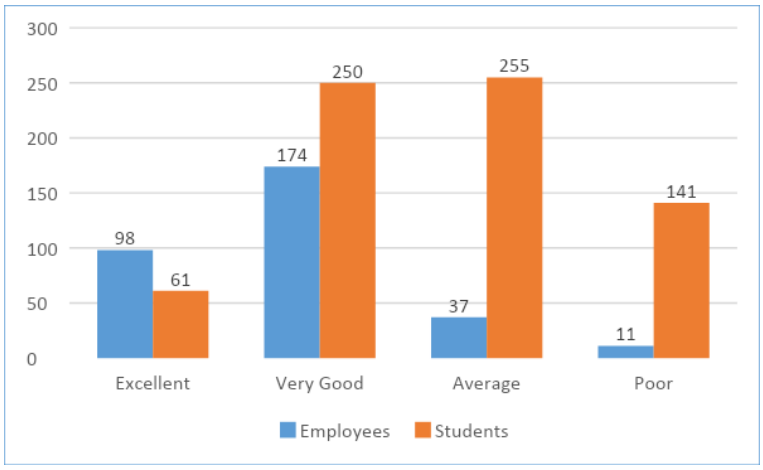


Fig. 4. Level of knowledge on the purpose of the University core values

Meanwhile, as to the level of awareness on the component and content of the University core values, most of the employee-respondents have "very good" (n=145) level of awareness, while the student-respondents have "very good" (n=273) level of awareness on the component and content of the University core values. The result indicates that the student-respondents are more aware of the component and content of the University core values. This indicates that the printed copy posted in their respective classroom helps the students to be more aware and responsive to the University core values. Similarly, the orientation conducted by the teachers during the first day as well as integrating these core values in the teaching and learning in their respective subjects helps the students to recall and prosper while nurturing their intellectual and spiritual aspects.

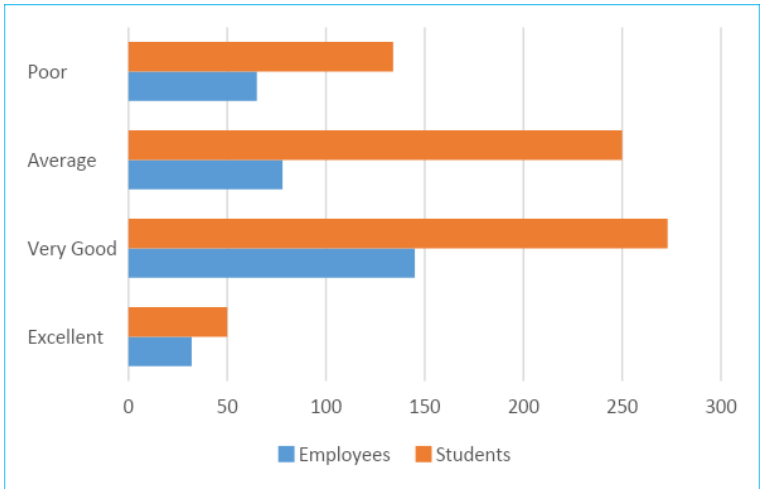


Fig. 5. Level of Awareness on the component/content of the University core values

Presence of Core Values as Experienced by the Respondents

When asked how they use these core values in the execution of the daily work and academic endeavor, they affirm the following: active participation in spiritual activities, being faithful to God, respect to others, being competent, compassionate on work, responsive and responsible on work demands, helping others who are in need, eagerness to participate in school activities, accountable to every action, showing good moral towards others and remain calm in stressful situation.

The result indicates that both sets of respondents affirm the presence of core values and they were able to experience these personally. As claimed by them, being active in the spiritual activities in school, they were able to work efficiently, accomplish their requirements on time because they felt the presence of God. Also, according to them, they were able to strengthen their belief and faith resulting from being more compassionate on work, helping others who are in need. Instilling Christian values to both employees and students lead to be more responsive and responsible for work demands. They were able to use their time to finish workloads, exhibited exemplary performance to their job assignment to have better output. Similarly, they are willing to help others who are in need by extending a helping hand through the utmost support to those who are suffering from illness and distress.

Furthermore, both sets of respondents not only educated and develop intellectually at the University. Indeed, but they also molded to a person of Christian values, a good role model to others as the institution's continuous care for the well-being of their employees, studentry and other stakeholders. The institution will continue to embark a Methodist tradition who develop young men and women to become the future leader of the community and society.

4. The extent of Practices of WUP Core Values

The data gathered on the extent of practices of WUP core values included competence, compassion, unity, spirituality, and accountability.

The competence indicator, the employee-respondents obtained an overall weighted mean of 3.46 verbally described as "strongly agree," or "very great extent," while the student-respondents yielded an overall weighted mean of 3.19 verbally descerbed as "agree," or "great extent."

Meanwhile, on the creativity dimension, the employee-respondents got a weighted mean of 3.35 verabally described as "strongly agree," while the student-respondents yielded a weighted mean of 3.14 described as "agree." The highest mean for employee-respondents was "actively seek to improve programs and services provided by the institution," with a mean of 3.36 described as "strongly agree," while the lowest mean was "take calculated risks on new ideas; thinking "outside the box," and "am not bound by current thinking and traditional approaches," with a mean of 3.34 described as strongly agree." For student-respondents, the highest mean was "actively seek to improve programs and services provided by the institution," with a mean of 3.26 verablly described as "strongly agree," while the lowest mean was "am not bound by current thinking and traditional approaches," with a mean of 3.01 described as "agree."

The result indicates that in terms of the extent of practices WUP core values as to creativity, both sets of respondents tend to demonstrate approaches and creativity at work and academic-related activities. They tend to apply certain strategies such as systematic approach in their job roles and organize a way of dealing with academic workloads. The result further denotes that both set of respondents more likely to improve programs and services provided by the institutions. The employees were able to upgrade themselves to attend seminar, training, conferences, symposia, fora and even graduate studies and other academic activities that makes them upgraded to be an exemplary faculty and staff who will deliver quality teaching and services to its studentry. Likewise, the students are given an equal chance to attend academic exchanges, representing the University in a different inter-school contest to showcase their talent and skills harness in their academic discipline.

In terms of commitment to continuous learning dimension, the employee-respondents obtained a mean of 3.51 verbally described as "strongly agree," or "very great extent," while the student-respondents yielded a mean of 3.19 described as "agree," or "great extent." The highest mean for employee-respondents was "actively seek to develop oneself professionally and personally," with a mean of 3.56 verbally described as "strongly agree," while the lowest mean was "contribute to the learning of colleagues," with a mean of 3.46 described as "strongly agree." Meanwhile for student-respondents the highest mean was "contribute to the learning of colleagues," and "seek feedback to learn and improve performance," both got a mean of 3.22 verbally described as "agree," while

the lowest mean was "actively seek to develop oneself professionally and personally," with a mean of 3.13 described as "agree."

Table 3. The extent of Knowledge and Practice of WUP Core Values in terms of Competence

	COMPETENCE	Employees		Students	
	CREATIVITY	WM	VI	WM	VI
	As WUP employee/students, I				
1	actively seek to improve programs and services provided by the institution	3.36	SA	3.26	SA
2	take calculated risks on new ideas; thinking "outside the box."	3.34	SA	3.10	A
3	take an interest in new ways of doing things	3.35	SA	3.20	A
4	am not bound by current thinking and traditional approaches	3.34	SA	3.01	A
	Mean	**3.35**	**SA**	**3.14**	**A**
	COMMITMENT TO CONTINUOUS LEARNING				
1	keep abreast of new developments for my occupation and profession	3.53	SA	3.19	A
2	actively seek to develop oneself professionally and personally	3.56	SA	3.13	A
3	contribute to the learning of colleagues	3.46	SA	3.22	A
4	seek feedback to learn and improve performance	3.50	SA	3.22	A
	Mean	**3.51**	**SA**	**3.19**	**A**
	PROFESSIONALISM				
1	demonstrate professional competence and mastery of the job roles I executed	3.45	SA	3.15	A
2	conscientious and efficient in meeting commitments, observing deadlines and achieving results	3.49	SA	3.21	A
3	show persistence when faced with problems	3.45	SA	3.17	A
4	remain calm in stressful situations	3.47	SA	3.14	A
	Mean	**3.47**	**SA**	**3.17**	**A**
	INTEGRITY				
1	demonstrate fairness and honesty in daily activities and behaviors	3.51	SA	3.23	A
2	act without consideration of personal gain	3.46	SA	3.17	A
3	stand by decisions that are in the institution's interest	3.42	SA	3.18	A
4	take prompt action in cases of unprofessional and unethical behavior	3.45	SA	3.13	A
5	return lost and found items	3.52	SA	3.30	SA
6	aspires to be fair and kind to all	3.55	SA	3.21	A
7	practice justice at all times	3.50	SA	3.30	SA
	Mean	**3.49**	**SA**	**3.22**	**A**
	TECHNOLOGICAL AWARENESS				
1	keep abreast of available technology	3.48	SA	3.25	SA
2	understand the applicability and limitations of technology in the workplace/school	3.46	SA	3.18	A
3	actively seek to apply technology to appropriate tasks	3.47	SA	3.21	A
4	show a willingness to learn new technology	3.47	SA	3.24	A
	Mean	**3.47**	**SA**	**3.22**	**A**
	OWM	**3.46**	**SA**	**3.19**	**A**

Legend: 3.25 – 4.00 Strongly Agree (SA) Very Great Extent (VGE); 2.50 – 3.24 Agree (A) Great Extent (GE); 1.75 – 2.49 Disagree (D) Moderate Extent (ME); 1.00 – 1.74 Strongly Disagree (SD) To no Extent (TE)

The result implies that both sets of respondents committed to developing themselves for their improvement both academically and professionally. They actively participated in seminars, training, conferences, and symposia that develop their skills and intellectual aspect. Additionally, the institution supported them morally and financially in this endeavor. Similarly, they were able to contribute new ideas, knowledge, and ability to train peers and colleagues to their level to become productive in serving different stakeholders.

As to integrity indicator, the employee-respondents got a weighted mean of 3.49 verbally described as "strongly agree," or "very great extent," while the student-respondents obtained a weighted mean of 3.22 described as "agree," or "great extent." The highest mean for employee-respondents was "aspires to be fair and kind to all," with a mean of 3.55 verbally interpreted as "strongly agree," while the lowest mean was "stand by decisions that are in the institution's interest," with a mean of 3.42 described as "strongly agree." Likewise, the highest mean for student-respondents was "return lost and found items," and "practice justice at all times," with a mean of 3.30 verbally described as "strongly agree," while the lowest mean was "take prompt action in cases of unprofessional and unethical behavior," with a mean of 3.13 described as "agree."

Result reveals that both sets of respondents tend to demonstrate integrity and honesty at school. They were able to exercise integrity when dealing with others. These act of kindness makes them be a good example and role model to others.

In terms of technological awareness indicator, the employee-respondents obtained a weighted mean of 3.47 verbally described as "strongly agree," or "very great extent," while the student-respondents got a weighted mean of 3.22 described as "agree," or great extent." The highest mean for employee-respondents was "keep abreast of available technology," with a mean of 3.48 verbally described as "strongly agree," while the lowest mean was "understand applicability and limitations of technology in the workplace/school," with a mean of 3.46 described as "strongly agree." Similarly, the highest mean for student-respondents was "keep abreast of available technology," with a mean of 3.25 verbally described as "strongly agree," while the lowest mean was "understand applicability and limitations of technology in the workplace/school," with a mean of 3.18 described as "agree."

The result indicates that both sets of respondents informed in terms of available technology at school. Using this technology in their specific job and academic learnings, they were able to execute their job well and process their academic activities more systematically.

Table 4 presents the extent of knowledge and practice of WUP core values in terms of compassion.

In this indicator, the employee-respondents obtained an overall weighted mean of 3.37 verbally described as "strongly agree," or "very great extent," while the student-respondents yielded an overall weighted mean of 3.20 described as "agree," or "great extent."

Consequently, the highest mean for employee-respondents was "genuinely care for others when they feel unease," with a mean of 3.49 verbally described as "strongly agree," while the lowest mean was "promote selfless dedication in loving and caring others in times of needs," with a mean of 3.23 described as "agree."

Table 4. The extent of Knowledge and Practice of WUP Core Values in terms of Compassion

		Employees		Students	
	COMPASSION	**WM**	**VI**	**WM**	**VI**
1	genuinely care for others when they feel unease	3.49	SA	3.23	A
2	show empathy in communication with others	3.48	SA	3.17	A
3	see the need of others and acting before being asked	3.46	SA	3.15	A
4	look through the eyes of the other person who is in need	3.42	SA	3.20	A
5	learn from other life stories	3.46	SA	3.09	A
6	promote selfless dedication in loving and caring for others in times of needs	3.23	A	3.16	A
7	provide a Christ-centered family through the teaching of the Bible	3.29	SA	3.25	SA
8	develop hospitable learning communities everywhere I serve	3.28	SA	3.27	SA
9	foster a spirit of belongingness, and interdependence based on mutual trust and respect	3.31	SA	3.26	SA
10	create socially responsible environments that challenge all of us to listen, to learn, to change and to serve.	3.29	SA	3.25	SA
	OWM	**3.37**	**SA**	**3.20**	**A**

Legend:		
	3.25 – 4.00 Strongly Agree (SA)	Very Great Extent (VGE)
	2.50 – 3.24 Agree (A)	Great Extent (GE)
	1.75 – 2.49 Disagree (D)	Moderate Extent (ME)
	1.00 – 1.74 Strongly Disagree (SD)	To no Extent (TE)

On the other hand, the highest mean for student-respondents was "develop hospitable learning communities everywhere I serve," with a mean of 3.27 verbally described as "strongly agree," while the lowest mean was "promote selfless dedication in loving and caring others in times of needs," with a mean of 3.16 decribed as "agree."

The result implies that both sets of respondents truly care for others, a community of faithful's who are willing to share and extend a helping hand to others who are in need. They were able to exercise this act of giving whenever the need arises. These particular core values truly reflect the kind of people who are working and studying at the University. These teaching truly embodied a Wesleyanian be like who shaped by Christian virtues by teachers in the institution.

Table 5 illustratesthe extent of knowledge and practice of WUP core values in terms of unity.

Data showed that in unity indicator, the employee-respondents got an overall mean of 3.30 verbally described as "strongly agree," or 'very great extent," while the student-respondents yielded an overall weighted mean of 3.30 described as "strongly agree," or "very great extent." Moreover, the highest mean for employee-respondents was "foster a spirit of service to the community development," with a mean of 3.72 verbally described as "strongly agree," while the lowest mean was "optimize all of the resources of the community to fulfill the University's mission and goals," with a mean of 3.19 described as "agree."

Meanwhile, the highest mean for student-respondents was "promote a life of peace in the institution," with a mean of 3.35 verbally described as "strongly agree," while, the lowest mean was "maintain industrial peace in the institution," with a mean of 3.27 described as "strongly agree."

The result indicates that both sets of respondents wanted to have a peaceful academic community. They were able to promote and maintain industrial peace in the institutions through fostering unity.

Table 5. The extent of Knowledge and Practice of WUP Core Values in terms of Unity

	UNITY	Employees WM	Employees VI	Students WM	Students VI
1	promote a life of peace in the institution	3.34	SA	3.35	SA
2	promote justice for all and search for truth	3.28	SA	3.29	SA
3	promote a life of leadership within the Christian community	3.20	A	3.34	SA
4	promote reconciliation and forgiveness	3.21	A	3.25	SA
5	promote respect for diversity in the workplace	3.24	A	3.31	SA
6	maintain industrial peace in the institution	3.21	A	3.27	SA
7	optimize all of the resources of the community to fulfill the University's mission and goals.	3.19	A	3.30	SA
8	foster a spirit of service to community development.	3.72	SA	3.29	SA
	OWM	**3.30**	**SA**	**3.30**	**SA**

Legend:		
	3.25 – 4.00 Strongly Agree (SA)	Very Great Extent (VGE)
	2.50 – 3.24 Agree (A)	Great Extent (GE)
	1.75 – 2.49 Disagree (D)	Moderate Extent (ME)
	1.00 – 1.74 Strongly Disagree (SD)	To no Extent (TE)

Table 6 presents the extent of knowledge and practice of WUP core values in terms of spirituality.

Table 6. The extent of Knowledge and Practice of WUP Core Values in terms of Spirituality

	SPIRITUALITY	Faculty WM	Faculty VI	Students WM	Students VI
	Expresses one's spiritual beliefs while respecting the beliefs of others				
1	engage oneself in worthwhile spiritual activities	3.23	A	3.40	SA
2	lead a prayer well when assigned to lead	3.25	SA	3.31	SA
3	actively participate in any religious or spiritual activities in the school	3.27	SA	3.28	SA
4	respect sacred places and observe silence at all times	3.24	A	3.22	A
5	politely listens for others to express their religious belief	3.31	SA	3.35	SA
6	observe proper behavior during religious activities	3.31	SA	3.39	SA
7	demonstrates curiosity and willingness to learn about other ways to express spiritual life	3.30	SA	3.28	SA
	OWM	**3.27**	**SA**	**3.32**	**SA**

Legend:		
	3.25 – 4.00 Strongly Agree (SA)	Very Great Extent (VGE)
	2.50 – 3.24 Agree (A)	Great Extent (GE)
	1.75 – 2.49 Disagree (D)	Moderate Extent (ME)
	1.00 – 1.74 Strongly Disagree (SD)	To no Extent (TE)

In this indicator, the faculty-respondents obtained an overall weighted mean of 3.27 verbally described as "strongly agree," or "very great extent," while the student-respondents got an overall mean of 3.32 verbally described as "strongly agree," or "very great extent." Data shown that the highest mean for faculty-respondents was "politely listens for others to express their religious belief," and "observe proper behavior during religious activities," both obtained a weighted mean of 3.31 verbally described "strongly agree," while "engage oneself in worthwhile spiritual activities," got the lowest mean of 3.23 described as "agree."

Moreover, the highest mean for student-respondents was "engage oneself in worthwhile spiritual activities," with a mean of 3.40 verbally described as "strongly agree," while "respect sacred places and observe silence at all times," got a lowest mean of 3.22 described as "agree."

The result shows that both sets of respondents practiced spiritual nurturing. They actively participated in the religious-related activities spearheaded by the Chaplains Office. The inter-office Bible study, the worship before and after the activities, the monthly convocation truly strengthen the faith of the respondents. Moreover, character education shapes the spiritual aspect of the students.

