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# ENTREPRENEURS' ENTREPRENEURIAL CAPABILITIES IN THE MUNICIPALITY OF MAMBUSAO

**Rosine O. Labado, Florence Gay B. Murguia, and Aldin C. Lorenzo**  
Faculty, College of Management, Capiz State University – Burias Campus  
Burias, Mambusao, Capiz

## ABSTRACT

*This study aimed to analyze the personal entrepreneurial capabilities of entrepreneurs in the Municipality of Mambusao. The research focused on finding out the demographic profile of the respondents and their level of personal entrepreneurial capabilities. Two hundred eighty-four respondents were identified using stratified random sampling and were surveyed using an adapted questionnaire. A descriptive research method was used and results were interpreted at 0.05 level of significance. Results showed that the respondents were dominantly sari-sari store owners, middle-aged adults, female, married, Roman Catholic, high school graduates, and have a low monthly income. Furthermore, majority of the entrepreneurs were good at opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self-confidence. Entrepreneurial capabilities differed significantly in terms of the respondents' business classification and sex.*

**Keywords:** *business classification, entrepreneurship, personal entrepreneurial competencies, entrepreneur*

## INTRODUCTION

The entrepreneurs' innate capabilities and life experiences make up a successful business person when placed in the right economic and environmental situation. Acquiring competencies to create a successful and sustainable business – such as technical and financial expertise – is required to lessen the probability of failure when starting a business venture. Entrepreneurship has emerged over the past decades as the most potent economic force that the world has ever seen. The focus of economic development and even that of educational programs has shifted more heavily toward entrepreneurship. Scientists, policymakers, and governments debated the significant contribution, innovation, economic growth, job creation, and well-being of a country (Hayes, 2021).

According to Bosma, et al. (2008), there is a wide - agreement on the importance of entrepreneurship for economic development. Entrepreneurs drive innovation: they speed up structural changes in the economy and force old incumbent companies to shape up thereby making an indirect contribution to productivity.

No less than the president of the most powerful country in the world, Barrack Obama stated that “small businesses are the backbone of the economy and the cornerstone of our communities” (Obama, 2010). Entrepreneurship often relates to the functional role of entrepreneurs and includes coordination, innovation, uncertainty bearing, capital supply, decision making, ownership and resource allocation (Frijs et al. 2002: 1–2; Jääskeläinen 2000: 5).

Entrepreneurship education over the years had hoped that people, especially the young generation, will engage in entrepreneurial venture to contribute to the economic development of the country and sustain the communities. However, very few seek education to become an entrepreneur (Lackeus, 2015).

College of Management of Capiz State University is located at the Municipality of Mambusao particu-

larly in Barangay Burias. To aid the community, this study was conducted to find out the entrepreneurial capability of the entrepreneurs in the Municipality of Mambusao as an input to local government's livelihood and training programs.

### **STATEMENT OF THE PROBLEM**

This study investigated the level of personal entrepreneurial capabilities of entrepreneurs in the Municipality of Mambusao.

Specifically, it attempted to answer the following:

1. What is the respondents' profile in terms of business classification, age, sex, civil status, religion, educational attainment, and monthly income?
2. What is the level of personal entrepreneurial capabilities of the respondents in terms of opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self-confidence?
3. Are there significant differences in the level of personal entrepreneurial capabilities when grouped according to respondents' profile such as business classification, age, sex, civil status, religion, educational attainment, and monthly income?

### **REVIEW OF LITERATURE**

Policymakers and community developers are increasingly interested in alternative models for local businesses that will both respond to community's needs as well as motivate local economic growth (UWCC, 2002). According to Bagheri and Pihie (2011), there are two types of competencies that the leaders of entrepreneurial endeavor must-have. These are the personal competencies and functional competencies where functional competencies permit leaders to mobilize a group of people; share the entrepreneurial vision with them; and commit to improve their self-efficacy and achieving their entrepreneurial vision. On the other hand, proactiveness, innovativeness, and risk-taking are among the personal competencies. While Dixon, Meier, Brown, and Custer (2005) categorize entrepreneurial competencies into eight clusters which are team leadership, communication, trustworthiness, organizational skills, basic business skills, problem-solving skills, personal traits, and creativity. One significance of assessing entrepreneurial competencies is to know their link with the business performance and its growth, and thus with economic development. In the framework of entrepreneurship, competencies are specifically related to the creation, survival, and/or growth of a business (Colombo and Grilli, 2005).