Table 7. The extent of Knowledge and Practice of WUP Core Values in terms of Accountability

	ACCOUNTABILITY	Employees		Students	
		WM	VI	WM	VI
	PERSONAL ACCOUNTABILITY				
1	take ownership for all responsibilities and honors commitments	3.28	SA	3.20	A
2	deliver outputs within prescribed time, cost and quality standards	3.23	A	3.21	A
3	operate in compliance with institutional policies	3.27	SA	3.27	SA
4	take personal responsibility for my shortcomings and those of the work unit, where applicable	3.23	A	3.18	A
	Mean	**3.25**	**SA**	**3.22**	**A**
	CLIENT ORIENTATION				
1	identify needs and provide appropriate solutions	3.17	A	3.23	A
2	keep myself informed of progress or setbacks in school activities	3.18	A	3.17	A
3	meet the timeline for any deadlines	3.18	A	3.16	A
	Mean	**3.17**	**A**	**3.19**	**A**
	PLANNING & ORGANIZING				
1	develop clear goals that are consistent with agreed strategies	3.24	A	3.21	A
2	allocate appropriate time and resources for completing work	3.26	SA	3.22	A
3	foresee risk and allow contingencies in planning	3.23	A	3.21	A
	Mean	**3.24**	**A**	**3.21**	**A**
	TEAMWORK				
1	work collaboratively with colleagues to achieve organizational goals	3.20	A	3.27	SA
2	solicit input and willing to learn from others	3.16	A	3.17	A
	Mean	**3.18**	**A**	**3.22**	**A**
	COMMUNICATION				
1	speak and write clearly and effectively to show accountability of any challenges	3.14	A	3.35	SA
	OWM	**3.20**	**A**	**3.24**	**A**

Legend:		
	3.25 – 4.00 Strongly Agree (SA)	Very Great Extent (VGE)
	2.50 – 3.24 Agree (A)	Great Extent (GE)
	1.75 – 2.49 Disagree (D)	Moderate Extent (ME)
	1.00 – 1.74 Strongly Disagree (SD)	To no Extent (TE)

In this indicator, the faculty-respondents obtained an overall weighted mean of 3.20 verbally described as "agree," or "great extent," while the student-respondents got an overall weighted mean of 3.24 described as "agree," "great extent." Consequently, personal accountability for employee-respondents got a mean of 3.25 described as "strongly agree," while the student-respondents got a mean of 3.22 verbally described as "agree." Moreover, the highest mean for employee-respondents in terms of personal accountability was "take ownership for all responsibilities and honors commitments," with a mean of 3.28 verablly described as "strongly agree," while, the lowest mean was "deliver outputs within prescribed time, cost and quality standards," and "take personal responsibility for my shortcomings and those of the work unit, where applicable," both got a mean of 3.23 described as "agree." On the other hand, the highest mean for student-respondents in terms of personal accountability was"operate in compliance with institutional policies," with a mean of 3.27 verbally described as "strongly agree," while the lowest mean was "take personal responsibility for my shortcomings and those of the work unit, where applicable," with a mean of 3.18 described as "agree.

On client orientation, indicator employee-respondents got a mean of 3.17 verbally described as "agree," while the student respondents obtained a mean of 3.19 described as "agree." Both sets of respondents agreed on all items in this indicator.

Meanwhile, on planning and organizing indicator employee-respondents obtained a mean of 3.24 verbally described as "agree," while student-respondents yielded a mean of 3.21 described as "agree." Both sets of respondents agreed on all items in this indicator.

Further, on teamwork indicator, employee-respondents obtained a mean of 3.18 verbally described as "agree," while student-respondents yielded a mean of 3.22 described as "agree."Both sets of respondents agreed on items in this indicator.

On the communication indicator, employee-respondents got a mean of 3.14 verbally described as "agree," while the student-respondents obtained a mean of 3.35 described as "agree."

In terms of personal accountability, the employee-respondents take ownership of all responsibilities to their job roles and other related work. They tend to manage their time and resources to finish their assigned task on time. Similarly, they serve their client diligently and persistently to the best of what they can. They work collaboratively to fasten and to avoid delay in their timeframe of completing their work assignment. They often consulted each other to solicit inputs for a better outcome of work assigned to them. Meanwhile, the student-respondents are adherence to institutional policies when dealing with academic and non-academic related-activities. They always observed compliance with existing policies to avoid problems. They plan ahead of time and allocate appropriate time and resources for completing their work.

Correlation Analysis between the profile and extent of practices of WUP core valuesamong employee-respondents

Table 8 presents the correlation analysis between the profile and extent of practices of WUP core values among employee-respondents.

Age was significantly correlated with competence (rs=.210), compassion (rs=.256) and accountability (rs=.534). The result indicates that older employee-respondents exhibited a level of competence in executing their job roles. Likewise, competencies of the respondents are determinants of their exemplary performance. The result further denotes that older respondent tends to be more kind, to care and willing to help others in times of need. Lastly, older respondents are more eager to perform their duties required by their jobs. They tend to be more accountable and engage in the organizational goals to be a productive employee in the workplace.

Table 8. Correlation Analysis between the profile and extent of practices of WUP core values among employee-respondents

		The extent of Practices of WUP Core Values				
		Competence	Compassion	Unity	Spirituality	Accountability
Age	Correlation Coefficient	.210**	.256*	0.015	.391*	.534**
	Sig. (2-tailed)	0.001	0.027	0.897	0.024	0.001
	N	320	320	320	320	320
Sex	Correlation Coefficient	.261**	.290*	-0.102	-0.243	.499**
	Sig. (2-tailed)	0.000	0.012	0.382	0.173	0.003
	N	320	320	320	320	320
Civil Status	Correlation Coefficient	0.109	0.087	-0.061	0.274	.467**
	Sig. (2-tailed)	0.091	0.457	0.603	0.123	0.006
	N	320	320	320	320	320
Religion	Correlation Coefficient	0.068	.338**	-0.096	0.273**	0.157
	Sig. (2-tailed)	0.295	0.003	0.412	0.004	0.383
	N	320	320	320	320	320

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Further, sex was significantly correlated with competence (rs=.261), compassion (rs=.290) and accountability (rs=.499). The result indicates that female employee-respondents are more competent, compassionate and accountable. It implies that female respondents perform better in their job roles; they tend to be more focused and organized resulting in higher productivity in the workplace. Also, they are more compassionate because of their caring role, nurturance, kindness, softness, gentleness, and emotional warmth.

Moreover, civil status and accountability (rs=.467) were significantly correlated. It implies that married employee-respondents tends to be more accountable in the workplace. They were able to balance workloads and spent their time and resources.

Finally, religion and compassion (rs=.338), spirituality (rs=0.273) was significantly correlated. This result implies that Roman Catholic employee-respondents are most likely compassionate and spiritual. Also, the result confirms that most of the respondents belonged to Roman Catholic affiliation. Although they belonged to this denomination, they practiced Methodist way of sharing, caring and helping others.

Correlation Analysis between the profile and extent of practices of WUP core values among employee-respondents

Table 9 presents the correlation analysis between the profile and extent of practices of WUP core values among student-respondents.

Table 8. Correlation Analysis between the profile and extent of practices of WUP core values among employee-respondents

		The extent of Practices of WUP Core Values				
		Competence	Compassion	Unity	Spirituality	Accountability
Course	Correlation Coefficient	-0.020	-0.098	-0.108	-0.055	0.032
	Sig. (2-tailed)	0.843	0.341	0.295	0.592	0.756
	N	707	707	707	707	707
Age	Correlation Coefficient	0.173	.285**	.254*	0.093	0.128
	Sig. (2-tailed)	0.092	0.005	0.013	0.366	0.214
	N	707	707	707	707	707
Sex	Correlation Coefficient	.247*	0.073	0.148	0.065	0.196
	Sig. (2-tailed)	0.015	0.481	0.151	0.53	0.056
	N	707	707	707	707	707
Civil Status	Correlation Coefficient	-0.1	-0.161	-0.193	-0.105	-0.068
	Sig. (2-tailed)	0.334	0.117	0.059	0.31	0.512
	N	707	707	707	707	707
Religion	Correlation Coefficient	0.004	0.105	-0.061	-0.008	-0.026
	Sig. (2-tailed)	0.966	0.309	0.556	0.94	0.798
	N	707	707	707	707	707
Year level	Correlation Coefficient	.290**	.230*	0.129	0.189	0.198
	Sig. (2-tailed)	0.004	0.024	0.211	0.065	0.053
	N	707	707	707	707	707
Membership to student organization	Correlation Coefficient	-0.054	0.021	0.008	0.017	-0.072
	Sig. (2-tailed)	0.604	0.841	0.935	0.866	0.488
	N	707	707	707	707	707

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Age and compassion (rs=.285) and unity (rs=.254)was significantly correlated. The result indicates that older student-respondents are more compassionate and foster unity. The result interfered that giving was practiced among students when someone who is in need they are open to sharing a portion of their daily allowances as evidenced by voluntary contributions, this act of giving foster unity among them.

Sex and competence (rs=.247) were significantly correlated. This data affirms that female student-respondents exhibited competencies in their academic and non-academic endeavor.

Year level and competence (rs=.290) and compassion (rs=.230)was significantly correlated. This result confirms that higher year level the student-respondents demonstrated a higher level of competencies as they acquired more knowledge and skills from their past academic subjects. Likewise, they tend to be more giver and able to share their daily allowance to those who are in need and share their knowledge withthose who are suffering from academic related-problems.

CONCLUSION

The researcher found out that the employee-respondents were found to be knowledgeable and familiar with the University core values. The printed materials posted on a strategic location in school premises was helpful to disseminate these. As to the extent of practices of WUP core values as to competence and compassion, the employee-respondents assessed themselves to a very great extent, while the student-respondents was great extent. In terms of unity and spirituality, both sets of respondents assessed themselves to a very great extent. Lastly, in terms of accountability, both sets of respondents assessed themselves as great extent on the practice of core values.

All profile variables of the employee-respondents found significantly correlated with the extent of practices of WUP core values. Likewise, among the profile variables of the student-respondents tested for correlation three were significantly correlated with the extent of practices of WUP core values.

CONFLICT OF INTEREST

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

REFERENCES:

Conversent (2013). Five Exercises to help Define Company's Core Values. Available at: http://www.convercent.com/resource/convercent-ebook-5-exercises-to-help-define-your-companys-core-values.pdf

Heathfield, S.M. (2018). Core Values Are What You Believe. Available at: https://www.thebalancecareers.com/core-values-are-what-you-believe-1918079

Ignacio, F. Q. (2018). Core values in Education. Available at: https://www.pressreader.com/philippines/sunstar-pampanga/20180708/281651075864533

Ignacio, F.Q. (2017). DEPED'S Core Values: An Insight. Available at: https://www.pressreader.com/philippines/sunstar-pampanga/20171031/281586650856031

Leedy, P. & Ormrod, J. (2001). Practical research: Planning and design (7th ed.). Upper Saddle River, NJ: Merrill Prentice Hall. Thousand Oaks: SAGE Publications.

Llego, M.A. (2016). DepEd Core Values Indicators: Concrete Manifestation: Available at: https://www.teacherph.com/deped-core-values-indicators-concrete-manifestation/

Price, P. C., R.S. Jhangiani, and C.A. Chiang (2016). Correlational Research. Available at: https://opentextbc.ca/researchmethods/chapter/correlational-research/.

Shuttleworth, M. (2008). Descriptive Research Design. Available at: https://explorable.com/descriptive-research-design.

Your Dictionary (2018). Core Values. Available at: http://examples.yourdictionary.com/examples-of-core-values.html

Ali G. Mamaclay obtained his Doctor of Philosophy in Business Administration, Master in Business Administration and BS Computer Science all from Wesleyan University-Philippines. He took his specialized training in Statistics at the School of Statistics, University of the Philippines, Diliman, Quezon City and at the Asia Pacific Center for Research, Inc., Makati City. He also undergone training on Intellectual Property Policy and Claim Drafting organized by the Central Luzon Industry and Energy Research and Development Consortium and IP-Philippines. He became a Finalist in the 2014 Nationwide Search for Outstanding PERAA Member (TOPM). He served as peer reviewer of two institutional journals namely: "The Harvest" of Baliuag University and "The Rurban" of Nueva Ecija University of Science and Technology. He is a multidisciplinary researcher written various researches in business and management, hotel and tourism management, institutional and educational researches, community needs assessment and impact study and in the field of Sikolohiyang Pilipino. He participated and presented his research papers in various local, regional, national and international research conferences, symposium and forum. He published research articles in local journal and international reputable journals. He is currently a Research Associate in Social/Behavioral Sciences and Business Management of the Research Development and Productivity Office, Chairman of the University Ethics Review Committee and Intuitional ISO Auditor of Wesleyan University-Philippines. He is also teaching research, statistics and business related subjects in both graduate and undergraduate programs.

Exploring the Collaborative Practices in Problem Solving Among Non-Physics Major Pre-Service Science Teachers

Joey-Nell T. Marzan

Science Teacher, University of Northern Philippines, Vigan City

Email: jaypanchomarzan@gmail.com

ABSTRACT

The need to understand how pre-service science teachers, specifically the non-physics majors, perform in problem-solving in physics is due to the shift in the structure of the K to +12 structure which is from disciplined-based to spiral progression. This shift challenges pre-service teachers who were trained to teach a specific discipline to teach other disciplines. For this reason, this study was formulated to look into the perspective of pre-service science teachers on collaborative problem-solving in physics as an intervention in developing their problem-solving solving skills. Through a phenomenological study approach, it was found out that the non-physics pre-service science teachers solve problems collaboratively by employing group strategies, following systematic methodology, and observing interdependence to arrive at a successful problem-solving.

Keywords: collaborative, practices, problem solving, non-physics, pre-service, science teachers

INTRODUCTION

Problem-solving is a cognitive activity that is said to be crucial to an individual because of its varied uses (Aljaberi & Gheith, 2016). It is the key skill that transforms one to be creative, systematic, and analytic in thinking about situations, issues, and problems in new and different ways (Bahtiyar & Can, 2016). Problem-solving as stated by Ibrahim & Rebello (as cited in Mansyur, 2015) is an integral part of the study of physics or any scientific discipline, however, the dominant problem-solving nature of physics attained its esteem as a very difficult subject (Reddy & Panacharoensawad, 2017). This is further supported by the findings of Angell et. al(as cited in Ornek et.al, 2008) that some of the reasons why students consider physics as difficult are due to formulas and calculations, graphs, and conceptual explanations which are involved in problem-solving.

A possible pedagogical design anchored on dealing with this identified problem in physics education is collaborative problem-solving. Collaborative problem solving, which originated from problem-based learning, was designed to deal with the complexity of problems that requires higher-order thinking skills and knowledge for the students to solve them successfully (Yin Yin, 2015).

Kyllonen (as cited in Oliveri et. al, 2017) defined collaborative problem solving as "a performance activity requiring groups of students to work together to solve problems". Hesse et.al. (as cited in Oliveri et. al, 2017) further described collaborative problem solving as "a joint activity where dyads or small groups [interact to] execute a number of steps in order to transform a current state into a desired goal state".

From the literature review conducted by Oliveri et. al(2017), they proposed a new way of describing collaborative problem solving in whichwhere components and skills per component were identified. The following are A)teamwork consists of team cohesion, team empowerment, team learning, self-management and self-leadership, and attitudes of open-mindedness, adaptability, and flexibility; B) Communication which includes active listening and information exchange; C)leadership which includes organizing activities and resources, monitoring performances, reorganizing when faced with obstacles, resolving conflicts, and demonstrating transformational leadership; and, Problem Solving which is consist of exploring and

Wesleyan Scientific Review

understanding, representing and formulating, planning and executing, and monitoring and reflecting.

Among the advantages of collaborative problem-solving include building problem-solving skills in addition to increasing self-directed learning and lifelong learning. It also promotes a good relationship between group members, increases intrinsic motivation to learn, and enhances the interaction between students and the facilitator (Yin Yin,2016).

Collaborative problem solving promotes strategies for positive interdependence. Scaffolding needs to be incorporated with suitable problem tasks as learners help each other in the collaborative classrooms, aided by their instructor to improve learning achievement (DeWitt, 2016).

On the other hand, the Philippines is currently undertaking a move for the expansion of its basic education which is known as the K to 12. The major reform of the K to 12 curriculum includes decongesting, enhancing, and lengthening the cycle of basic education in order for the learners to master basic competencies. Under the Secondary Education, significant changes are observed in the structure, curriculum, and assessment. Changes in the Science Curriculum under the K to 12 are also notable. In the old curriculum, Science was taught using the discipline-based approach except in year 1 while in the new curriculum concepts and skills in Life Sciences, Physics, Chemistry, and Earth Sciences are presented through spiral progression approach wherein science concepts and applications are presented with increasing levels of complexity from one grade level to another paving the way for a deeper understanding of key concepts (SEAMEO INNOTECH, 2012).

This major reform in the structure of the science curriculum becomes a threat to the current students of Teacher Education Institutions which are not prepared to teach all the sciences, instead, they are only prepared to teach a specific subject (biological or physical sciences). In relation to the above-mentioned problem in Physics Education, teacher education institutions must address the needs of these future science teachers. Thus, pre-service teachers must be engaged in activities that train them to act as the expert in problem-solving because the success or failure of the problem solving depends highly on the teachers' function (Yin Yin, 2015). Thus, Tthis study was formulated to investigate collaborative problem solving applied to pre-service teachers which could possibly serve as a basis in improving the instruction for non-physics majors.

Teacher training is one of the major concerns in the implementation of the K to+12 science curriculum. This is due to the shift of its structure which is from disciplined-based to spiral progression. In this case, teachers who were trained to teach a specific discipline have to teach other disciplines. The same thing happens to pre-service science teachers who go out for an internship. This scenario calls teacher education institutions to understand how pre-service science teachers perform as a basis in developing intervention programs that will help them face the challenge of spiral progression. Thus, the need to understand how non-physics major pre-service science teachers perform in problem-solving in physics.

This study is significant to non-physics major pre-service science teachers because this will provide them a concrete description of how they solve problems. It is also significant to teacher education institutions and the basic-education administrators because this will provide the basis for designing intervention programs related to problem-solving to pre-service and in-service science teachers. Lastly, the result of this study provides inputs to curriculum developers in

revising the curriculum most especially in the integration of problem-solving in all science contents.

This paper aimed to study the perspective of pre-service science teachers on collaborative problem-solving in physics. Specifically, it sought to answeranswers to the following questions:

Q1: How do non-physics major pre-service science teachers collaboratively solve problems in physics?

Q2: How does collaborative problem-solving impact the individual performance of the non-physics major pre-service science teachers?

MATERIALS AND METHODS

This study employed phenomenology as its research design. Phenomenology as defined by Faulkner & and Faulkner (2009) is "a research design which is most appropriate when the purpose of the study is to explore and create a detailed description of a phenomenon". It was anchored on the idea that employing collaborative problem-solving in physics to pre-service science teachers, will have a positive impact on them.

The third-year students taking Bachelor of Secondary Education major in Biological Sciences enrolled in Physics II during the second semester of the school year 2017-2018 of the University of Northern Philippines-College of Teacher Education were observed and interviewed. The number of participants depends on the willingness of the pre-service teachers to participate in the study. For one to be an eligible participant in the study, one should be present during lectures and on group problem-solving activities. The reason for setting this criterion is for the participants to be able to participate well in collaborative problem-solving sessions in which they were observed and interviewed.

McNamara's (2009, as cited by Turner, 2010) eight principles to the preparation stage of interviewing was considered before proceeding into the inquiry part. Thus, the interview was conducted at the respondents' most convenient time in a quiet and conducive place of the respondents' choosing. The researcher reiterated the purpose and nature of the study. The respondents were assured of their anonymity and the confidentiality of the information they will provide. Furthermore, the researcher explained the format of the interview, indicated how long the interview usually takes, inform the respondents how to get in touch later if they want to, and ask them if they have any questions before starting with the interview. Finally, the researcher emphasized that their participation in the study is determined by the extent of their willingness hence they can decline to answer any question or even terminate the interview should they feel the need to do so.

First, the researcher determined the non-physics pre-service science teachers who are willing to participate in the study. After several group-problem-solving sessions, they were interviewed. The following questions were asked in the interview Q1. Can you please describe the way you solve a problem as a group? Q2. Were you able to solve problems correctly through the strategy you have mentioned? Q3. Can you give the step by step process which you utilized in solving problems? Q4. What are your experiences and insights in collaborative problem-solving?. The collaborative

problem-solving session and the interview were taped.

Tape records during the interview were transcribed to arrive at an extended text. Field notes were created to document observations. The phenomenological reduction was done through a repertory grid in which the data gathered from the observation and interview were deduced. This enabled the researcher to observe both the cool and warm analyses of the information collected from the participants. The cool analysis part consisted of the participants' significant points or statements. These statements were the basis in the conduct of the warm analysis stage wherein the categorization of the data was formulated and that the themes evolved. The themes and subthemes that emerged in the study were further subjected to member checking procedure via correspondence. Through correspondence, the researcher was assured of the trustworthiness and truthfulness of the data collected.

RESULTS AND DISCUSSION

The data for this study were collected from four non-physics major pre-service science teachers of the University of Northern Philippines-College of Teacher Education. All of them are taking a Bachelor of Secondary Education major in Biological Sciences. Significant statements of non-physics major pre-service science teachers from their answer to the four questions asked during the interview were used to formulate themes. To facilitate the presentation of the result of this study, themes that emerged were discussed parallel to the four questions; Q1. Can you please describe the way you solve a problem as a group? Q2. Were you able to solve problems correctly through the strategy you have mentioned? Q3. Can you give the step by step process which you utilized in solving problems? Q4. What are your experiences and insights in collaborative problem-solving?

Questions	Significant Statement	Emerging Themes
Can you please describe the way you solve a problem as a group? Were you able to solve problems correctly through the strategy you have mentioned?	P3 First individually then after that we compare solutions to our group mates and then we come up with the right answer. . .[solution] is a check.	***There are two types of collaboration exhibited by student teachers and all led to successful problem-solving.***
Can you give the step by step process which you utilized in solving problems?	P4 First we are solving the problem individually and then group. . .yes	
	P2 We solve a problem as one under the guidance of a leader. . . So far, yes.	
	P1 We work as a group facilitated by a leader. . . Yes	

Questions	Significant Statement	Emerging Themes
Can you give the step by step process which you utilized in solving problems?	P4 Identify the given variables and the target variables, then we identify the formula to be used, in order to solve the problem and execute the formula. Then we will have the answer to the problem. . .we are proving our answer.	***Students follow a systematic way of problem-solving in doing collaborative problem solving***
What are your experiences and insights on collaborative problem-solving?	P4 Collaborative problem is very enjoyable and an easy way to understand a problem because there is brainstorming in analyzing the problem. P1 It is better when you are solving within a group because there are more ideas that can give more help. P2 Collaborative problem solving is effective compared when you solve alone like when you forgot something someone is there to help you recall.	***Collaborative problem solving reinforces positive interdependence.***

There are two types of collaboration exhibited by student teachers and all led to successful problem-solving.

There are two types of problem-solving exhibited by the non-physics pre-service science teachers. First is in a group, students work individually first then work as a group while the other one is Students work as a group under the supervision of a leader. This shows that there is no specific approach to collaborative problem solving; , the approach comes out naturally based on the interaction of the students (DeWitt et .al, 2017).

The first type shows that learners work on their own thinking and this allows them to participate in group problem-solving. This finding is supported by Dewitt et.al, 2017 in which they have stated that collaborative problem solving takes place through the prior knowledge of the learners that allow them to interact. This is clearly manifested among the non-physics pre-service science teachers in which they solve a specific problem individually, after solving they compare their answers among the members of the group, the differences and similarities in their answer serve as the springboard for discussion among the group. It is through the discussions that they resolve and allow them to arrive with the correct answer.

On the other hand, the second type shows that students work under a leader who facilitates the interaction among the group. This finding is parallel to the statement of Oliveri et.al (2017) that cooperative problem solving encompasses monitoring and organization to set and meet the goals of a team. This is clearly manifested among the non-physics pre-service science teachers in which the leader assigns tasks to the members of the group and as the member performs his/her task, the whole team monitors until all the members have performed their tasks and arrive with the correct answer. Leak et.al (2017) further elucidated that through collaborative problem solving, students establish shared goals and responsibilities.

With the utilization of these two types of problem-solving, non-physics major pre-service science teachers were successful in answering word problems. Unal, E & Cakir, H. (2017) stressed that academic success and improved problem solving are developed in a learning environment that fosters collaborative learning and problem-based learning. Furthermore, students exposed to a collaborative environment obtained better results in examination (Johnston et al. (2000), as cited by Yin Yin, 2015).

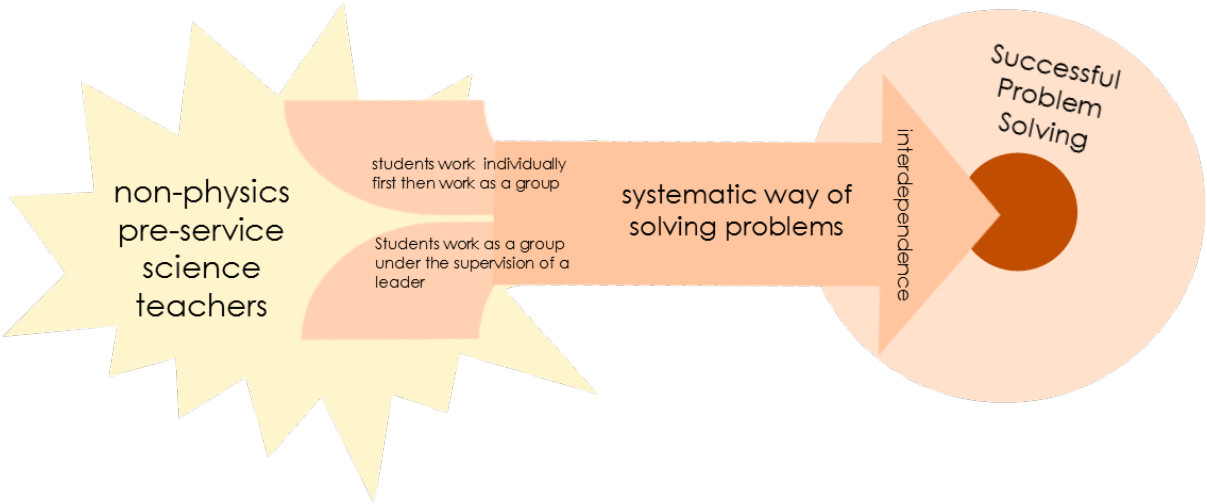
Students follow a systematic way of solving problems in doing collaborative problem-solving.

The non-physics pre-service science teachers follow a systematic way of problem-solving in any of the types of problem-solving they use. They always start with identifying the given and asked variables, followed by setting up equations, executing the setup equations, and evaluating the answers. This further implies that as the non-physics pre-service science teachers work, they focus on this methodology that guides them towards reaching their goal. As mentioned by Oliveri et. al (2017), in order to arrive at a solution to a given problem there is a need to design or create a strategy for problem-solving. Thus, the methodology employed by the non-physics pre-service science teachers plays a vital role in collaborative problem solving, and that the success of collaborative problem solving is dependent on this methodology not only on the knowledge that students have (Yin Yin, 2015).

Collaborative problem solving reinforces positive interdependence.

As the non-physics pre-service science teachers work collaboratively to solve problems interdependence occurred in which a member contributes to aid other students doing a specific task in the group and vice versa. Vygotsky as mentioned by Yin Yin(2015), stated that scaffolding occurs in a collaborative problem-solving setting in which members help their peers by sharing their ideas. It is through this that students work together by filling the gap of each member, which in turn reinforces interdependence that is positive. Through interdependence, students were able to work together to solve problems successfully.

To summarize the finding of this study, a simulacrum was designed. The simulacrum shows that collaborative problem solving serves as an arrow by the non-physics pre-service science teachers to hit the major target which is successful problem-solving. Specifically, the arrow contains factors that yield successful problem solving which are the group strategy in problem solving and interdependence.



CONCLUSIONS

This study concludes that the non-physics pre-service science teachers solve problems collaboratively by employing group strategies, following systematic methodology, and observing interdependence to arrive at a successful problem-solving. It is therefore recommended that the non-physics pre-service science teachers be always involved in collaborative problem solving to intensify their training in Physics Teaching and that they will be prepared in facing the challenges of spiral progression of the concepts in science.

REFERENCES

DeWitt, D., Alias, N., Siraj, S., & Spector, J. M. (2017). Wikis for a Collaborative Problem-Solving (CPS) Module for Secondary School Science. Educational Technology & Society, 20 (1), 144–155.

Faulkner, S.S. & Faulkner, C. (2009). Research methods for social workers: Practice-based approach. Morehead State University. Lyceum Books Inc.

Leak, A. et al. (2017). Examining problem solving in physics-intensive Ph.D. research. PHYSICAL REVIEW PHYSICS EDUCATION RESEARCH, 13(2).

Oliveri, M. E., Lawless, R., Molloy, H. (2017). A literature review on collaborative problem solving for college and workforce readiness (GREBoardReportNo.17-03).Princeton,NJ:EducationalTestingService.http://dx.doi.org/10.1002/ets2.12133

Reddy , VB & Panacharoensawad, B. (2017).Students Problem-Solving Difficulties and Implications in Physics: An Empirical Study on Influencing Factors . Journal of Education and Practice, 8(14).

Turner, D. W. (2010). Qualitative interview design: A practical guide for novice investigators. The Qualitative Report, 15(3), 754-760. Retrieved from http://nsuworks.nova.edu/tqr/vol15/iss3/19

Unal, E & Cakir, H. (2017). Students' Views about the Problem Based Collaborative Learning Environment Supported By Dynamic Web Technologies. Malaysian Online Journal of Educational Technology, 5(2).

Yin Yin, K. (2015). Collaborative Problem Solving Promotes Students' Interest. Journal of Economics and Economic Education Research, 16(1).

SEAMEO INNOTECH.(2012) "k+12 toolkit" retrieved from: http://www.gov.ph/downloads/2012/201209-K-to-12-Toolkit.pdf

Prof. Joey-Nell T. Marzan is a faculty and extensionist at the University of Northern Philippines where he finished his Bachelor of Secondary Education – Physical Science (Cum laude) including his Master of Science in Teaching Physics and academic requirements for Master of Science in Teaching Chemistry. Currently, he is on his dissertation for the degree Doctor of Philosophy in Science Education at the School of Advanced Studies, Saint Louis University – Baguio City. The focus of his writing are Contextualized Modules in Physics published in UNP Journal and Learning Style, Attitude and Force Concept Inventory Score published in the Philippine Physics Journal. He also wrote and proficient in chemistry focusing on Instructional Material Development and Inquiry-based Science. He gained Best Research Paper at the 2017 International Conference Seminar – Workshop & Biennial Convention in cooperation with NOSTE, DOST, WVSU & University of Georgia.

Caring Behaviors and Spiritual Care Competencies of Nurses in Selected Hospitals in Manila, Philippines:

A Correlational Study

Gil P. Soriano and Ronnell D. Dela Rosa

College of Nursing, San Beda University

Graduate School, Bataan Peninsula State University

ABSTRACT

Objectives: The objective of the study was to determine the self-perceived caring behaviors and spiritual competencies of Filipino nurses. Also, the relationship between these two concepts was also determined.

Methods: A descriptive correlational study was utilized and a purposive sample of 124 medical surgical nurses employed in Level 3 Phil health accredited hospitals were included in the study.

The spiritual competencies of nurses were determined using Nurse Spiritual Care Therapeutic Scale (NSCTS) and the Level of Caring Behaviors were assessed using Caring Nurse Patient Interaction Scale 23 (CNPI-23). The data gathered was analyzed using frequency, percentage, mean, standard deviation and spearman rank correlation.

Results: The study revealed that Filipino nurses have a mean spiritual care competency of 3.57 (±0.65) and a mean caring behaviors of 4.35 (±0.71). Specifically, the four dimensions of caring behaviors namely clinical, relational, humanistic and comforting care has a mean score of 4.64(±0.64), 3.91 (±0.77), 4.24 (±0.56) and 4.54 (±0.42) respectively. The computed spearman coefficient was 0.362 with p value of 0.000 which showed significant relationship.

Conclusion. The study concluded that Filipino nurses have a good level of spiritual competencies and excellent level of caring behaviors. Further, it was noted that a significant relationship exists between caring behaviors and spiritual competencies of nurses. Hence, it is important to promote and prioritize the spiritual competencies and caring behavior of nurses in order to provide better health services.

Keywords: Caring behaviors, Filipino nurses, spiritual competencies

INTRODUCTION

In the recent years, much attention was given on the perception of caring in the nursing literatures. The process of caring has been defined as an interactive and inter-subjective human process which occurs during moments of shared vulnerability between two or more people, both the self and other directed process (Wolf et al., 1992 as cited in Calong Calong & Soriano, 2018). It has also been considered as the core and essence of nursing practice. Studies have revealed that nurse's caring approach can enhance the patient's level of health and well-being and can assist in health promotion (Cronin & Harrison, 1998; William, 1998). Hence, measures to assess and evaluate caring has been done and has focused on its outward expression, the "caring behaviors."

Caring behaviors are acts, conduct and mannerisms demonstrated by nurses that conveys concern to patient's safety, attention, and feeling cared for; the sensation of well-being and safety resulted from enacted behaviors of another (Larson, 1984 as cited by Wolf et al., 2017). Utilization of caring behaviors as a model of nurse-patient interaction has shown to improve working conditions and provide a higher level of satisfaction for both nurses and patients (Fortuno et al., 2017; Feo et al., 2018).

Wesleyan Scientific Review

Another important concept in the field of nursing is spirituality. Spirituality has been defined as the inclinations of human for exploring the concept of life with a need for connecting with something beyond self or by developing one's self (Shaton et al., 2001). According to Mizock et al. (2012), spirituality can assist patients in the process of recovery from illness by facilitating their autonomy and helping them to live and grow beyond the limitations imposed by their illness. Thus, there has been a growing emphasis on the importance of spiritual care in order to meet the spiritual needs of patients (Paal et al., 2015).. Spiritual care is defineds as a set of skills used in the professional field or nursing process which include therapeutic relationships between the nurse and patients, being accessible for patients, active listening, showing empathy, providing religious facilities for patients with certain religious beliefs, helping patients, etc.(Fallahikhoshknab & Mzaheri, 2008). The provision of spiritual care is considered to be one of the major role of nurses (Caldeira et al., 2013). This is congruent with the multi-faceted role of nurses which incorporates the physical, psychological, social and spiritual needs of patients (Chan et al., 2006). Literature has revealed that when spiritual care was offered appropriately and sensitively, it could significantly enrich the patient's emotional well-being and patient-provider relationships (Phelps et al., 2012).

Given the important role of caring behaviors and spiritual care, it is necessary to assess and evaluate its application in the clinical practice. However, with the advancement of modern technology, this has affected the delivery of caring behaviors and made the healthcare more impersonal and less humane (Vujanić et al., 2020). Studies have also revealed that nurses often neglect caring behaviors in interaction with patients and focuses on psychomotor competencies in the performance of clinical tasks (Sitzman & Watson, 2019; Jiang et al., 2014). In terms of spiritual care, nurses have conveyed a need to learn how to provide spiritual care to patients due to poor knowledge (Burkhart & Schimt, 2012) and lack of information on how to meet the patient's spiritual needs (Zehtab & Adib-Hajbaghery, 2014)

The study was conducted in order to determine the level of self-perceived caring behaviors and spiritual care competencies among nurses. Further, the relationship between caring behaviors and spiritual care competencies was evaluated.

METHODS

Design and Sample

This descriptive-correlational study employed a convenience sample of 115 nurses working in medical-surgical ward in selected hospitals in Manila. The inclusion criteria of the participants includes staff nurses with at least 1 year of service in the hospital and those who agreed to participate in the study while nurse supervisors and head nurses were excluded since they are not involved in direct patient care.

Research Instrument

The study utilized a three part questionnaire in order to gather the needed data which includes the demographic profile sheet, the Caring Nurse Patient Interaction (CNPI) Scale-Nurse and the Nurse Spiritual Care Therapeutic Scale.

Demographic Profile Sheet. This includes questions pertaining to the participant's age, sex and length of service in the hospital.

Caring Nurse Patient Interaction (CNPI) Scale-Nurse. This instrument was developed by Cosette et al. (2006) and was used to determine the self-perceived level of caring behaviors among staff nurses. It is consists of 23 items which can be rated using a 5-point Likert scale from 1=Almost Never to 5=Almost Always, and includes four caring domains namely: Humanistic Care (4 items), Relational Care (7 items), Clinical Care (9 items) and Comforting Care (3 items). This has been validated among Filipino nurses by Soriano and Calong Calong (2019) which showed a good model fit (chi-square value= 1.72, root mean square error of approximation=0.076, comparative fit index=0.090, Tucker-Lewis index=0.90, incremental fit index=0.91 and standard root mean square residual=0.041 and an acceptable Cronbach's α coefficient of 0.943 (alpha coefficient for clinical care, relational care, humanistic care and comforting care were 0.852, 0.908, 0.817, 0.823 respectively).

Nurse Spiritual Care Therapeutics Scale. This is a 17-item instrument developed by Mamier and Taylor (2014) to assess the frequency of therapeutics or practices intended to support patient spirituality. It has an alpha coefficient of 0.962 which satisfied the acceptable range of 0.70 to 0.95 (Polit & Beck, 2014).

Data Analysis

The data collected in the study was analyzed using descriptive statistics which includes frequency, percentage, mean and standard deviation while spearman rank correlation was used in order to determine the relationship between spiritual care competencies and caring behaviors among nurses. It was analyzed using IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.

Ethical Consideration

The nature and the objective of the study were explained to the participants and the right to withdraw from the study was discussed prior to securing the informed consent. Reasonable steps in order to ensure privacy, anonymity and security of information were done. The study was approved by Arellano University- Ethics Review Board (AU-ERB).

Results

Table 1 shows the demographic profile of the participants. It can be noted that the mean age of the participants was 30.32 (±3.14) years old. In terms of sex, 95 or 82.61% were females while 20 or 17.39% were males. On the other hand, the mean of length of service of the participants was 5.57 (±3.21) years.

Table 1. Demographic Profile of the Participants (n=115)			
Profile	**Frequency (f)**	**Percentage (%)**	**Mean (SD)**
Age			30.32 (±3.14)
Sex			
Male	20	17.39%	
Female	95	82.61%	
Length of Service (years)			5.57 (±3.21)

As presented in Table 2, the mean spiritual care competency score was 3.57 (±0.65). On the other hand the mean caring behaviors of the participants was 4.35 (±0.71). For each of the subscales, comforting care had the higher mean score (4.64±0.42), followed by clinical care (4.54±0.64), humanistic care (4.24±0.56) and relational care (3.91±0.77).

Table 2. Level of Spiritual Care Competency and Caring Behaviors of the Participants (n = 115)		
	Mean (SD)	**Interpretation[a]**
Caring Behaviors	4.35±0.71	Excellent
Clinical Care	4.64±0.64	Excellent
Relational Care	3.91±0.77	Very Good
Humanistic Care	4.24±0.56	Excellent
Comforting Care	4.54±0.42	Excellent
Spiritual Care Competency	3.57±0.65	Very Good
[a]Legend: Poor = 1.00 to 1.79 Fair = 1.80 to 2.59 Good = 2.60 to 3.39 Very Good = 3.40 to 4.19 Excellent = 4.20 to 5.00		

The relationship between the spiritual care competency and caring behaviors of the participants is presented in Table 3. As shown below, a significant relationship (rho=0.362)was noted as evidenced by p value of less than 0.05.

Table 3. Spearman Rank Correlation of Caring Behaviors and Spiritual Care Competency of the Participants (N = 124)

Spearman rank coefficient	p value	Interpretation
0.362	*0.00	Significant
*Significant at 0.05		

Discussion

The objective of the study was to determine the level of self-perceived caring behaviors and spiritual care competencies among nurses and to evaluate the relationship between caring behaviors and spiritual care competencies. Based on the results, the participants have an excellent level of caring behaviors with a mean score of 4.35 (±0.71). Specifically, clinical care, humanistic care and comforting care were rated as excellent while relational care was rated as very good. This means that nurses acknowledges the importance of caring behaviors in interacting with patients. The findings were as supported by the study conducted by Soriano et al. (2019) among nurses assigned in medical-surgical wards. In addition, Martinez (2013) stated that the essence of caring among Filipino nurses is embodied by "oneness" and central to its understanding is the connection to their own culture and full appreciation of their own uniqueness and complexities as Filipino nurses.

In terms of the provision of spiritual care to patients, the study revealed that the participants have a very good level of spiritual care competency (3.57±0.65). It only indicates that Filipino nurses are well-equipped and pay special attention to the spiritual needs of their patients. The finding is not surprising as Filipinos are known to be highly religious and spiritual which can be attributed to the influence of Spaniards who spread the Catholic faith in the country four hundred years ago (Soriano et al., 2019). Also. a survey made by Gallup International (2017) revealed that the Philippines is the fifth most religious country in the world. However, the result was contradicted by the study of McSherry and Jamieson (2011) among UK nurses which revealed that most of the nurses are poorly-equipped in providing spiritual care to patients.