The entrepreneurial value creation theory of Mishra and Zachary (2014) discusses entrepreneurial value creation and its realization through a business venture. The theory also presents that an entrepreneur undergoes several stages and the first stage will be the theory of entrepreneurial competence. The theory further explains that the understanding of individual competencies is a vital factor to the success of the business venture.

The study of Rezaeizadeh, et al. (2016) indicated that productive thinking, motivation, interpersonal skills and leadership are core entrepreneurial competences that need to be developed in educational contexts. It also highlighted critical interdependencies between entrepreneurial competencies and the relative influence of different competencies across groups and regions.

Moreover, the study conducted by Zempetakis, et al. (2016) from moderated mediation regression analyses found that masculinity and femininity fully mediated the effects of entrepreneurs' sex on business growth intentions. Females who had higher femininity orientation and independent self-construal reported lower growth intention compared to those with lower independent self-construal. The study encompasses theoretical and empirical research on the effects of identity on business growth intentions while

applications of the results are discussed.

## METHODOLOGY

The study adopted a descriptive type of research in which quantitative analysis was employed using Personal Entrepreneurial Competencies (PECs) which is a self-rating questionnaire as the survey instrument. This was adopted from Entrepreneurship in the Philippine Setting by Dr. Winefreda B. Asor (2010) pages 18-21.

The respondents of the study were 284 out of 977 entrepreneurs identified by the office of the Municipal Economic Enterprise and Development Office (MEEDO) in the Municipality of Mambusao. The Cochran formula (1963:75) was used to determine the sample size and a simple random sampling technique was employed in the study.

The self-scoring personal entrepreneurial competencies (PECs) questionnaire uses 55 items to measure ten personal entrepreneurial competencies. These items are processed based on the instructions as stipulated by Asor (2010) and are rated using a 3-point Likert scale with anchors labeled as 1- poor, 2- fair, and 3- good. The data collection used for the survey was through a personal meeting with the respondent. The survey instrument has a sequential number to track the responses of the participants. Observations and informal conversations with the respondents were likewise utilized for validating the result of the study. The respondents of this study were entrepreneurs in the Municipality of Mambusao.

Descriptive statistics, which include frequency count and percentage, were used to determine the profile of the respondents in terms of business classification, age, sex, civil status, religion, educational attainment, and monthly income. The level of personal entrepreneurial capabilities of the respondents included opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self-confidence and were measured based on the PECs' computation as stipulated by Asor (2010). Frequency count and percentages were utilized and inferential statistics such as Kruskal Wallis and Mann – Whitney U tests were used to test the differences. The proponents used non-parametric statistics since the data derived were not normally distributed.

## FINDINGS

### Profile of Respondents

Table 1 reflects the profile of the respondents that includes business classification, age, sex, civil status, religion, educational attainment, and monthly income. Businesses in the Municipality of Mambusao were classified in which respondents are composed of 66 (23.20%) as market general, 149 (52.50%) were sari-sari stores, 17 (6.00%) were businesses that sold dry goods, 19 (6.70%) were vegetable and fruit vendors, 23 (8.10%) were fish vendors and 10 (3.50%) were meat vendors. Majority (44.00%) of the respondents were middle-aged with ages from 37 to 57 years old; 39.10 percent, middle-aged, 15 – 36 years; 16.90 percent and old aged (58 – 79 years old) category. Moreover, more than two-thirds (67.60%) of the respondents were females and the rest (32.40%) were males. In terms of civil status, majority (68.66%) of the respondents were married; 24.30 percent, single; 3.87 percent, separated; and 3.17 percent were widowed. Most (92.96%) of the respondents were Roman Catholics, and the rest (7.04%) were non-Roman Catholics. High school graduates were the most common (53.52%) educational attainment among the respondents, 29.94 percent were bachelor's degree holders, 15.14 percent were elementary graduates, 0.70 percent earned units towards masters' degree, and 0.70 percent earned vocational courses. Majority (93.31%) of the respondents had low income, 5.99% were middle income, and 0.70% were of high income.