The self-perceived caring behaviors and spiritual care competency of the participants was revealed to be significantly correlated (rho=0.362, p=0.000). This is a noteworthy finding in the study as these two concepts are known to be vital in the delivery of nursing care to patients.

CONCLUSION

The study revealed a significant relationship between the caring behaviors and spiritual care competency among the participants. Hence, measures should be taken in order to promote and prioritize the spiritual competencies and caring behaviors of nurses in order to provide better health services. Further, authorities and policymakers should take steps in planning for nurses' training for promoting their competence in providing spiritual care for patients such as In-house training programs such as workshops and seminars.

Conflict of Interest

The authors declare that there are no conflict of interest in the publication of this study.

Acknowledgement

The authors would like to express their gratitude to all the nurses who participated in the study.

REFERENCES

Burkhart, L. & Schmidt, W. (2012). Measuring effectiveness of a spiritual care pedagogy in nursing

education. Journal of Professional Nursing, 28(5), 315-321. https://doi.org/10.1016/j.profnurs.2012.03.003.

Caldeira, S., Carvalho, E. C., & Vieira, M. (2013). Spiritual distress-proposing a new definition and defining characteristics. International Journal of Nursing Knowledge, 24(2), 77-84. https://doi.org/10.1111/j.2047-3095.2013.01234.x.

Calong Calong, K. & Soriano, G. (2018). Caring Behaviors and Patient Satisfaction: Merging for Satisfaction. International Journal of Caring Sciences, 11(2), 697-703

Calong Calong, K., & Soriano, G. (2019). Construct Validity and Reliability of Caring Nurse Patient

Interaction Scale-Nurse among Filipino Nurses. International Journal of Caring Sciences, 12(2), 1017-1022

Chan, M. F., Chung, L. Y., Lee, A. S., Wong, W. K., Lee, G. S., Lau, C. Y., Lau, W. Z., Hung, T.

T., Liu, M. L., & Ng, J. W. (2006). Investigating spiritual care perceptions and practice patterns in Hong Kong nurses: results of a cluster analysis. Nurse Education Today, 26(2), 139-50. https://doi.org/10.1016/j.nedt.2005.08.006

Cossette S., Cote J., Pepin J., Ricard N., & D'Aoust L. (2006). A dimensional structure of nurse-patient interaction from a caring perspective: Refinement of the caring nurse-patient interaction scale (CNPI-Short Scale). Journal of Advance Nursing, 55(2), 198-214. https://doi.org/10.1111/j.1365-2648.2006.03895.x

Cronin S. & Harrison B. (1998). Importance of nurse caring behaviors as perceived by patients after myocardial infarction. Heart & Lung, 17, 374-380.

Fallahikhoshknab, M. & Mzaheri, M. (2008). Spirituality, Spiritual Care and Spiritual Therapy.

University of Social Welfare and Rehabilitation Sciences Publication.

Feo, R.; Donnelly, F.; Athlin, Å.M.; Jangland, E. (2019). Providing high-quality fundamental care for patients with acute abdominal pain. Journal of Health Organization and Management, 33(1), 110–123. https://doi.org/10.1108/JHOM-02-2018-0037

Fortuno, A. F., Oco, D. B., Clores, M.A. (2017). Influential Components of Caring Nurse-Patient Interaction (CNPI) in a Tertiary Hospital in the Philippines: Towards Improving Health Outcomes of Patients. International Journal of Nursing. Science, 7, 84–90. https://doi.org/10.5923/j.nursing.20170704.02

Gallup International. (2017, April 10). Religion prevails in the world. https://www.gallupinternational.bg/en/36009/religion-prevails-in-the-world/

Jiang, L .L., Ruan, H., Xiang, X.J., & Jia, Q. (2014). Investigation and analysis of the caring attitude and behaviour of nurses in Shanghai, China. International Journal of Nursing Practice. 21(4), 426–432. https://doi.org/10.1111/ijn.12287

Mamier, I., &Taylor, E. (2018). Psychometric Evaluation of the Nurse Spiritual Care Therapeutics Scale. Western Journal of Nursing Research, 37(5), 679-694. https://doi.org/10.1177/0193945914530191

Martinez, R. (2013). "Hinabing Ugnayan": Nature of Caring among Filipino Nurses Working withChildren. Unpublished Dissertation. Asian Social Institute

McSherry, W. & Jamieson, S. (2011) An online survey of nurses' perceptions of spirituality and spiritual care. Journal of Clinical Nursing, 20 (11–12), 1757–1767. https://doi.org/10.1111/j.1365-2702.2010.03547.x

Mizock L., Millner U., & Russinova Z. (2012). Spiritual and religious issues in psychotherapy with schizophrenia: cultural implications and implementation. Religions. 3(1), 82–98. https://doi.org/10.3390/rel3010082

Paal, P., Leget, C., Goodhead, A. (2015). Spiritual care education: results from an EAPC survey.

European Journal of Palliative Care, 1;22, 91–95.

Phelps, A., Lauderdale, K., Alcorn, S., Dillinger, J., Balboni, M. Van Wer, M., VanderWeele, T., & Balboni, T. (2012). Addressing Spirituality Within the Care of Patients at the End of Life: Perspectives of Patients With Advanced Cancer, Oncologists, and Oncology Nurses. Journal of Clinical Oncology, 30(20), 2538-2544, https://doi.org/10.1200/JCO.2011.40.3766

Polit, D. & Beck, C. (2014). Essentials of nursing research: Appraising evidence for nursing practice. Wolters Kluwer Health /Lippincott Williams & Wilkins.

Ruder, S. (2013). Spirituality in Nursing. Home Healthcare Nurse, 31(7), 356-367. Ruder, S. (2013). Spirituality in Nursing. Home Healthcare Nurse, 31(7), 356–367. https://doi.org/10.1097/nhh.0b013e3182976135

Shaton, J., Shoy, R., & Byock, I. (2001). A few months to live. Different paths to life's end.

Georgetown University Press

Sitzman, K., & Watson, J. (2019) Assessing and Measuring Caring in Nursing and Health Sciences. Springer.

Soriano, G., Aranas, F.C., & Tejada, R.S. (2019). Caring behaviors, spiritual and culturalcompetencies: A Holistic Approach to Nursing Care. Bedan Research Journal, 4, 98-115.

Vujanić, J., Prlić, N., & Lovrić, R. (2020). Nurses' Self-Assessment of Caring Behaviors in Nurse–Patient Interactions: A Cross-Sectional Study. International Journal of Environmental Research and Public Health, 17(14), 5255. https://doi.org/10.3390/ijerph17145255

Williams, S. A. (1998). Quality and care: patients' perceptions. Journal of Nursing Care Quality, 2(6), 18-25.

Wolf, Z., Dillon, P., Townsend, A., & Glasofer, A. (2017). Caring behaviors inventory-24 Revised:

CBI-16 validation and psychometric properties. International Journal for Human Caring, 21(4), 185-192. https://doi.org/10.20467/1091-5710.21.4.185

Zehtab, S. & Adib-Hajbagherty, M. (2014). The Importance of Spiritual Care in Nursing. Nursing and Midwifery Studies. 3(3), e22261.

Gil P. Soriano, MHPEd, RN earned his Bachelor of Science in Nursing degree from Pamantasan ng Lungsod ng Pasay and his Master of Health Professions Education from the University of the Philippines Manila under a UP Presidential Scholarship Grant. Currently, he is pursuing his. Dual Doctorate Degree, Doctor of Philosophy in Nursing at Silliman University and Doctor of Philosophy in Health Sciences at Tokushima University, Japan. He is the Level 3 Coordinator and Community Coordinator of San Beda University College of Nursing. He has presented researches in various national and international research fora and has published a number of research articles in reputable/indexed journals focusing on Public Health, Caring Science, and Nursing Pedagogy.

Dr. Ronnell D. Dela Rosa, is a mental health enthusiast, nurse-midwife and a teacher-educator. He is the recipient of the 2019 Outstanding Nurse in Research by the Philippine Nurses Association in Central Luzon (Region 3), Philippines. He was the former Dean of the Graduate School and Dean of the College of Nursing and Midwifery of the Bataan Peninsula State University (BPSU). He is also the Founding Chair of the BPSU Peninsulares Research Ethics Committee – a DOST PHREB Accredited. He was the National President of the Psychiatric Mental Health Nurses Association of the Philippines, Inc (2015-2017).

Modular and Social Media-Based Learning Materials in Basic Calculus:

A Quasi-Experimental Study

Engr. Judd Edward Z. Hernandez[1],
Dr. Gener S. Subia[2],
Dr. Ramil P. Polintan[3] &
Dr. Philip P. Ermita[4]

[1]Mathematics Teacher, Juan R. Liwag Memorial High School, Nueva Ecija
[2]Dean, Wesleyan University Philippines Graduate School, Cabanatuan City
[3]Public School Division Supervisor, Department of Education, Carranglan, Nueva Ecija
[4]Dean, College of Engineering, University of Perpetual Help System DALTA, Calamba Laguna

Email: gssubia@wesleyan.edu.ph

ABSTRACT

There were several types of research explored in the difficulties of students in Mathematics. However, experimental studies dealing with the contribution of social-media as a tool for teaching math are rare. This quasi-experimental, two groups, pretest-posttest research design concentrated on the effects of the utilization of modular and social media platforms, such as YouTube and Facebook against the traditional classroom approach in teaching Basic Calculus. Two comparable groups, control and experimental, both with 42 Grade 11 Science Technology Engineering and Mathematics (STEM) students served as respondents of this study. The pretest results show that the respondents were in the developing level and that there is no significant difference in their performance. As to their post-test scores, the experimental group that was taught modular and social media-based learning materials performed better than the control group who were imparted with the traditional mode approach. Thus, the use of Module, Youtube, and Facebook were found to be effective in improving the academic proficiency of Grade 11 STEM students in Basic Calculus. The findings of the study have implications for education particularly among senior high school mathematics learners and teachers, and future researchers along this specialization.

Keywords: Academic proficiency, basic calculus, digitalized educational tools, modular and social media-based learning materials, traditional learning materials

INTRODUCTION

Education, as a phenomenon, is both a social foundation and a process occurring in the society; and having access to education is a privilege for many Filipinos as academic excellence benefits the stability of having a secure future and the country's economic growth (Türkkahraman, 2012). Twenty-first-century learners are expected to become fluid on the changes, having good communication, and well-off in problem-solving which are essential skills in the 21st-century workforce (Lazar, 2015; Subia, 2020). The improvement of thinking and problem-solving skills amidst the students is one major goal of 21st-century instruction. Thinking is the whole thing that a sensible mind does, from mental arithmetic to remembering a phone number (Saini, 2014). Additionally, modern learners should be trained by educators to analyze and solve problems accurately.

However, according to Chan and Sidhu (2015), students in higher education faced learning challenges involving cognitive difficulties, learning inactivity, instructional problem, and cultural difference in higher education. It is suggested that higher learning institutes should emphasize the construction of knowledge through active interaction between lecturer and the students which became a platform for the students to cope up with the learning challenges they are facing in higher education as stated by Chan and Sidhu (2015). With this regard, students demand powerful learning tools in evaluating information from a wide variety of subjects and sources through the advancements offered by the utilization of technology (Montrieux, Shellens, & Vanderlinde, 2015).

"Science, Technology, Engineering, and Mathematics or STEM is one of the important innovations currently implemented in Philippine education" (Pawilen & Yuzon, 2019, p.130). Professionals especially the people who are related to Science, Technology, Engineering, and

Wesleyan Scientific Review

Mathematics need to pass the specialized subject for their respective professions. One of these specialized subjects is Calculus, where most of the students experience difficulties because of complex topics and incomplete understanding of basic concepts. Calculus is one of the hardest to learn subjects of mathematics.

In the last 25 years, several math educators discovered that learners' problems in comprehending significant ideas in calculus are because of their misconceptions of the function of concept (Carlson et al., 2010; Smith 2008; Zandieh, 2000). Even in the United States (U.S.), their scholastic targets were not attained particularly in preparing their learners to be proficient in Calculus since the major issue identified is the absence of learning chances (Moore 2012; Moore and Carlson 2012).

Due to this problem, an effective teaching strategy is very significant for the students to learn and cope up with the competencies required to fulfill the subject. "According to the National Association for the Education of Young Children, the math skills that students learn at a young age build a foundation for future learning endeavors and can be a good indicator of whether or not young people will be able to meet and overcome new challenges as they mature" (Dream_Learn, 2013, p.1). Understanding of Mathematics is requisite both for professionals, such as accountants, engineers, philosophers, doctors, and scientists, and persons who are working in the street. Learning Math is very essential in this day and age. "Creating spending budgets, paying for groceries, buying things on sale, and cooking meals all have to deal with math in some way or another. Our world today would be lost without numbers" (Schuster, 2020, p.1).

Through the years, teachers utilize different strategies and techniques in teaching mathematics in order to have an appropriate approach and disseminate the knowledge and learning to the students. The most common technique used is the traditional technique which relies on textbooks and was delivered through recital and route learning to test the learning capacity of students. This traditional method is an old-fashioned way of teaching, but it is more widespread compared to modern teaching since not all people are knowledgeable and skilled in using modern technology.

Other teachers utilized teaching strategies and new learning materials were implemented and used, such as the module. It is one of the learning materials that was applied in a different teaching approach for arranging learning experiences in education. Modular learning materials can be used in any setting convenient to the student and can provide opportunities for learning at their own control according to their ability level and needs. Learners were able to choose and identify the objectives that they want to achieve, select the appropriate material, and follow a learning sequence by selecting from a variety of methods of presentation (Ali, et.al., 2010).

Modern faculty members, however, are implementing computer and online learning materials in their classes and found that students are interested to learn. In parallel, the study of Cervenanská (2013) shows that the field of information technology in education has experienced many successes over the years. The pace of change brought by new technologies has had a significant effect on the way students deal with different scholastic approaches. Online educational tools create a vital role in education because of its convenience as it could be a platform where the students can engage, interact, and learn. According to Brame (2016), digitalized educational tools like videos, powerpoint presentations, and lectures are known to be helpful in connecting to students and in giving insights about a certain topic which are some of the pedagogical benefits

that a learner could obtain from these tools. Applying the materials in a different setting such as social media, its wider reach and accessibility could pave the way in the academic improvement of students in basic calculus. With digital videos continuing to gain popularity, one of the possible ways that could improve the students' understanding is introducing it to media platforms making the educational tools digitalized which could be easily accessed (Orleans, 2007).

Based on the above discussion, the researchers investigated the effects of modular and online-based instructional materials in enhancing students' academic proficiency in Basic Calculus. Also, they aimed to differentiate the traditional and modular and social media-based learning materials in terms of the academic performance of the students. They also want to provide significant pieces of information regarding the effect of modular and online-based instructional materials on Science, Technology, Engineering, and Mathematics (STEM) Senior High school students and 21st-century learners and teachers as a whole.

MATERIALS AND METHODS

The study utilized a quasi-experimental pretest-posttest research design. This design was used to evaluate the effectiveness of modular and social media platforms, such as YouTube and Facebook, in improving the academic proficiency of students in basic calculus.

The participants of the study were two groups of Grade 11 STEM students enrolled in Juan R. Liwag Memorial High School- during the Academic Year 2018-2019 who are taking Basic Calculus as their specialized subject. They were purposively picked on the basis of their comparability. Both groups (Dalton and Bohr) have: the same average grade in their previous math subject; the same number of students; and the schedules of their Basic Calculus classes were in the morning. Dalton, the experimental group, undergone Treatment 1 which is the Modular and Social Media -Based Learning (MSMBL) approach while the control group, Bohr, took the traditional classroom learning (TCL) approach. Each group consists of 42 students. Informed consents and assents were secured prior to experimentation.

Before discussing the topics about introduction to limits, limits of algebraic functions involving infinity, limits of exponential functions, and limits of trigonometric functions, the two were subjected to a 50-item pre-test. The test was standardized since the items came from the regional achievement examination. The different learning approaches and materials were then employed to the participants. Grade 11 Bohr, as a control group, undergone the teaching-learning process in a traditional classroom way through face to face physical learning. On the other hand, Dalton, the experimental group, was given modules and social media-based learning materials such as videos from YouTube and online activities on Facebook. Finally, after more than two months of experimenting, students were given a post-test. The result of the pre-test and post-test were analyzed using an independent sample t-test or student's t-test to determine the answers to the research questions as well as to infer whether there is no significant difference in the performance of the experimental group that was taught modular and social media-based learning materials than the control group who were imparted with the traditional mode approach.

RESULTS AND DISCUSSION

1. Performance in the Pre-test of the Control and Experimental Groups

Table 1 presents the performance in the pre-test of both the control and experimental groups in the 50 items Basic Calculus examination. It can be observed on the table that no students from both groups have reached the proficient and advanced level. The data clearly shows that the students were at the same level of mathematics cognition in terms of their pre-test performance. The results further confirmed that the two groups are comparable since both are in the developing levels with an average of 17.14 for the experimental group and 16.74 for the control group,

Table 1. Pre-test Performance of the Control and Experimental Group

Score	Group				ADJECTIVAL DESCRIPTION
	DALTON (Experimental)		BOHR (Control)		
	F	%	F	%	
1 to 10	0	0.00	3	7.14	Beginning
11 to 20	35	83.33	33	78.57	Developing
21 to 30	7	16.67	6	14.29	Approaching Proficiency
31 to 40	0	0.00	0	0.00	Proficient
41 to 50	0	0.00	0	0.00	Advanced
Total (n)	42	100%	42	100%	
Mean	**17.14**	**Developing**		**16.74**	**Developing**

The pre-test results also revealed that prior to the teaching and learning process the baseline knowledge and the level of proficiency of the learners in limits, limits of algebraic functions involving infinity, limits of exponential functions, and limits of trigonometric functions were still in the same stage which is below average level. This result is related to the finding of Carlson, Madison and West (2015), that "from administering the Calculus Concept Readiness (CCR) to first-semester calculus students at the beginning of the semester revealed severe weaknesses in students' foundational knowledge and reasoning abilities for learning calculus" (p.209). Furthermore, Pedraza (2013), enumerated the following problems why many students were experiencing difficulty understanding Pre-Calculus and Calculus: "bad preparation of the students in primary and secondary levels, particularly in mathematics; wrong teaching methods (mechanical reasoning in the study of Mathematics); prioritization of Mathematics study through the realization of multiple exercises instead of emphasizing the understanding of the main concepts, principles and properties of mathematics by explaining why these concepts, principles and properties are important; lack of qualified teachers and/or the use of updated methods for the teaching of Modern Mathematics, demotivating students in the study of the subject; lack of interest in studying of mathematics by most of the students due to their misunderstanding of its main concepts, properties and principles; insufficient time dedicated by the students for the study of mathematics; and use of non-appropriate books in teaching the subject" (Subia, Marcos, Pascual, Tomas & Liangco, 2020, p.266).

2. Performance in the Post-test of the Control and Experimental Groups

Table 2 displays the results of the post-test in Basic Calculus. It seems that both groups, even though subjected to two different treatments, improved with their Basic Calculus performances. From the developing level, the control group reached the proficient level while the experimental group gets hold of the advanced stage. All of the students from both groups reached the proficient to advanced levels and nobody was at the below-average level in their post-test performances. Sixteen (38.10%) and 26 students (61.90%) from the experimental groups were able to achieve the proficient to advanced levels, correspondingly, while 30 (71.43%) and 6 (14.29%) learners from the control group attained the said levels, respectively.