**Table 1. Profile of the Respondents**

Profile	Frequency	Percentage
<b>Business Classification</b>		
Market General	66	23.20
Sari – sari store	149	52.50
Dry Goods	17	6.00
Vegetable and Fruit Vendors	19	6.70
Fish Vendors	23	8.10
Meat Vendors	10	3.50
<b>Age</b>		
Young	111	39.10
Middle – aged	125	44.00
Old	48	16.90
<b>Sex</b>		
Male	92	32.40
Female	192	67.60
<b>Civil Status</b>		
Single	69	24.30
Married	195	68.66
Widow/er	9	3.17
Separated	11	3.87
<b>Religion</b>		
Roman Catholic	264	92.96
Non – Roman Catholic	20	7.04
<b>Educational Attainment</b>		
Elementary Graduate	43	15.14
High School Graduate	152	53.52
Bachelor's Degree	85	29.94
with units towards a Master's Degree	2	0.70
Vocational	2	0.70
<b>Monthly Income</b>		
Low Income	265	93.31
Middle Income	17	5.99
High Income	2	0.70
<b>TOTAL</b>	<b>284</b>	<b>100.00</b>

### Level of Personal Entrepreneurial Capabilities

Table 2 reflects the level of personal entrepreneurial capabilities of the respondents. Results revealed that in terms of opportunity seeking, most (75.35%) of the respondents were good, 24.30 percent were fair, and 0.35 percent were poor. In terms of persistence, majority (79.23%) of the respondents were good, 20.42 percent were fair, and 0.35 percent were poor. Moreover, 75.35 percent of the respondents were good in terms of commitment to work contract while 24.65 percent were fair. About 69.01 percent of the respondents were also good in terms of demand for quality and efficiency, while the rest (30.99%) were fair. Also, 64.40 percent of the respondents were good in terms of risk-taking and 35.60 percent were fair. Additionally, majority (88.40%) were good and 11.60 percent were fair. Furthermore, 77.11 percent of the respondents were good in terms of information seeking, 22.54 percent were fair and 0.35 percent were poor. In terms of systematic planning and monitoring, 76.41 percent were good; 23.24 percent; fair, and 0.35 percent; poor. The study also revealed that in terms of persuasion and networking, 62.68 percent were good, 36.27 percent were fair and 1.05 percent were poor. Lastly, majority (79.90%) of the respondents had good self-confidence while the rest 20.10 percent was fair.

**Table 2. Level of Personal Entrepreneurial Capabilities of the Respondents**

Competencies	Frequency	Percentage
<b>Opportunity Seeking</b>		
Poor	1	0.35
Fair	69	24.30
Good	214	75.35
MEAN 17.50 (Good)		

<b>Persistence</b>		
Poor	1	0.35
Fair	58	20.42
Good	225	79.23
MEAN	18.23	(Good)
<b>Commitment to Work Contract</b>		
Fair	70	24.65
Good	214	75.35
MEAN	17.79	(Good)
<b>Demand for Quality and Efficiency</b>		
Fair	88	30.99
Good	196	69.01
MEAN	17.32	(Good)
<b>Risk-Taking</b>		
Fair	101	35.60
Good	183	64.40
MEAN	17.24	(Good)
<b>Goal Setting</b>		
Fair	33	11.60
Good	251	88.40
...MEAN	18.90	(Good)
<b>Information Seeking</b>		
Poor	1	0.35
Fair	64	22.54
Good	219	77.11
MEAN	17.89	(Good)
<b>Systematic Planning and Monitoring</b>		
Poor	1	0.35
Fair	66	23.24
Good	217	76.41
MEAN	17.89	(Good)
<b>Persuasion and Networking</b>		
Poor	3	1.05
Fair	103	36.27
Good	178	62.68
MEAN.....	16.86	(Good)
<b>Self – Confidence</b>		
Fair	57	20.10
Good	227	79.90
MEAN	17.96	(Good)
<b>Total</b>	<b>284</b>	<b>100.00</b>

### Differences in the Level of Personal Entrepreneurial Capabilities of the Respondents and their Profile.

Table 3 shows the analysis of the differences in the level of personal entrepreneurial capability when grouped according to respondents' profile such as business classification, age, sex, civil status, religion, educational attainment, and monthly income.

Findings revealed that there were no significant differences in the level of personal entrepreneurial capabilities when the respondents were grouped according to age, civil status, religion, educational attainment, and monthly income. This implies that the respondents' personal entrepreneurial capabilities were not affected by their age, civil status, religion, educational attainment, and monthly income. However, there were significant differences in the level of personal entrepreneurial capabilities when the respondents were grouped according to business classification and sex. The results conform with the study of Rezaeizadeh, et al. (2016) which highlighted different entrepreneurial competencies in the context of different groups.

Female respondents were more inclined to business than their male counterparts which conform with the result of the study of Zampetakis, et al. (2016), where females with higher femininity orientation and independent self-construal were reported to have lower growth intention compared to those with lower independent self-construal.

**Table 3. Test of Differences in the Level of Personal Entrepreneurial Capabilities of the Respondents and Their Profile**

<b>Variable</b>	<b>Sig.</b>	<b>Interpretation</b>
Business Classification	0.000	Significant at 5% level
Age	0.064	Not significant
Sex	0.004	Significant at 5% level
Civil Status	0.471	Not significant
Religion	0.070	Not significant
Educational Attainment	0.160	Not significant
Monthly Income	0.497	Not significant

## CONCLUSIONS

Based on the foregoing findings, the following conclusions were drawn.

1. The respondents were dominantly sari-sari store owners, middle-aged adults, female, married, roman catholic, high school graduates, and have a low monthly income which reflects that most of the entrepreneurs in Mambusao were striving individuals in order to provide a good living condition to their respective families.
2. The level of personal entrepreneurial competencies was good at opportunity seeking, persistence, commitment to work contract, demand for quality and efficiency, risk-taking, goal setting, information seeking, systematic planning and monitoring, persuasion and networking, and self – confidence implying that there is a need to enhance further their personal entrepreneurial competencies by utilizing and taking seriously their business experience or personal business endeavor and exposure by attending trainings and seminars provided by the government and the non-government agencies.
3. The level of personal entrepreneurial capabilities differed significantly in relation to respondents’ business classification and sex. This implies that the respondents’ personal entrepreneurial capabilities differ as to the type of business they run and female respondents were more inclined to do business than their male counterparts.

## RECOMMENDATIONS

In view of this, the following recommendations are respectfully proposed:

1. Entrepreneurs may attend training on business-related topics offered by the different government agencies, Academe, Non-Government Organizations, and Civil Society Groups to enhance further their capacities and uplift their skills toward self-improvement and reliance.
2. Further, entrepreneurs may enroll at Capiz State University, College of Management under the Bachelor of Science in Entrepreneurship or Bachelor of Science in Business Management program to increase their knowledge and skills in doing business.
3. LGU may conduct, monitor, and evaluate training and programs related to entrepreneurial capability and recommend interventions that could improve the capabilities of its constituents.
4. CAPSU may extend its services to the entrepreneurs in the municipality of Mambusao to empower them in their business venture.
5. Another study may be conducted to find out the interest and characteristics of every entrepreneur considering of their respective business classification and sex.
6. Additional studies may be conducted to determine the mindset of entrepreneurs.
7. Follow-up study on the relationship between entrepreneurial competencies and business performance.

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# EXPLORING THE EXTRAORDINARY CHALLENGES FACED BY PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER DURING THE PANDEMIC COVID-19 LOCKDOWN

Dr. Aurizia Duhah Siraji, LPT  
Sulu State College

## ABSTRACT

*Pandemic covid-19 has made huge impact to all people around the globe especially to family with child diagnosed with autism that needs more activities outside that could eventually develop social interactions and facilitate positive growth, enjoy and relaxed. Unfortunately, few studies were conducted to address these challenges. As a parent with autism, a researcher has experienced extraordinary Challenges that made her more motivated to conduct the present study. this research was made utilizing qualitative approach with twenty (20) parents' respondents of ten children with autism participated in semi-structured video call interviews. After two weeks' interviews, the research shows that many parents encountered challenges such as financial needs for their children consultations and medications, children experienced epilepsy, aggressiveness, more sleepless nights. Therefore, it is strongly recommended that Local Government in the province of Sulu Should provide schools with competent teachers and implement discounts for children with disability or with special needs, and a program counseling for parents with extra income for less fortunate family to sustain their children's needs specially during this time of pandemic where most parents as revealed in the present study were experiencing financial crisis.*

**Keywords:** *Autism, Children, Covid 19, Extra Ordinary Challenges, Parents*

## INTRODUCTION

The Pandemic covid 19 has added challenged to low income family especially those with special children. Autism is one of a spectrum of behaviorally defined “pervasive developmental disorders,” which are commonly referred to as autism spectrum disorder (ASD). The deficits in social communication and presence of restricted interests and repetitive behaviors result in lifelong impairments and disability. ASD has been reported to affect as many as 1 in 88 children in the US.