Table 2. Post-test Performance of the Control and Experimental Group

Score	Group				ADJECTIVAL DESCRIPTION
	DALTON (Experimental)		BOHR (Control)		
	F	%	F	%	
1 to 10	0	0.00	0	0.00	Beginning
11 to 20	0	0.00	0	0.00	Developing
21 to 30	0	0.00	6	14.29	Approaching Proficiency
31 to 40	16	32.10	30	71.43	Proficient
41 to 50	26	61.90	6	14.29	Advanced
Total (n)	42	100%	42	100%	
Mean	**42.88**	**Advanced**		**34.90**	**Proficient**

However, upon looking at the mean rating of the two treatments, the Modular and Social Media-based Learning Materials (experimental) and the Traditional Learning Materials (control), the data shows that the experimental group (Mean = 41.88) have a better average than the control group (Mean = 34.90). The finding clearly shows that the experimental group improved in their proficiency in limits, limits of algebraic functions involving infinity, limits of exponential functions, and limits of trigonometric functions. The results consistently demonstrated higher test scores in the virtual learning environment as opposed to the conventional lecture, regardless of the time in the semester at which the knowledge tests were given. In addition, this occurs because learning methods that use these types of objects may reduce the working memory cognitive load, make the learning more active and therefore facilitate the learning process.This can be supported by the studies of Goldberg and Mc Khann (2000) who investigated the performance of students in a virtual learning environment and compared them with that of students in a conventional lecture.

Zhang et al. (2006) and Kreiner (1997) outlined to further promote active learning. Generally speaking, the objective of active learning practices in videos is to increase the total germane load capacity and consequently improve memory and motivation via self-assessment and the testing effect. Educational computer materials are examples of this type of learning object (Thomas & Brown, 2007) which represents an educational strategy of growing interest (Akl, et al., 2008). These materials have characteristics related to problem-solving, providing the student with different possibilities to elaborate strategies and to achieve their predetermined goals (Ebner & Holzinger, 2008).

3. Significant Difference Between the Post-Test Performances of the Control and Experimental Groups.

As shown in Table 3, there is a significant difference in post-test scores of the two groups of respondents (t=7.42; p<0.001).

Table 3. The significant difference between the Post-Test Results of the Control and Experimental Groups

Group	Mode of Instruction	Mean	Mean Difference	T	Sig.	Decision
Dalton (Experimental Group)	MSMBL	41.88	6.98	7.423**	.00048	Reject H_o
Bohr (Control Group)	TCL	34.90				

This means that the null hypothesis is rejected implying that there is a significant difference between the post-test performances of the control and experimental groups. Upon scrutiny of the scores of students within the treatments, it was evident that the Modular and Social Media-Based Learning (MSMBL) approach group has higher performance and has a more positive impact than those from Traditional Classroom Learning (TCL) approach based on the mean scores presented.

This infers that students who were subjected to modular and online learning performed better in Basic Calculus than their counterparts. The result was validated by the study of Pei and Wu (2019), who stated that online learning could be able to enhance the students' skills and knowledge. The same outcome was shown in parallel research conducted by Stack (2015). The result of his research study proved that examination scores of the students in online classes were higher compared to the traditional class (68.1% vs. 61.6%).

It was found out that a variety of online teaching tools provided students' presence and were effective for cultivating students' thinking as online reviews enable the sharing of information and collaboration. Online educational tools, furthermore, enable a number of metacognitive and self-regulatory processes to be practiced and enhanced. There are also opportunities for the students to reflect on what was presented on the tool (Tarricone, 2011). According to Roschelle (2016), an online mathematics homework intervention produced a positive impact on students' mathematics achievement at the end of a school year which is evident with the result of the current study. Through the use of online platforms such as YouTube and Facebook, the level of proficiency of the respondents was positively affected by the utilization of supplemental instructional materials.

According to the students in the experimental group, in terms of the accumulation of a better understanding of the concepts about Basic Calculus through online involvement, they were able to exercise their critical thinking skills and helped them deepen their understanding of the subject.

They could answer related topics because of the sample problems in the videos, presentation links, and modules and they were more engaged in the teaching and learning process because of their exciting online review classes.

Engagement of students with various online materials is critical since there is a generally positive relationship between the use of learning technology and student engagement and learning outcomes (Chen, Guidry, & Lambert, 2010).

Correspondingly, the students were motivated due to the effect of online video clips with graphical mathematics presentation that was shown to them. They were also provided with different links and online practices which made them be familiarized with the difficult topics of Basic Calculus. The use of video clips for the students, in line with Brame (2016), allows for more efficient processing and memory recall due to its visual and auditory nature which appeals to a wide audience and allows each user to process information in a way that's natural to them. Student motivation, in another facet, is a central part of a learner which is a process of a student to seek attention and become focused on meeting their scholastic objectives and their energies are directed towards realizing their academic potential (Usher & Kober, 2012). The administered online review materials, particularly online tools, are crucially ensured reliable and objective considering students use the materials for improved students' academic self-confidence and academic self-reliance (Alshahrani, Ahmed, & Ward, 2017). With the given value, students found that graphical presentation and animation modes have a positive impact on increasing their understanding and interest in the course through visualization supported by the study of Arrifin (2017).

However, Jennifer Walsh, lead author of the study published in the journal Emerging Adulthood,had different findings on the effect of social media in the academics of the students. She found that "less academic behaviors, such as completing homework and attending class, lower academic trust and more problems affecting their school work, such as lack of sleep and substance use," were encountered by students who spent the most time using social media. Though, she also shared that "there were two activities related to the media that were correlated with higher grade point averages: listening to music and reading the newspaper" (Carter, 2013).

CONCLUSIONS

Pre-test and Post-test questionnaires in Basic Calculus were administered to two groups of Grade 11 senior high school students who were subjected to a Quasi-Experimental Research Design. The groups were taught with two different approaches: the use of the Traditional Classroom Learning Approach (TCL) for the control group, and the Modular and Social Media-Based Learning (MSMBL) model for the experimental group.

The result of the Pre-test revealed that most of the respondents were under the developing stage of their Basic Calculus mathematical ability. Post-tests were administered after the intervention and revealed that there were changes in the academic proficiency of the respondents from either group. The students from the control group reached the proficient level while the experimental group achieved the advanced stage. It was very evident that MSMBL showed a more progressive result than TCL using analysis of the mean scores and frequency distribution. Modular and Social Media-Based Learning approach positively affected the academic proficiency of the students.The use of online materials, including video clips and presentation, as a domain in enhancing cognitive ability to analyze abstract and problem-solving related concepts in line with Basic Calculus, could result in improvisation of knowledge and skills that are deemed to be essential in the mastery of a certain concept in the subject. Students also implied that imparting online-based materials helps extend their level of engagement and motivation to learn and progress in their education.

The lack of two additional groups of participants to deal with possible research risks is a drawback of this analysis. Thus, the researchers recommend that the learning intervention approaches utilized in this study should be conducted to the similar participants utilizing Solomon four-group experimental design to further validate the findings of this research. Likewise, a longer exposure time to treatments may be considered to gather more data regarding its effectiveness as well as the combination of learning pedagogies. Lastly, the effects of different learning approaches on the overall well-being of a student should also be taken into account.

REFERENCES

Akl, E. A., Mustafa, R., Slomka, T., Alawneh, A., Vedavalli, A., & Schünemann, H. J. (2008). An educational game for teaching clinical practice guidelines to Internal Medicine residents: development, feasibility and acceptability. BMC medical education, 8(1), 50. DOI: 10.1186/1472-6920-8-50

Ali, R., Ghazi, S. R., Khan, M. S., Hussain, S., & Faitma, Z. T. (2010). Effectiveness of modular teaching in biology at secondary level. Asian Social Science, 6(9), 49.

Alshahrani, S., Ahmed, E., & Ward, R. (2017). The influence of online resources on student–lecturer relationship in higher education: a comparison study. Journal of Computers in Education, 4(2), 87-106.

Ariffin, A., Samsudin, M., Nurulazam, A., Hamzah, N., & Ismail, M. (2017). Effects of Using Graphics and Animation Online Problem-Based Learning on Visualization Skills among Students. IOP Conference Series: Materials Science and Engineering. 203. 012022. 10.1088/1757-899X/203/1/012022.

Brame, C. J. (2016). Effective educational videos: Principles and guidelines for maximizing student learning from video content. CBE—Life Sciences Education, 15(4), es6. DOI: 10.1187/cbe.16-03-0125

Carlson, M.P., Madison, B. & West, R.D. A Study of Students' Readiness to Learn Calculus. Int. J. Res. Undergrad. Math. Ed. 1, 209–233 (2015). https://doi.org/10.1007/s40753-015-0013-y

Carlson, M., Oehrtman, M., & Engelke, N. (2010). The precalculus concept assessment (PCA) instrument: a tool for assessing reasoning patterns, understandings and knowledge of precalculus level students. Cognition and Instruction, 28(2), 113–145.

Carter, D.(2013). Research: Social media has negative impact on academic performance. Today's Innovation in Education.eSchoolMedia & eCampus News.

Chan, F. & Sidhu, G. (2015). Investigating Learning Challenges Faced by Students in Higher Education. Procedia – Social and Behavioral Sciences 604-612. DOI: https://doi.org/10.1016/j.sbspro.2015.0 4.001

Cervenanská, M. (2013). Need and importance of technology in education. Technologia Vzdelavania, 21(1), 1.

Chen, P. S. D., Lambert, A. D., & Guidry, K. R. (2010). Engaging online learners: The impact of Web-based learning technology on college student engagement. Computers & Education, 54(4), 1222-1232.

DreamBox_Learn. (2013). Learning math early on is important for student success. https://www.dreambox.com/blog/learning-math-early-on-is-important-for-student-success

Ebner, M., & Holzinger, A. (2007). Successful implementation of user-centered game based learning in higher education: An example from civil engineering. Computers & education, 49(3), 873-890. DOI: 10.1016/j.compedu.2005.11.026

Goldberg, H. R., & McKhann, G. M. (2000). Student test scores are improved in a virtual learning environment. Advances in physiology education, 23(1), S59-66.

Kreiner, D. S. (1997). Guided notes and interactive methods for teaching with videotapes. Teaching of Psychology, 24(3), 183-185.

Lazar, S. (2015). The Importance of Educational Technology in Teaching. International Journal of Cognitive Research in Science, Engineering and Education. Vol. 3, No. 1, 2015

Montrieux, H., Vanderlinde, R., Schellens, T., & Marez, L. (2015). Teaching and Learning with Mobile Technology: A Qualitative Explorative Study about the Introduction of Tablet Devices in Secondary Education. PloS one. 10. e0144008. 10.1371/journal.pone.0144008.

Moore, K. C. (2012). Coherence, quantitative reasoning, and the trigonometry of students. In R. Mayes & L.L. Hatfield (Eds.), Quantitative reasoning and mathematical modeling: A driver for STEM integrated education and teaching in context (pp. 75–92). Laramie: University of Wyoming

Moore, K. C., & Carlson, M. P. (2012). Students' images of problem contexts when solving applied problems. Journal of Mathematical Behavior, 31, 48–59

Orleans, A. V. (2007). The condition of secondary school physics education in the Philippines: Recent developments and remaining challenges for substantive improvements. The Australian educational researcher, 34(1), 33-54. DOI: 10.1007/BF03216849

Pawilen, G. T., & Yuzon, M. R. A. (2019). Planning a Science, Technology, Engineering, and Mathematics (STEM) Curriculum for Young Children: A Collaborative Project for Pre-service Teacher Education. International Journal of Curriculum and Instruction, 11(2), 130-146.

Pedraza, J. (2013). What is your opinion that students find difficult in learning introductory/basic calculus? Research Gate.

Pei, L., & Wu, H. (2019). Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. Medical education online, 24(1), 1666538. DOI: 10.1080/10872981.2019.1666538

Roschelle J., Feng M., Murphy R., Mason C. (2016). Online Mathematics Homework Increases Student Achievement Available at https://doi.org/10.1177%2F2332858416673968

Saini, P. (2014). Why is it Important to Think? Retrieved from https://www.quora.com/profile/Poonam-Saini.

Schuster, B. (2020). The importance of math in our lives. https://slicernewsroom.com/3544/academics/the-importance-of-math-in-our-lives/

Smith, N. (2008). Students' emergent conceptions of the fundamental theorem of calculus (Unpublished doctoral dissertation). Tempe: Arizona State University.

Stack, S. (2015). "Learning Outcomes in an online vs traditional course," International Journal for the Scholarship of Teaching and Learning: Vol. 9: No. 1, Article 5. Available at: https://doi.org/10.20429/ijsotl.2015.090105

Subia, G. S. (2020). Treasure Chess: Worthy Contributions of the Game in the Lives of Student Champions. The Normal Lights, 14(1),100-121

Subia, G., Marcos, M., Valdez, A., Pascual, L. & Liangco, M. (2020). Cognitive Levels as Measure of Higher-Order Thinking Skills in Senior High School Mathematics of Science, Technology, Engineering, and Mathematics (STEM) Graduates. Technology Reports of Kansai University. Volume 62, Issue 3, pp 261-268.

Tarricone, P. (2011). The taxonomy of metacognition. Psychology Press.

Thomas, D., & Brown, J. S. (2007). The play of imagination: Extending the literary mind. Games and Culture, 2(2), 149-172. DOI: 10.1177/1555412007299458

Türkkahraman, M. (2012). "The role of education in the societal development". Journal of educational and instructional studies in the world, 2(4). Retrieved from http://www.wjeis.org/FileUpload/ds217232/File/04.turkkahraman.pdf

Usher, A., & Kober, N. (2012). 4. What Roles Do Parent Involvement, Family Background, and Culture Play in Student Motivation? Center on education policy.

Zandieh, M. (2000). A theoretical framework for analyzing student understanding of the concept of derivative. In E. Dubinsky, A. H. Schoenfeld, & J. Kaput (Eds.), Research in collegiate mathematics education IV (pp. 103–127). Providence: American Mathematical Society

Zhang, D., Zhou, L., Briggs, R. O., & Nunamaker Jr, J. F. (2006). Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. Information & management, 43(1), 15-27.

Engr. Judd Edward Z. Hernandez is a licensed civil engineer and a professional teacher. He is currently affiliated with Juan R. Liwag Memorial High School Senior High School as mathematics teacher. He also serves as part-time instructor at Nueva Ecija University of Science and Technology – Gapan Off Campus. He earned his MA in Education major in Mathematics at Wesleyan University Philippines, where he is currently finishing his Doctor of Education Major in Educational Leadership and Management. He finished his BS in Civil Engineering at University of Santo Tomas (España, Manila). He teaches Calculus and other STEM related subjects in SHS and college. He is a national coach for both Scientific Research(Life, Science, Physical Science, and Robotics) and Journalism(Photojournalism). He was awarded as one of the Outstanding Teachers of DepED Division of Gapan City for two consecutive years due to his achievements and contribution in the field of research and journalism. Currently, he is the research coordinator of JRLMHS and his subject of interest in research includes engineering, robotics, intelligent machines, online learning, physical sciences, and innovation.

He is currently teaching Calculus online through his Youtube Channel, his videos are being used by STEM teachers of SHS for distance learning. The content of his video lesson on Youtube focuses on Pre-Calculus and Basic Calculus. Additionally, he developed different Learning Activity Sheets for learners under modular learning in DepED Gapan City. He also contributed action research in school and division level entitled "ALEX – M : Alternative Learning Experience in Mathematics" focusing on virtual learning setup and the use of mobile applications to facilitate learning in Mathematics. Project ALEX - M enabled the students to experience new way of learning through the use of computer based learning material. Also, it helped them choose the appropriate learning material that is applicable to their knowledge and interest, from enrichment activities, peer mentoring, tutoring to watching online videos of the topics.

Dr. Gener Santiago Subia is an interdisciplinary researcher with interests in math, sports, engineering, business and arts. He has undergraduate degrees in Electrical Engineering (TSU) and Mathematics Education (WUP-CPTE). His graduate courses include MAEd Math (with Distinction-Best Grad School Research), MA Psychology (Magna Cum Laude), MBA (Summa Cum Laude) and PhD in Mathematics Education. Civil Service Sub-Prof (10th Place-PPT), Civil Service Prof (1st Place-CAT), Electrical Engineer, Master Electrician, and Professional Teacher are among his eligibilities. He has completed TESDA courses in Portrait Painting (Charcoal and Oil), as well as Computer Education. He received additional certifications when he was schooled at Ateneo De Manila University as a K-12 Math trainer for three (3) consecutive summers and finished the UP-OU-Executive Course in Remote Teaching and Learning last 2020. During his college years, he was a National Chess Champion, and in 2010, he won Best Director and Scriptwriter at ESIHAS, an interschool indie-film competition.

Dr. Subia has written five (5) books for C&E and Educational Publishing House in the areas of mathematics, statistics, and physics. He has about 50 research articles published worldwide, indexed in Google Scholar, Harvard e-library, Asian Citation, Web of Science, and Scopus. His most referenced publication, with 55 citations, is his research on Linear Equation in Algebra, in which he invented a technique for an easier method of solving problems on consecutive numbers. He is currently a member of the Editorial Board of a Canadian-based international research journal, a Web of Science Publons peer reviewer, and the Chief Editor of Wesleyan Scientific Review (WSR).

RAMIL PASCUAL POLINTAN, PhD., is a Public Schools District Supervisor at Deped Nueva Ecija, part time Lecturer at Graduate School-WU-P, and lecturer at Undergraduate of NEUST Carranglan Extension Campus. He finished his BSE major in Mathematics at Wesleyan University Philipppines, MSEd in Education Management at Central Luzon State University, PhD. in Education Management at Nueva Ecija University of Science and Technology. He is also affiliated with various organizations: Member- Knights of Rizal, Commisioned Officer as Lt Col of ARESCOM 1st RCDG. His research jopurney started when he was a classroom teacher continued when given a chance to be a Research Speacialist of DepEd SDONE, where he attended different trainings and capacity building for Action Research (Applied and Experimental) focus on delivery of learning, learning assessment, interventions, and school managemnt which are quantitative, qualitative and MMR study. He also attended seminars on Data Analysis where he developed his knowledge in statistical treatment.

Dr. Philip Ermita, PIE, ASEAN Eng. is currently the Dean of the College of Engineering of University of Perpetual Help System Dalta Calamba, Campus. From 2005-2010, He worked in the different manufacturing industries such as ceramics and electronics manufacturing companies. From 2010 up to the present, he is strongly involved in academic development and innovation in engineering programs through Outcomes Based Education transition both in undergraduate and graduate program. With his strong industry and academe experience, he is also part time faculty in the graduate school and open university of Polytechnic University of the Philippines in Sta. Mesa Manila and University of Perpetual Help System Laguna Graduate School. As a visionary leader, Dr. Ermita is strongly committed to animate engineering education for student's welfare, development and global opportunities. He had earned his Doctorate degree in Engineering Management from Nueva Ecija University of Science and Technology, Nueva Ecija and Masters of Engineering Major in Industrial Engineering in Adamson University, Manila. He also obtained his Bachelor's degree in Industrial Engineering and Diploma in Business Administration from De La Salle University - Dasmarinas, Cavite.

Underlying all of his work to uplift the standards of Engineering education, Dr. Ermita is an active researcher, evaluator, peer reviewer and active participant in different scholarly events, journal publication, conferences and symposiums. Dr. Ermita is also an Accreditor and Evaluator of Philippine Association of Colleges and Universities-Commission on Accreditation (PACUCOA) and Philippine Technological Council (PTC).

“Ang Nasaksihan NG Masinag NA Tabing”:

An Autoethnography of an Online Educator in the COVID-19 Era

Dr. Jerome V. Cleofas

Associate Professor, Behavioral Sciences Department,

College of Liberal Arts, De La Salle University, Manila, Philippines

Email: jerome.cleofas@dlsu.edu.ph

ABSTRACT

This evocative and performative autoethnographic paper presents insights from my experiences as a social sciences teacher in a university conducting online classes for one whole term in the midst of the COVID-19 pandemic. As an educator engaged in online teaching during a pandemic, I have experienced losses (boundary of work and home, general sense of wellbeing, and clear perspective of the future), and gains (new educational competencies, more eyes to navigate a society in quarantine, and hope for the youth). I creatively present these findings through a poem entitled, "Ang Nasaksihan ng Masinag na Tabing" (The Things that the Radiant Screen Sees).

Keywords: autoethnography, COVID-19, online classes, online teaching, poetry

INTRODUCTION

The COVID-19 pandemic has transformed the way we do education. In the Philippines, all levels of education have been shifted to pure online mode because of the need for social distancing to prevent the spread of the virus. This transition from traditional to online classes has not been easy. Planning and implementing online classes have faced many problems, such as: (1) lack of access to reliable and affordable internet services in many parts of the country; (2) lack of electronic gadgets and material technology, especially among poorer students and teachers (Pastor, 2020; Uy-Tioco, 2019); (3) lack of technological and pedagogical competencies for educators to conduct online classes, and; (4) incomplete institutional readiness of schools to offer virtual learning (Marcial, et al, 2015; Pastor, 2020).

News and social media have highlighted stories of hardships and sacrifices of students, teachers and their families to meaningfully engage in online education (Casilao, 2020; Magsambol, 2020). The Department of Education have been criticized for pushing through with school year 2020-2021, despite the many unaddressed gaps (CNN Philippines, 2020). For many days since the beginning of quarantine, the social media movement #AcademicFreezeNow has trended in the Philippines, with a call to halt opening of classes so that no student is left behind (Lalu, 2020).

Moreover, these issues in the education sector are embedded within the larger context of the persisting rise of COVID-19 cases and deaths in the Philippines, and a state of quarantine that has been the longest in the world. After seven months, the Philippines has over 300,000 cases registered (Sabillo, 2020). The pandemic also hampered the economic sector of the country, causing business shutdowns and an unemployment rate of more than 45%, with the poorer segments of society disproportionately affected by these losses (Esguerra, 2020). Alongside the health and economic downturns are political issues such as the closure of ABS-CBN, the largest broadcasting network in the country; the enactment of the controversial Anti-Terrorism Law, and; corruption scandals (The German-Southeast Asian Center of Excellence for Good Governance, 2020).

I have been teaching health and social science courses for more than a decade. However, conducting classes online, with an ongoing pandemic and a plethora of socioeconomic crises transpiring in the backdrop, has been a great challenge for me. I have recently concluded a term in my university, where I taught Science, Technology and Society (STS), and Introduction to Sociology subjects to college students through online mode. I was able to use the theories and concepts in these disciplines to situate the teaching-learning process to current events.

Wesleyan Scientific Review

For this paper, in order to make deeper sense of the role I performed as an online social sciences teacher in a university in the midst of the COVID-19 pandemic, I made use of an autoethnographic approach, where I used my own lived experiences to represent larger sociocultural contexts (Rambo & Ellis, 2020). The reflections found in this paper can help illuminate the plight of teachers faced with multifaceted challenges during this pandemic. The insights can inform educational leaders and policy makers in understanding the stories of educators like me, to be able to formulate and supportive empowering programs and procedures for faculty during these trying times.

MATERIALS AND METHODS

Autoethnography as a Research Design

The research design that I used for this project is autoethnography, which is both a process and a product. It makes use of the life story of the author and integrates it with ethnography. Through this design, I was able to use my experiences, thoughts and emotions, and link them with larger sociocultural contexts (Rambo & Ellis, 2020). Through autoethnography, I attempted to represent a specific identity— a college educator teaching online— navigating the context of distance education in the time of the COVID-19 pandemic in the Philippines.

More specifically, this autoethnography is both evocative and performative. Evocative autoethnography aims to describe and represent the author's personal experience with the intent to stir emotion of the reader. Despite being critiqued for it for being unscientific and subjective, evocative autoethnography can potentially present the nuances of human behavior, illuminate social injustices and encourage social action (Gergen & Gergen, 2018). On the other hand, performative autoethnography aims to enact the identity through performance, either by text or play. Spry (2001) asserts that the dialogical nature of performance integrated in autoethnography encourages and challenges the writer to interact with the sociocultural contexts that shaped his experience. In this paper, I choose poetry as my medium to take advantage of the potentials of performative autoethnography.

Reflexivity Statement

The main participant of autoethnography is the researcher, thus articulation of reflexivity I am an early millennial, cisgender, queer man. I am a middle-income earner. I was born and raised in the Philippines. I have resided in Manila all my life. I graduated as a nurse but proceeded to work in the academe, where I have been for more than a decade. I eventually earned my doctorate degree in Sociology. I teach and conduct research in the fields of health and social sciences. As an artist, my fields are in songwriting and poetry. I have been publicly performing spoken word since 2015 and have won some poetry slams since then.

Data Collection and Analysis Procedure

I used my experiences in planning and implementing online classes, interacting synchronously and asynchronously with my students and colleagues, and other aspects of my life outside my work as an educator during the entirety of my recently concluded term (July to September 2020) to draw out my reflections. In my retrospective reflective processes, I read and reread correspondences,

social media posts and communications and all the teacher-student interactions that have been captured by our learning management system, and documented them through journaling to be able to further gain more insights from my own memories.

RESULTS AND DISCUSSION

As a result of this analytical introspective process, I have categorized my thematic reflections to losses and gains.

Section 1: my losses from online teaching

Through the 14-week long term, I learned that there are things that I lost along the way as I transitioned from a traditional classroom teacher in the pre-COVID-19 era to an amateur online teacher during a global pandemic. These are: (1) loss of the boundary of work and home life; (2) loss of a general sense of wellbeing, and; (3) loss of a clear perspective of the future.

Verse 1: Loss of the boundary of work and home (WFH)

Lumiwanag ang masinag na tabing	*The radiant screen brightens*
Natagpuan ang sarili sa parehong piitan	*And finds itself in the same prison*
Ang hindi matakasang tahanan	*An inescapable home*
Ang espasyong pinilit maging silid-aralan	*A space forcibly transformed into a classroom*

Like many forms of employment, teaching has also shifted to work-from-home during the pandemic. Because of the need to quarantine, I have to transform my current small one-bedroom condo unit to a workplace. The space where I usually rest and relax in private can now be seen in glimpses by my students and co-workers that I have video conferences with. During work time, I would be interrupted by personal and home related concerns: preparing meals, cleaning the house, fixing broken fixtures, tending for my dogs. After work, my personal time would be interrupted by emails and calls from students and colleagues. The weekends when I used to frequent the mall for leisure pre-COVID-19, are now spent in creating modules and learning materials, or checking requirements that are now more complicated than they used to pre-pandemic. My colleagues who live with their family also have disrupted work-life balance, especially those who have children whose needs they have to attend to from time to time even during work hours. Some of my students also share that even being in bed is stressful for them, because they had to attend classes and do their work in their bedrooms because everybody else in the house have school or work to attend to.

My challenging WFH experiences are similar to those experienced by teachers in a qualitative study in Indonesia (Purwanto, et al, 2020). Like me, the teachers describe that the atmosphere they have at home is not conducive for work. There is the temptation to always rest. Also, work issues further encroach on home concerns, especially that the internet and other resources are not completely provided by the school.

Verse 2: Loss of a general sense of wellbeing

Lumiwanag ang masinag na tabing
Sawa na ang kamera sa naaaninag na larawan
Pagod na mga ngiti, bagsak na katawan
Naiwanang nakabukas nang ito ay makatulugan

The radiant screen brightens
The camera is tired of the images it sees
Tired smiles, and a heavy body
And as the user slept, the screen was left open

Despite being restricted from moving about, I have an overwhelming sense of tiredness during the entire length of the term. Because of the overlapping of home and work responsibilities in time and space, I would often feel restless. I used go to the gym every day to run on the treadmill and swim. But because most fitness centers are closed during quarantine, I remained sedentary. I gained weight because I did not have many healthy choices for food. My migraine, sleeplessness and pain disorders also returned. Aside from my declining physical health, I also feel that my mental status have been altered as well. I would get easily moody, sad and anxious. I am in a constant state of worry not only because of the stressors of adjusting to a new mode of teaching, but also due to the current state of the world. Our department chairperson conducted a feedback survey among the faculty, and like me, my colleagues also report being more exhausted in carrying out online teaching compared to the pre-pandemic, traditional classroom setup. At every start of my sessions, I would always check in on my students prior to the lesson proper. They would also share feelings of being overburdened with schoolwork and declining psychological wellbeing. Also, I, my colleagues and students all admit to the ill effects of being socially isolated for a long period of time.

It is somehow comforting to know that the general population, and particularly the education sector, are also experiencing these health declines as suggested by a voluminous amount of evidence already available about COVID-19. Sahu (2020) has noted that teachers, students and their families are stressed due to the many pandemic and education-related anxieties we are continually facing. A study in Italy found that students and staff in a university demonstrated sleep disturbances, insomnia, depressive and anxious symptoms (Marelli, et al, 2020). Sedentary lifestyle, increased screen and sitting times and self-isolation were seen to be associated with poor mental health outcomes in the USA (Meyer, et al, 2020). It has also been found that while employing proper coping mechanisms are linked to subjective wellbeing, their positive effects are only small and non-significant during the pandemic (Zacher & Rudolph, 2020).

Verse 3: Loss of a clear perspective of the future

Lumiwanag ang masinag na tabing
Wala nang dalampasigan, mga bakasyunan
Mga kalendaryong walang laman
Tila walang hanggan ang hanggang kailan?

The radiant screen brightens
It no longer sees the oceans, the excursions
The calendar remains empty
It seems "until forever" answers, "until when?"

I am in a country that is still in the first wave of COVID-19. The cases and deaths are rising still. As a health social scientist, I am aware of sociocultural determinants of health and disease. I can tell that the current management of the pandemic in our country is far from successful. When I log into social media, I am bombarded with bad news about my country and elsewhere—not just about the global pandemic and how we are still far from resolving it, but also from its economic effects that impact the margins of society, and the other social injustices that still persist in the world. Almost daily, a Facebook friend or Twitter account I follow has lost a loved one from COVID-19. In STS, I and my students discuss about social forces that shape medicine. COVID-19 and its poor handling is something that comes up in our conversations in class in every session. In some of their responses, I can feel their frustration, disappointment, helplessness and lack of optimism about their future careers and the current state of the country and the rest of the world.

This sense of hopelessness I have experienced during this pandemic is also echoed by scholarly literature. A study among young adults— the demographic where I and my students belong to—suggests that hopelessness is associated with pandemic distress and anger (Shanahan, et al, 2020). I also resonate with the findings of the qualitative study of Lovric et al (2020) among university students who have expressed multiple sources of fear during the pandemic: contracting COVID-19, loved ones contracting the virus, interaction with others in public, learning difficulties and concerns over the management of the public health crisis.

Section 2: My gains from online teaching

However, while we have lost so many things and opportunities because of this pandemic, and it is understandable to feel pessimism during these trying times, this transition to the "new normal" is not without positive outcomes. From my experiences, I glean that my gains from online teaching are: (1) new educational competencies; (2) eyes to navigate a society in quarantine, and; (3) hope for the youth.

Verse 4. Gaining new educational competencies

Masinag pa rin ang liwanag ng tabing
Isang elektronikong puno ng kaalaman
Natatanging armas habang wala pang kinabukasan
May kaakibat na hirap, pero nakakasanayan

The radiant screen remains bright
One device full of knowledge
The only weapon while tomorrow's out of sight
That can be adapted to, despite its challenge

In attempting to adapt to the sudden shift of delivery of education, there are many things that I had to learn, unlearn and relearn. As a millennial, I feel that I am tech-savvy enough to navigate the technological requisites of conducting a full online class. Familiarizing myself with the features of our learning management system, and planning a structured educational experience, while taking into consideration the volatile situation where I and my students are at the moment, has taught me to be patient, inquisitive and creative. In my small space at home, I had to be a teacher, IT manager, designer, videographer and counsellor in one. Designing a virtual educational experience that maximizes learning through created and curated content, and varying individual and collaborative activities, while being flexible enough to consider students' needs and limitations, and relevant to the current times, is challenging yet fulfilling. My colleagues and I would discuss about our best practices and celebrate our small victories as we master managing online classrooms. Despite experiencing hardships, students have expressed their positive regards

about the new skills and learnings they have gained from both the content and process of virtual learning.

My experience of gaining new competencies in conducting distance education is not far from other Filipino teachers involved in the study of Alea, et al, (2020). Like me, these teachers are highly aware of the pandemic, and cognizant of the need of the educational system to be transformed. They expressed favorable levels of readiness to shift to online mode, despite the limited resources. We are fortunate that online education advocates have been actively learning about this mode of education pre-COVID-19, so there were frameworks we could use as we embarked on our own online teaching journeys, despite individual and institutional challenges (Saqr & Wasson, 2020).

Verse 5. Gaining eyes to navigate a society in quarantine

Masinag pa rin ang liwanag ng tabing
Ito ang matalik na kaibigan
Upang makasama ang mga kaibigan
At makita ang mundong taglay ng ibang piitan

The radiant screen remains bright
This is the new best friend
To meet other friends
And view the world from other confinements

"I wonder what the outside world looks like…?" is a question that I have frequently asked myself while quarantined at home for eight months. Aside from images in social media, I have no other means to see beyond the limited space that I am allowed to explore. However, being an online teacher, I am able to learn about the conditions of other places through the eyes of my students. Through their sharing in our class, I am able to gaze at the space that they occupy. I learn about the conditions of the towns and cities that I used to visit, where they reside. And because classes are held online, I have students who are staying in parts of the Philippines that are distant from the university. It felt like having a hundred more pairs of eyes every time I read student outputs about how our lessons apply to their circumstances. Furthermore, because our studies are social scientific in nature, we are able to describe and analyze our personal situations and connect them with larger social context and forces that shape our lives, thereby increasing the sense of shared environment.

This introspection activity has led me to have a deeper appreciation for scholars who continually remind the general population to keep social connections intact via virtual presence while in quarantine. Interacting with loved ones and social networks— and in my case, students and colleagues through online teaching— helps us cope better while in isolation. Continuous exchange of cultural and intellectual creations, such as those that I and my students produce as we interact in our virtual classrooms, improve our psychosocial wellbeing, provide a sense of normalcy, and protect us from mental distress (Courtet, et, al, 2020).

Verse 6. Gaining more hope for the youth

At hangga't masinag ang liwanag ng tabing
Bagama't ang panahon at mundo'y nasa dilim
Magpapatuloy ang mga nabiting hangarin
Dahil masmaliwanag pa rin ang taong nasa harap ng tabing

And as long as the radiant screen remains bright
Despite the world and the times are in darkness
Interrupted dreams will continue
Because the one in front of the screen, shines more radiantly

Despite the crises we are experiencing at present and the gloomy outlook of the future, my optimism has not been completely dampened. While I sense a large deal of frustration among my students in class discussions and requirements, they would also propose solutions on how our current problems could be addressed. They are still able to come up with insightful and creative outputs. Resilience is an overly romanticized Filipino trait; however, this value is demonstrated by my students when they are able to accomplish their tasks, despite hurdles such as family and health problems, poor internet connection and lack of resources. Some of them even actively assist faculty members who are technologically challenged, so that online classes could resume smoothly. Most of my students are vocal about their stand against social injustices, their appraisal of the COVID-19 management in the country and the world, their fight against environmental issues and climate change, and their call for sustainable and equitable educational reforms. Their passion, enthusiasm and grit for social change, even during these trying times, sustains my hope for a better future.

My experience with my students highlights the value of building the agency and resilience of the youth through civic engagements. Pavarini, et al, (2020) suggests that this could be done by coproduction of research and peer-led interventions among the youth. Similar to what I did for my subjects this term, I asked students to create projects and research that place them in the forefront of active interventions for today's social problems. Walsh (2020) explains that in order to gain individual and family resilience, one should reflect on the past, find meanings in the events happening at the present and having hopeful and positive meaning for the future.

Theoretical Implications

In order to contribute my reflections to knowledge building while remaining authentic to my personal and social contexts, I situate my findings in Filipino psychology. More specifically, I appeal to the concept of Katatagan (Resilience) by Hechanova, et al, (2015). In their framework, they attempted to describe Katatagan through the experience of disaster survivors. In disaster science, pandemics such as COVID-19 are considered as a form of disaster. My experience as an online educator in this period of crises, I was able to relate with the underlying dimensions of Katatagan. Specifically, despite the internal and external struggles, I was able to find and cultivate my strengths (Kalakasan), manage my physical and mental wellbeing (Katawan; Kalooban), establish a sense of normality and routine in this modified teaching mode (Kinagawiang Gawain), maintain social ties (Kalutasan at Kaagapay) and nurtured an optimism towards the future (Kinabukasan).

The poem: "Ang Nasaksihan ng Masinag na Tabing"

As a result of my reflections in this autoethnographic project, I was able to write a creative output to provide an evocative and performative presentation of my insights. The poem is entitled, "Ang Nasaksihan ng Masinag na Tabing" (The Things that the Radiant Screen Sees). As a teacher conducting online classes at home, I spent practically all of my time in front of a computer screen. It made me think: if there is one witness to how my life was during quarantine, it would be my screen. Personifying my trusted gadget, and then looking at myself through its eyes helped me see myself and my experiences better. Despite lacking linguistic availability of some modern and contemporary English terms and concepts in Tagalog (e.g. screen, computer, online), I chose to still

write in my language. The obvious struggle in linguistic choices and limitations manifested in the writing demonstrate the uneasiness that online classes has made me feel as I engaged in it.

CONCLUSION

As an educator, planning and implementing online classes in the midst of the COVID-19 pandemic is truly a daunting but fulfilling task. While there are many obstacles in providing efficient delivery of online education, such as the loss of sense of space, time, wellbeing and positive outlook, engaging in virtual learning can reward a teacher with new competencies, reimagined social relations with students and hope for the youth. However, this should not be seen as merely a half-glass-full/half-glass-empty scenario, but rather as a challenge for institutions to improve the sociopolitical environment and public health situation in the Philippines in order to address the losses, and optimize the gains among teachers, students and other stakeholders of education embarking on this journey of online learning.

The findings of this study must be taken with caution as the nature of this study is highly characterized with my personal subjectivities, therefore transferability of results is greatly limited. It is therefore recommended that follow up studies engaging more teachers can be done, and the thematic reflections of this study may be used as potential contexts or variables.

Doing creative projects such as performative autoethnography can be done by other stakeholders of online education during COVID-19: students, parents, administrators and staff. The humanities and the arts are powerful tools towards self-knowing and reflective practice to understand one's world, and device innovative ways to bring awareness and address the problems they find.

REFERENCES

Alea, L. A., Fabrea, M. F., Roldan, R. D. A., & Farooqi, A. Z. (2020). Teachers' Covid-19 awareness, distance learning education experiences and perceptions towards institutional readiness and challenges. International Journal of Learning, Teaching and Educational Research, 19(6), 127-144.

Casilao, J. L. (2020, June 26). Mt. Province teachers walk kilometers to get internet signal for webinar. GMA News Online. https://www.gmanetwork.com/news/news/nation/744404/mountain-province-teachers-walk-kilometers-for-training-webinar/story/.

CNN Philippines. P. (2020, October 5). DepEd claims victory over COVID-19 as classes start. cnn. https://www.cnnphilippines.com/news/2020/10/5/COVID-19-pandemic-school-opening-DepEd-Briones.html.

Courtet, P., Olié, E., Debien, C., & Vaiva, G. (2020). Keep socially (but not physically) connected and carry on: preventing suicide in the age of COVID-19. The Journal of clinical psychiatry, 81(3), 0-0.

Esguerra, D. J. (2020, August 17). Adult unemployment reaches record-high 45.5% in July - SWS. INQUIRER.net. https://newsinfo.inquirer.net/1322567/adult-unemployment-reaches-record-high-45-5-in-july-sws.

Hechanova, M., Waelde, L., Docena, P.S., Alampay, L.P., Alianan, A.S., Flores, M.J.B., Ramos, P.A.P. and Melgar, M.I.E., (2015). The development and initial evaluation of Katatagan: A resilience intervention for Filipino disaster survivors. Ateneo De Manila University.

Kenneth J. Gergen & Mary M. Gergen (2018): Doing things with words: toward evocative ethnography, Qualitative Research in Psychology, DOI: 10.1080/14780887.2018.1430004

Lalu, G. P. (2020, September 12). Students tell CHEd's De Vera: We already sent academic freeze proposals last July. INQUIRER.net. https://newsinfo.inquirer.net/1334309/students-tell-cheds-de-vera-we-already-sent-academic-freeze-proposals-last-july.

Magsambol, B. (2020, June 25). During pandemic, student climbs a mountain to send class requirement. https://www.rappler.com/nation/student-climbs-mountain-send-class-requirement-coronavirus-pandemic.

Marcial, D. E., Caballero, R. D. B., Rendal, J. B., & Patrimonio, G. A. (2015). I am offline": measuring barriers to open online learning in the Philippines. Інформаційні технології і засоби навчання, (45, вип. 1), 28-41.

Marelli, S., Castelnuovo, A., Somma, A., Castronovo, V., Mombelli, S., Bottoni, D., ... & Ferini-Strambi, L. (2020). Impact of COVID-19 lockdown on sleep quality in university students and administration staff. Journal of Neurology, 1-8.

Meyer, J., McDowell, C., Lansing, J., Brower, C., Smith, L., Tully, M., & Herring, M. (2020). Changes in physical activity and sedentary behaviour due to the COVID-19 outbreak and associations with mental health in 3,052 US adults.

Pastor, C. K. L. (2020). Sentiment Analysis on Synchronous Online Delivery of Instruction due to Extreme Community Quarantine in the Philippines caused by Covid-19 Pandemic. Asian Journal of Multidisciplinary Studies, 3(1), 1-6.

Pavarini, G., Lyreskog, D., Manku, K., Musesengwa, R., & Singh, I. (2020). Debate: Promoting capabilities for young people's agency in the COVID-19 outbreak. Child and Adolescent Mental Health, 25(3), 187-188.

Purwanto, A., Asbari, M., Fahlevi, M., Mufid, A., Agistiawati, E., Cahyono, Y., & Suryani, P. (2020). Impact of Work From Home (WFH) on Indonesian Teachers Performance During the Covid-19 Pandemic: An Exploratory Study. International Journal of Advanced Science and Technology, 29(05), 6235-6244.

Rambo, C., & Ellis, C. (2007). Autoethnography. The Blackwell Encyclopedia of Sociology, 1-3.

Sabillo, K. (2020, October 1). With 314,079 total cases, PH now among top 20 countries with COVID-19. ABS-CBN News. https://news.abs-cbn.com/news/10/01/20/philippines-covid19-cases-coronavirus-infections-tally-update-oct12020.

Sahu, P. (2020). Closure of universities due to Coronavirus Disease 2019 (COVID-19): impact on education and mental health of students and academic staff. Cureus, 12(4).

Saqr, M., & Wasson, B. (2020). COVID-19: Lost opportunities and lessons for the future. International Journal of Health Sciences, 14(3), 4.

Shanahan L, Steinhoff A, Bechtiger L, Murray AL, Nivette A, Hepp U, Ribeaud D, Eisner M (2020). Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study. Psychological Medicine 1–10. https://doi.org/10.1017/ S003329172000241X

Spry, T. (2001). Performing autoethnography: An embodied methodological praxis. Qualitative inquiry, 7(6), 706-732.

The German-Southeast Asian Center of Excellence for Good Governance. (2020). Asia in Review SEA Philippines 2019-2020. German-Southeast Asian Center of Excellence for Public Policy and Good Governance (CPG). https://www.cpg-online.de/asia-in-review-sea-philippines-2019-2020/.

Uy-Tioco, C. S. (2019). 'Good enough'access: digital inclusion, social stratification, and the reinforcement of class in the Philippines. Communication Research and Practice, 5(2), 156-171.

Walsh, F. (2020). Loss and resilience in the time of COVID-19: Meaning making, hope, and transcendence. Family process, 59(3), 898-911.

Funding

There was no funding received for this study.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Dr. Jerome V. Cleofas is a registered nurse and health social scientist. He is currently an Associate Professor and the Graduate Program Coordinator of the Behavioral Sciences Department, College of Liberal Arts at the De La Salle University (Taft, Manila), where he also obtained his PhD in Sociology degree, major in Family, Health and Population Dynamics. He earned his MA in Nursing degree at St. Paul University Manila, where he used to serve as the Senior Research Associate and Planning Coordinator. He obtained his BS Nursing degree at Far Eastern University, where he graduated cum laude. He teaches various courses in social sciences, health sciences and research in both undergraduate and graduate levels.

Sustaining Kankana-ey in the Community and the Select Schools in Baguio City

Ruby A. Gabor[1], Elaine Grace J. Dizon[2] & Adamson N. Labi[3]

[1]English Teacher, North Luzon Philippines State College, Candon City, Ilocos Sur

[2]English Teacher, Saint Louis University, Baguio City

[3]English Teacher, Benguet State University, La Trinidad, Benguet

rubyabayagabor@gmail.com

ABSTRACT

In terms of language sustainability, language and curriculum variety maximizes chances for learners to become more successful. This research focused on determining thedetermination of awareness of Kankana-ey community on their language, reasons for language loss or decrease in language proficiency including the strategies to sustain the language. The study used the qualitative research or mixed method with interview and Focus Group Discussion (FGD) as data gathering techniques. In agriculture, 86.36 percent of the concepts are learned inside the community while 13.63 percent of the concepts are learned outside the community. Kankana-ey terms used in technology were influenced by outside knowledge. Kankanaey concepts were either becoming less important or growing stronger. It can be concluded that 78 percent of the concepts in agriculture are growing stronger while 22 percent are becoming less important. In terms of religion, 83.33 percent of the concepts were growing stronger while 16.67 percent were becoming less important. Along technology concepts, there were 93.75 percent which were growing stronger. Likewise, along medicine, 93.33 percent were growing stronger while 6.67 percent were becoming less important. Finally, on the concept of sports, 92.86 percent were growing stronger while 7.14 percent were becoming less important. The language was somehow "put aside" or less prioritized because of the migration of young people or the 2nd or 3rd generation, because they had to adapt to the languages used in the city or place of migration. While it was true that the language is still being used, for its preservation, the language must be taught to the 2nd and 3rd generations. To preserve the vocabulary, innovative and fascinating forms must be added. The more one uses the language, the more it is preserved.

Keywords: sustaining, Kkankana-ey, community, select schools, Bbaguio Ccity

INTRODUCTION

Sustainable use of Kankana-ey in this paper is the ability of the speakers of the language to maintain what they have learned for a long period of time. Based on the definition by Elaha (2003: 90), sustainability in a language is achieved through being exposed to the culture of the target language. According to numerous studies on sustainability such as Tilman (1996), Elton (2000) and Odum (2005), increasing diversity, increases stability. In terms of language sustainability, language and curriculum variety maximizes chances for learners to become more successful (Pashler 2008: p.116). According to numerous studies on sustainability such as Tilman (1996), Elton (2000) and Odum (2005), increasing diversity, increases stability. In terms of language sustainability, language and curriculum variety maximizes chances for learners to become more successful (Pashler 2008: 116).

The existence of language cannot be separated from human life. According to Holmes (1992), every language represents the temple in which the speaker's soul is his/her devotee. It seems that everything related to human life in the society involves language because it is through the language that interaction among tribes, ethnic groups, and religions can happen. However, language is not always able to maintain by the ethnic group especially in the multilingual societies.

The term "Kankana-ey" is a linguistic category used by non-Cordillerans to refer to the inhabitants of Western Mountain Province, Northeastern Ilocos Sur and the Northern section of the province of Benguet.

Wesleyan Scientific Review

Kankana-ey-speaking people were called mangalkali by the Ibaloi in the early days. On the other hand, the Kankana-ey call the Ibaloi, mangatebekbek.

Historically, the Kankana-ey were nomadic, always in search of land with water suitable for farming. Because of this and other reasons like the onset of epidemics, these people were distributed in the northern part of Benguet and southern part of Mt. Province. Others preferred to settle in the place where the sun rises and found themselves in Palatang, now called Loo. Some went further east and settled in Baugan, now Cayapas and became the great grandparents of the Kankana-eys in Eastern Buguias. Still others followed the sunset in Lagon, now Bakun; on settled in Nangkayang, now Mankayan; and in Palina, now part of Kibungan: they were the ancestors of the Kankana-ey in Mankayan, Bakun, Kibungan, and Kapangan.

These Malay people move in groups., This phenomenonwhich explains the fact thatwhy the Kkankana-ey live in clusters which are located several kilometers away from other clusters.

The Kankana-ey of Benguet and Mountain Province trace their roots to the group of Malay people who travelled from the lowland areas. These Malays followed the Amburayan river and Abra rivers going upstream and finally reached a cave in Namilingan, now a part of Bauko, Mt. Province.

Kankana-ey towns are the sources of the main rivers that go down to La Union, Pangasinan, Abra and the Ilocos, namely, Amburayan, Abra, and Agno rivers. Amburayan river traces its roots from Kapangan and Kibungan while Abra river traces roots from Mankayan.

The Kankana-ey specifically occupy the municipalities of Buguias, Mankayan, Kibungan, and Bakun; they are also found in some parts of Atok, Kapangan and Kabayan. Due to the continuous movement and intermarriages, Kankana-ey are found in Itogon, Tuba and other parts of Benguet and in Baguio City.

The Kankana-ey can be found also in La Trinidad, Benguet, the capital town of the province. Most of the areas inhabited by Benguet Kankana-ey are primarily agricultural. Mining, both small-scale and large-scale, is found in Mankayan, Bakun and Itogon. The municipality of Mankayan is the location of the Lepanto Consolidated Mining Corporation (LCMCo). Buguias, Bakun, Kapangan, and Kibungan as well as Atok are primarily agricultural areas. The above-mentioned barangays of Itogon municipality that are inhabited by Kankana-ey are small-scale mining areas.

The Northern Kankana-ey ethnolinguistic group consists of the inhabitants of the municipalities of Sagada and Besao, including those who migrated to other places. Found in the western portion of Mountain Province, these municipalities are bounded on the east by the municipalities of Bontoc; the west by the municipalities of Cervantes and Quirino, Ilocos Sur; on the north by the province of Abra; and on the south by the municipalities of Tadian and Bauko. They are accessible from Baguio through the Halsema Highway or Mountain Trail and from Bontoc through the Bontoc-Sagada road.

The Kankana-ey comprise the third largest cultural group in the Cordillera, after Ifugao and Bontoc cultural groups. There are two Kankana-ey subgroups: the Northern Kankana-ey of Mt. Province and the Southern Kankana-ey of Benguet. The Northern Kankana-ey, known as Lepanto

Igorot, Aplai or Iyaplay inhabit the municipalities of Besao, Sagada, Tadian, Bauko and Sabangan. The Southern Kankana-ey, meanwhile, inhabit the municipalities of Mankayan, Bakun, Kibungan, Buguias and the upper half of Kapangan.

Dominating the Northwest are the Kankana-ey, speaking Kalkali; a dialect similar to the Bontoks and akin to the Iloko.

Moss writing in 1920 specified the two kankana-ey groups: Kankana-ey Igorot of Northern Benguet and almost all the people living in the Amburayan and Southern Lepanto, and the inhabitants of Northern Lepanto.

Keesing noted the Kankana-ey dialect variations from the district. He pointed out that kankana-ey differs from the Ifugao language spoken across the mountains on the eastern Cordillera slopes. The contrast with Tinggian, spoken in Abra valley and with Bontoc, are less yet marked. No study was available showing the relations of the Kankana-ey dialect with the Iloko of the adjacent communities.

Based on Ethnologue, a web-based publication that contains information about the 7,099 living languages in its 20th edition, it puts Kankana-ey a level 5 language status. Accordingly, the Expanded Graded Intergenerational Disruption Scale (EGIDS), a tool to measure the vitality or the status of a language in terms of endangerment or development, states that a level 5 language is Developing. The language is in vigorous use, with literature in a standardized form being used by some though this is not yet widespread or sustainable. Developing language brings into focus the degree to which the ongoing use of the language is supported and reinforced by the use of the language in education. This largely focuses around issues of standardization and literacy acquisition and the degree to which those are institutionally supported and have been adopted by the community of language users.

Since the language is in vigorous use, it is imperative to ensure language sustenance (Mesthrie, 1999) as the continuing use of the language in the face of competition from a regionally and socially powerful or numerically stronger languages like Ilokano (being the lingua franca) and even Filipino and English.

This research may be significant among community stakeholders like the local residents themselves in terms of, but not limited to, language sustenance or preservations. This will also aid language documenters in arriving at appropriate materials (academic or otherwise) including local literatures. Policy-makers, too, may be guided on their works of legislation.

This paper also intends to contribute to prevent the Kankana-ey language from becoming unknown. The language may be at a risk of being lost when it is no longer taught to younger generations, while fluent speakers of the language (usually the elders) die. Language sustenance is a situation where a speaker, a group of speakers, or a speech community continues to use their language even when there are other languages available.

In consideration of some key ethics principles, the researchers sought the participant's verbal consent. This is to ensure that the key informants will participate in the study voluntarily and that the study will not cause them harm; that the research is independent and impartial and the informant's welfare is protected.

Over the years, a great deal of variations of Kankana-ey have evolved due to the richness of the language. Hence, the researchers would like to know the following:

1. What do the people (the Kankana-ey community) know and do about their language?
2. What are the reasons for language loss or decrease in language proficiency?
3. How can the community and school sustain Kkankana-ey as a language?

MATERIALS AND METHODS

The study used the qualitative research or mixed method with interview and Focus Group Discussion (FGD) as data gathering techniques. These are the profiles of the participants of the research. Before their selection, the researchers made sure that these six (6) participants are fluent speakers of the language. The first participant is 20 years old and single. He is fluent in Kankana-ey having exposed in a language community for 15 years. He can also speak other languages like Ilocano, English, and Filipino. His profession is teaching.

The second participant is 37 years old and married. She stayed in a community that speaks the language for 16 years. Aside from Kankana-ey, she can speak Ilocano, English and Filipino. She is a professor in the university.

The third participant is 38 years and married. For all his life, he stayed in a language community where he mingled with elders. He can speak Bontok, Ibaloi, English, Filipino, and Thai. He is also in the teaching profession.

The fourth participant is 29 years old and single. He stayed in a language community for 15 years. He can speak English and Filipino fluently. He is an EFL Teacher.

The fifth participant is 39 years old and married. She stayed in a language community for 20 years. She can speak Ilocano, English and Filipino. She is a housewife.

The last participant is 39 years old and married. He spent nearly 30 years using the Kankana-ey language. He is also well-versed in Ilokano, English, and Filipino. He is a teacher by profession, but now working as a freelance musician.The researchers informed personally or through telephone call the six informants about the research being conducted. On November 8, 2017, the informants were invited at SMART FITS Centrum on Bonifacio Road in Baguio City for the actual conduct of the interview and activity on language documentation. Upon arrival at the site, the researchers introduced each informant to one another for rapport to be established. They were then explained the purpose of the research study and how the activity will be done.

The informants were given six broad categories of concepts: agriculture, education, religion, technology, medicine, and sports. Using Kkankana-ey and its variants, the informants were asked to write on strips of papers words related to the categories given. After a careful deliberation, they posted the words on color-coded manila papers. Consequently, they brainstormed if those classified concepts are a result of an inside or outside knowledge in the language community. Finally, it was the informants who determined if the words are considered growing (as shown by an arrow up symbol) or if these are dying (as indicated by an arrow down). The documentation process lasted for three hours.

RESULTS AND DISCUSSION

Kankanaey Concepts that are Learned Inside or Outside the Community

The frequency distribution and percentage of Kankana-ey concepts that are learned inside or outside the community is shown in Table 1.

Table 1
Frequency Distribution and Percentage of Kankanaey Concepts
That are Learned Inside or Outside the Communit

Broad Concepts	Knowledge In / Out			
	In	%	Out	%
Agriculture	19	86.36%	3	13.63%
Education	3	18.75%	13	81.25%
Religion	7	28.00%	18	72.00%
Technology	0	0.00%	16	100.00%
Medicine	3	20.00%	12	80.00%
Sports	4	28.57%	10	71.43%

Table 1 shows the frequency distribution and percentage of the concepts that are learned inside or outside of the community. In agriculture, 19 or 86.36 percent of the concepts are learned inside the community while three or 13.63 percent of the concepts are learned outside the community. To name a few, evident in this sector are kankana-ey terms like mangabyon, mansimilya, manlugam, man-esek, nakpit, and makipordiya. Interestingly, the word "makipordiya" is taken from the line maki per day, according to one of the informants. The result implies that many of the tools or techniques in planting and gardening are indeed traditional and are still widely used in Benguet and its preservation is passed down through generations.

For the other broad concepts, not even 10% for each category accounts for the inside knowledge. In fact, all kankana-ey terms used in technology are influenced by outside knowledge. This may be attributed to inter-marriage, influence of multimedia, migration, technology, or personal preference.

According to Domingo, Caroy, Carambas, Dizon and Po-or (2019) language is an essential part of one's culture and a means of communicating one's thoughts, feelings and state of mind which the results showed that in Agriculture, a Kankana-ey dialect was learned most inside the community while in the religion most community learned the dialect. Thus, it was peculiar across cultures that may be fundamental to one culture but not the other, with various degrees of expression in communication. One factor that seemed to be static across cultural boundaries was that of language because it has its own type of emotion-expressing profanity or taboo words. Taboo words or cuss words are a profane or vulgar oath or expression which was a reminder of a certain emotion. The meaning of the interaction between the speaker and listener was one aspect to remember as a person used the words. Moreover, language was the essence of any culture that can establish the sense of human experience, thinking, feeling, appearance, and actions for a person. In order to establish, reinforce or even build a cultural, national or other form of group identity, language must integrally entangled with the idea of both the personal and the wider level of society. One study found that as many as 6,000 languages worldwide were at risk of extinction as

the number of speakers for these languages was steadily decreasing without the language being taught to new speakers.

Kankanaey Concepts that are Growing Stronger or Becoming Less Important

The frequency distribution and percentage of Kankanaey concepts That are growing stronger or becoming less important portrays in Table 2.

Table 2
Frequency Distribution and Percentage of Kankanaey Concepts That are Growing Stronger or Becoming Less Important

Broad Concepts	Growing Stronger / Becoming Less Important			
	⬆	%	⬇	%
Agriculture	22	78%	5	22.00%
Education	14	86.00%	2	14.00%
Religion	15	83.33%	3	16.67%
Technology	15	93.75%	1	6.25%
Medicine	14	93.33%	1	6.67%
Sports	13	92.86%	1	7.14%

Table 2 shows the frequency distribution and percentage of kankanaey concepts that are either becoming less important or growing stronger. It can be surmised that 22 or 78 percent of the concepts in agriculture are growing stronger while five or 22 percent are becoming less important. Along the concepts in education, 14 or 86 percent are growing stronger while two or 14 percent are becoming less important. On religion, 15 or 83.33 percent of the concepts are growing stronger while three or 16.67 percent are becoming less important. Along technology concepts, there are 15 or 93.75 percent which are growing stronger but one or 6.25 percent are becoming less important. Likewise, along medicine, 14 or 93.33 percent are growing stronger while one or 6.67 percent are becoming less important. Finally, on the concept of sports, 13 or 92.86 percent are growing stronger while one or 7.14 percent are becoming less important.

Most of the words in the categories such as education, technology, sports, religion, and medicine are growing but these words are growing because the concepts used are outside knowledge. Except for the category, agriculture, most of the words used in agriculture are inside knowledge but are also growing. The table shows that words are growing or still being used. But not all are inside knowledge. Due to migration, technology, exposure to media, these are some factors why most of the terms are outside knowledge.

CONCLUSIONS

Due to the migration of the youth or the 2nd or 3rd generation, the language was somehow "set aside" or less prioritized because they needed to adjust to the languages used in the city or place of migration.

Although it is true that the language is still used, the language needs to be taught to the 2nd and 3rd generation for its preservation. Creative and interesting ways need to be introduced to

keep the language. As discussed, the more one uses the language, the more it is preserved.

Fishman (2002) states that literacy strengthens a language only if it "leads inward, to the community culture, traditions, lore, practical concerns, etc., rather outward, to the modern world with which it cannot successfully compete.

It is recommended that for Kankana-ey to be sustained, the following may be considered: support to mother tongue institutions, usefulness or functions of the language, standardization of local literature, tool for connections, academic achievement of bilinguals and multilinguals, identity and pride of culture, nationalistic aspirations as a language group, attendance to cultural practices in the community, bridge to speakers of related languages, literacy of language users, and economic situation of users.

REFERENCES

Adorna, H., Alangui, W., & Rapanut, T., 1996. Algebra of the weaving patterns, music, and kinship system of the kankana-ey. University of the Philippines. pp. 11.

Allen, J. (1978). The limiting glottal infix in Kankanaey. Studies in Philippine Linguistics 2(1), 73-76.

Allen, L. (1977). Reduplication and cyclical rule ordering in Kankana-ey morphophonemics. Studies in Philippine Linguistics 1(2), 280-295.

Dangpa-Subagan, C., 2009. Kankana-ey of Benguet. First Edition. National Commission for Culture and Arts. pp. 4.

Domingo, E., Caroy, A., Carambas, J., Dizon, E. G., & Po-or, K. (2019). CUSSING AMONG THE KANKANAEY YOUTH. Cadernos de Linguagem e Sociedade, 20, 2.

Hamada, S. People's history of Benguet province. pp. 32.

K to 12 Basic Education Curriculum Senior High School – Core Subject. (2013). McDonnell, B. (2007). Distributed reduplication in Kankanaey. BLS 33 (1), 296-308.

Mesthrie, R. (1999). Fifty ways to say I do: Tracing the Origins of unstressed do in Cape Flats English, South African Journal of Linguistics, 17 (1), 58-71.

Sacla, W., 1987. Treasury of beliefs and home rituals of Benguet. BFC Printing Press, Baguio City. pp. 3.

Sumeg-Ang, A. 2005. Ethnography of the major ethnolinguistic groups in the cordillera. Cordillera Schools Group, Inc. and New Day Publishers. pp.136-13

Ms. Ruby A. Gabor is a faculty under the College of Teacher Education of the North Luzon Philippines State College in Candon City, Ilocos Sur. She teaches English and Professional subjects. Ms. Gabor has conducted and presented researches locally and nationally.

ruby.gabor@nlpsc.edu.ph
+63936-861-5033

Dr. Elaine Grace J. Dizon is a professor at Saint Louis University, Baguio City under the School of teacher Education and Liberal Arts. She teaches Purposive Communication, Art Appreciation, Reading Visual Arts, and Language subjects. She has published and presented researches papers locally and nationally.

egjdizon@slu.edu.ph
+63925-878-2731

Dr. Adamson N. Labi is a professor at Benguet State University. He teaches English subjects under the College of Arts and Sciences. He is a certified trainer of SMART FITS center. He also sponsors free training scholarships to hundreds of students in the fields of creative writing, public speaking, music, dance, emceeing/hosting, and leadership. He has presented researches locally and nationally. Presently, he is the Special Assistant to the President of BSU.

adamson.labi@gmail.com
+63918-483-1637

The Heart Swelled With a Sea of Tears: Nurses Caring for HIV-Positive Patients

GLENN A. GUIRA, RN, PhD

Master Teacher 1/Research Coordinator

Lussoc National High School

Department of Education, Schools Division of Ilocos Sur

Email – glennguira@yahoo.com

Tel. No. 09988665296

ABSTRACT

This phenomenological research outlines the experiences of eight (8) staff nurses providing nursing care to patients who were not identified as HIV-positive during hospital admission. The research employed the qualitative research design of descriptive phenomenology. The participants of the study were selected through purposive sampling based on the following criteria: 30-50 years old staff nurses who provided nursing care to HIV-positive patients, at least five years as a staff nurse, employed as a staff nurse in a hospital in Region 1, male or female and very much willing to participate in the study. The data were gathered using semi-structured questionnaires with prompts. Data reduction and clustering were done to analyze the themes that emerged from the data gathered. Data analysis was done utilizing the Colaizzi's seven (7) steps. The main themes that emerged in the study were: unparalleled nursing care unique among nurses regardless of the disease; nurse-imposed personal protection for safety and peace of mind; psychological mixedmixed psychological feelings; the power of belief, hope, and faith; lack of relevant skills and knowledge to handle HIV-positive patients; and solidarity and cohesion among co-workers. Understanding these experiences of nurses while facing the challenges of healthcare workers is essential in managing the AIDS pandemic.

Keywords: HIV-Positive, Phenomenology, Staff nurses, Qualitative Research, Themes

INTRODUCTION

HIV infection is on the rise (WHO, 2017). Close to 37 million people globally were living with HIV in 2016 (UNAIDS, 2017). In Asia-Pacific, the Philippines has the highest HIV-AIDS infection rate (Bondoc, 2017). The Department of Health (2017) reported that there are 26 newly diagnosed HIV cases per day, which is one in every hour. This research outlines the experiences of eight staff nurses who provided care to patients who are not yet identified as HIV-positive. The research study used descriptive phenomenology to outline summarize the experiences.

But while various government and non-government organizations are focused on HIV cure research, there is a need to understand the experiences of the health care providers who arehealthcare providers caring for these HIV clients. Nurses are the primary health care provider who performs care to these patients. Farley (2012) said that nurses have been at the forefront of HIV-AIDS care since day 1. It is imperative to recognize the experiences of nursnurses' experiences because Makhado & Davhana-Maselesele (2016) believed that nurses experiences burnout while caring for people living with HIV-AIDS that includes emotional exhaustion, depression, stigma, discrimination, and low personal accomplishment.

It is difficult challenging to handle patients who are HIV-positiveHIV-positive patients. According to Koto (2016), health care workers such as nurses are afraid of contracting HIV from their patients, and thiswhich affects the delivery of quality care. Nursing students are not assigned to hospital wards with HIV positive patients. When they graduate, they are assigned to these patients without the relevant experience.

However, Okpala, et al. (2017) revealed in their study that there is a need for more nurses' in-service trainings on managingon HIV-AIDS for nurses to improve nurses' their knowledge and

Wesleyan Scientific Review

positive attitude. towards the care of persons with HIV-AIDS.

This research thereforeerefore, this research was conducted to explore and describe the lived experiences of eight nurses caring for HIV-positive patients.

Statement of the Problem

The research study explored and described the lived experiences of staff nurses caring for HIV-positive patients.

MATERIALS AND METHODS

Research Designs

The researchThis study used the qualitative descriptive-phenomenology research design. A descriptive research refers to research studies that have as their main objective the accurate portrayal of the characteristics of person, situations or groups (Polit & Hungler, 2012). The "descriptive" method was used in this study which dealt with the experiential meaning of mothers with children diagnosed with congenital heart disease. The descriptive phenomenology reached true meanings through engaging in-depth reality (Lopez & Willis, 2004). Husserl (1989) as cited in Lopez and & Willis (2004) valued the experience of phenomenon as perceived by human consciousness which should be an object of scientific study. Descriptive phenomenology stimulates people's perception of lived experiences while emphasizing the richness, breadth, and depth of those experiences (Streubert & Carpenter, 2011). Descriptive phenomenology is a three-step process: (1) intuiting, (2) analyzing and (3) describing. It This adopted the Collaizzi's seven-step to analyze the data gathered from respondents.

Participants of the Study

The research involved eight (8) staff nurses who provided nursing care to patients who are HIV-positive. The inclusion criteria includes staff nurses who have provided nursing care to patients who arewith HIV-positive, aged 30-50 years old, male or female, registered nurses and are willing to participate in the research study.

Research Instruments

The researcher was the main data collector in this phenomenological inquiry. The researchers played a major role in conducting the interviews. As the initiator of the interview, the researchers played an active role in making decisions about the progress of the interview. The data collection gave the staff nurses the opportunity to express their lived experiences. In this investigation, consent was obtained from the participants and the suitable time and place for the interview for each participant was determined based on their convenience. Data were gathered by conducting a semi-structured interview because the researcher knows most of the questions but cannot predict the answers. Interviews were conducted individually for at least 30, and at most 90 minutes and the interviews were repeated until data saturation was met.

Data Analysis

Data analysis is a mechanism for reducing and organizing data to produce findings that require interpretation by the researcher (Calderon & Gonzales, 2007). Interpretation focused on the usefulness of the findings for clinical practice or moved toward theorizing. After collecting and filing up necessary data, a soft copy of the files for clustering and classifying data was secured. Transcript files were "cut and pasted" using Microsoft Word program and grouped the similar data into initial themes.

Data analysis was done immediately after data collection utilizing the Colaizzi's seven (7) steps (Streubert & Carpenter, 2011). In the analysis of the gathered data, there was an identification of essential features and a description of interrelations among the themes. The researcher identified themes and patterns from the data. Coding was used to expand, transform and re-conceptualize data, providing opportunities for more diverse analysis.

RESULTS AND DISCUSSION

This section of the research study presents, analyzes and interprets the data gathered from the staff nurses.

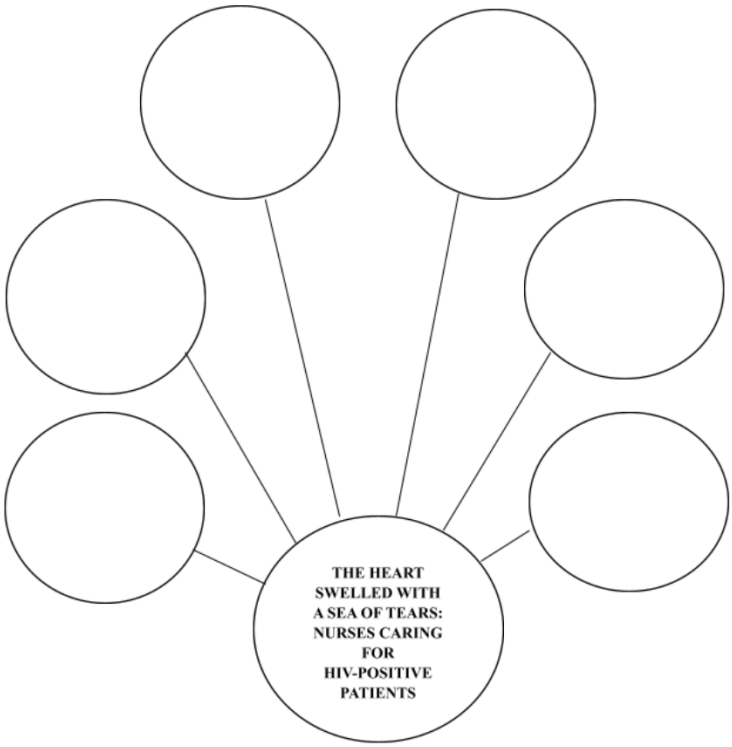


Figure 1. Conceptual Map

The map depicts six major themes: unparalleled nursing care unique among nurses regardless of the disease, nurse-imposed personal protection for safety and peace of mind, psychological mixed

feelings, the power of belief, hope and faith, lack of relevant skills and knowledge to handle HIV-positive patients and all for one, and solidarity and cohesion among co-workers.

The identified themes led the researchers to come out with the final title: "The Heart Swelled with a Sea of Tears: Nurses Caring for HIV-Positive Patients" because of the sufferings felt by the patient and their families.

Lived Experiences of Nurses Caring for HIV-Positive Patients

The lived experiences of nurses caring for HIV-positive patients is a very challenging research endeavor. It involves the all-around role of the nurse in caring for a client who was not identified as HIV-positive during hospital admission. In this phenomenological research, there were six emerging themes: unparalleled nursing care unique among nurses regardless of the disease, nurse-imposed personal protection for safety and peace of mind, psychological mixed feelings, strong faith and hope, lack of relevant skills to handle HIV-positive patients and all for one, one for all approach of co-workers.

Unparalleled nursing care unique among nurses regardless of the disease. A nurse will always be a nurse regardless of any situation, circumstances or any disease. As verbalized by the participants, providing nursing care to the HIV-positive patients is but a responsibility, part of her role and functions.

Nurse-imposed personal protection for safety and peace of mind. It is very imperative to protect oneself to the disease of the patient. As of the moment, there is no known cure of the disease, that is why it is very important to use protection and prevention in order to ensure that nurses are always free from the disease and have peace of mind.

Plethora of experiences. Caring for an HIV-patient causes psychological mixed feelings. Shives (2008) described psychological mixed feelings as a state of the individual's present feeling which can be inferred from facial expression such as anger, sadness and happiness. Under ordinary circumstances, a person's emotion varies according to the situation or subject matter such as when a person is caring for another person who is sick.

The power of belief, hope and faith. Another major theme is faith and hope. When all is lost and there is no one to turn to and no one is coming to help, there is one being that one goes to, as the last resort – God. This sub-theme reflects the participants' faith to the Almighty, and what they are experiencing is just part of the plan of God, to make us closer to Him. Faith in the Almighty God is a complete trust and confidence in Him. It is a strong belief in God that will help them all in their needs. There are benefits of faith and hope. When people have faith in God, they develop strength and security; they experience joy and peace of mind and they receive spiritual blessings. According to the Holy Scripture, without faith, man cannot have strength, joy and peace of mind that come from knowing that eternal life lies before us. The life with God as the center of our living is not free from suffering, as experienced by the mother in this research, but the child of God who has faith in Him has the comfort of a guaranteed relationship with God that can sustain us through the worst of times.

Hansen (2017) said that faith is a belief or trust in God. Faith provides sense of purpose, allows people to connect to something greater than themselves and enable them to release control and

improves health. Likewise, Leydon, et. al., (2000) said that hope is indispensable for survival and this interacts with information seeking in a complex way where patients needed to be enabled to ask questions and search for information.

Lack of relevant skills to handle HIV-positive patients. One important theme that emerged involved the nurses' lack of the relevant nursing skills to handle HIV-positive patients. Participant 1 said, "I told myself I was not ready for this yet because anyway the case needs a lot of attention and precaution." Likewise, Participant 2 said, "It is really difficult handling patients with HIV because you need to be very careful and it is a very sensitive topic." Furthermore, Participant 3 mentioned, "I saw my patient on the floor covered with blood. Since it happened so quickly, I dressed and cleaned his wound and assisted him back on his bed."

The participants clearly are not skillful in providing care to an HIV-positive patient basing from their responses. This probably due to the fact that they were not exposed to HIV-positive patients when they were nursing students or they are not trained to care for them. Mametja, Lekhuleni & Kgole (2013) said that there is a need for nurses to undergo in-service education on treatment of HIV positive patients.

Solidarity and cohesion among co-workers. It is important to recognize the presence of colleagues in the care of HIV-positive patients. In this study, eight participants experienced the support of co-workers. Participant 1 stated, "We conducted a meeting on our station, I was a little relieved when the same sentiments as I have were also experienced by my fellow staffs. I am thinking that at least, I could have support on what to do. I also consulted the Infection Control Officer if he could assist us and since there were no open wounds, no action was done." On the other hand, Participant 2 said, "I was told by my manager to be careful and continue to be safe and be vigilant to ensure that I am free from the disease that my patient is infected with. I should always connect with all members of the health team of the hospital." These statements provide evidence of our importance as an employee of the hospital.

CONCLUSIONS

One of the most challenging tasks for a nurse is to provide nursing care to an HIV-positive patient. This is due to the difficulty of discharging their function with the fear of being infected by their patient. Nevertheless, nurses despite the threat continues to perform their duties regardless of the case of the patient. It would be useful for the nurse to strictly consider using personal protective equipment regardless of the type of patient. Likewise, nurses may consider providing counselling to members of the family with loved one who is HIV-positive. In addition, it would be appropriate for nurses to consider developing an information and dissemination pamphlet to be given to members of the family of the HIV-positive patient and that nurses may continue to conduct research to refine the research findings in this study.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest in this work.

RECOMMENDATIONS

Nursing practice is beyond the type of patient, the type of situation and the type of

REFERENCES

Bondoc, J. (2017). HIV-AIDS in Asia: guess whose worst. Retrieved August 25, 2017 from http://www.philstar.com/opinion/2017/08/25/1732501/hiv-aids-asia-guess-whos-worst

Department of Health (2017). Number of newly diagnosed HIV cases per day. Retrieved August 25, 2017 from http://www.doh.gov.ph/stat_of_the_month

Farley, J. (2012). The role of the nurse in HIV treatment and care. Retrieved August 25, 2017 from http://www.medscape.com/viewarticle/768767

Koto, M. & Maharaj, P. (2016). Difficulties facing healthcare workers in the era of AIDS treatment in Kesotho. Journal of Social Aspects of HIV/AIDS. 13, 34-51.

Hansen, F. (2017, February 14). Can faith help us cope? Retrieved from https://adrenalfatiguesolution.com/faith-and-stress/

Leydon, G., Boulton, M., Moynihan, C., Jones, A., Mossman, J., Boudini, M., & McPherson, K., (2000). Faith, hope and charity. Western Journal of Medicine, 173, 26-31.

Lopez, K., & Willis, D. (2004). Descriptive versus interpretive phenomenology: Their contribution to nursing knowledge. Quality Health Research, 14, 726-735.

Makhado, L. & Davhana-Maselesele, M. (2016). Knowledge and psychosocial well-being of nurses caring for people living with HIV/AIDS. Health SA Gesondheid, 21, 1-10.

Mametja, V., Lekhuleni, M., & Kgole, J. (2013). Problems experienced by professional nurses providing care for HIV-AIDS patients in public hospitals at Polokwane Municipality, Limpopo Province, South Africa. African Journal for Physical Activity and Health Sciences. 19, 37-46.

Okpala, P. et al. (2017). Nurses' knowledge and attitude to the care of HIV-AIDS patients in South East, Nigeria. International Journal of Community Medicine and Public Health. 4, 547-553.

Polit, D. & Hungler, B. (2012). Nursing research: principles and methods, 6th ed. Philadelphia: Lippincott Williams and Wilkins.

Shives, L. (2008). Psychiatric-mental health nursing, 7th ed. Philadelphia: Lippincott Williams and Wilkins.

UNAIDS (2017). Latest statistics on the status of the AIDS epidemic. Retrieved August 25, 2017 from http://www.unaids.org/en/resources/fact-sheet

WHO (2017). HIV/AIDS data and statistics. Retrieved August 25, 2017 from http://www.who.int/hiv/data/en/

Dr. Glenn A. Guira is currently a Master Teacher 1, of the Senior High School Department of Lussoc National High School, Schools Division of Ilocos Sur, Department of Education. Dr. Guira is both a licensed nurse and a professional teacher and holds a Master of Arts in Nursing and Doctor of Philosophy degree. Likewise, Dr. Guira has 26 years of teaching experience in instruction, research and extension. He is a research coordinator and consultant of various higher educational institutions and organization in the Philippines and around the world. His passion is qualitative research specifically, phenomenology, grounded theory and ethnography. He is a back-to-back Basic Education Research Fund (BERF) grantee of the Department of Education, Region 1 for fiscal year 2019 and 2020 with a total grant of PhP 300,000.00.

Wesleyan Scientific Review

Wesleyan Scientific Review (WSR) is an international journal presented using the following symbols:

- the Cap signifies educational attainment and achievement. The journal is geared towards advancement and improvement of existing body of knowledge;

- the Key signifies a process of discovery one undergoes when undertaking research;

- the Open Book signifies the willingness of WSR to share its findings for the greater good; and,

- the Quill symbolizes communication as it traverses the path of international correspondence.

Bringing these together represents the sole purpose of WSR which is to reproduce papers that cover interdisciplinary issues, challenges and innovations on formal and informal facets of education.

Wesleyan Scientific Review