The concept of autism was coined in 1911 by the German psychiatrist Eugen Bleuler to describe a symptom of the most severe cases of schizophrenia, a concept he had also created. According to Bleuler, autistic thinking was characterized by infantile wishes to avoid unsatisfying realities and replace them with fantasies and hallucinations. ‘Autism’ defined the subject’s symbolic ‘inner life’ and was not readily accessible to observers (Bleuler, 1950[1911]: 63).

The National Autistic Society describes autism as “a lifelong, developmental disability that affects how a person communicates with and relates to other people, and how they experience the world around them” ([www.autism.org.uk](http://www.autism.org.uk)). Current prevalence rates in the UK are thought to be around 1 in 100 (Baird et al., 2006).

According to Smith (2002) parents of children with disabilities experience greater stress and a larger number of caregiving challenges, such as health problems, greater feelings of restriction, and higher levels of parental depression than parents of children without disabilities. Some families are experiences difficulties in financial assistance and inadequate support from the members of the family and communities. Families of children with special needs face both the normal pressures and tensions of family life



and in addition, adjustments to the presence of the child with a disability. Such families usually require assistance in order to reorganize their lives towards positive adaptation.

Parents of children with disability experience challenges which may lead them to make mistakes in upbringing of their children and which can give rise to learning difficulties and other problems. They need to be motivated to become involved in the education of their children. Parents play a greater role in the education of their children because they know their children better and are able to inform the teachers about their learning problems. They can help teachers to understand their children better and they can give advice about individual behaviour, and they can also contribute to the design and implementation of joint learning support strategies (Lewis & Doorlag, 2006).

With the hope to shades light on to government in determining the quality of life of people with autism in the province of Sulu and bring changes to parents struggling the journey of life with special autistic children, this paper explores the extra ordinary challenges of parents with autistic child.

## **OBJECTIVE**

The purpose of the research was to explore the challenges facing the parents of Autistic children in selected municipalities in the province of Sulu and to recommend possible solution to help the parents handle the challenges this midst of pandemic covid 19.

## **METHODOLOGY**

### **Research design**

The basic frame work or plan in the present study that guides the collection and analysis of data were qualitative research, specifically, interviews were used to Exploring the Extraordinary Challenges faced by parents of Children with Autism Spectrum Disorder During the Pandemic Covid-19 Lockdown. Pritha Bhandari (2020), Qualitative research involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research. On the other hand, the researcher often transcribes and types the data into a computer file, in order to analyze it after interviewing. Interviews are particularly useful for uncovering the story behind a participant's experiences and pursuing in-depth information around a topic. Interviews may be useful to follow-up with individual respondents after questionnaires, e.g., to further investigate their responses. (McNamara, 1999).

### **Locale**

This study was conducted in selected municipality in the province of Sulu in the midst of pandemic covid 19 Lockdown on school year 2021-2022.

### **Respondents and sampling**

The respondents of the study were parents of children with autism. Specifically, the respondents of the study were both the mother and father of the child with autism. At least 20 participants, composed of 10 mother and 10 father.

### **Instruments used**

The tool used to collect or obtain data was a semi structured interview. Specifically, the open ended and closed ended questions. An open-ended question gives participants more options for responding. For example, an open-ended question may be, "How do you balance participation in athletics with your schoolwork (Creswell, 2012)". A closed-ended question provides a preset response. For example, "Do

you exercise?” where the answers are limited to yes or no (Cresswell, 2012).

### **Data analysis technique**

The researcher utilized a narrative analysis to analyze the data by watching the recorded interviews of each participant. Moreover, it involves making sense of respondents’ individual stories.

### **Data gathering procedure**

The data collected through video call with the parents’ participants and was recorded and reviewed, as well as encoded by the researcher.

## **RESULT AND DISCUSSION**

The results and discussions tackles with the presentation, analysis and interpretation of results based on the data obtained for this study. The Common Challenges faced by parent- participants of Autistic children in this study were revealed as follows.

Beresford et al. (2007), state that no matter how severe the special needs of the child is, the parents are inevitably affected in one way or the other. Most of the parents are affected emotionally. Parents often struggle with guilt; they feel as though they somehow caused the child to have disability, whether from genetics, alcohol use, stress or other logical or illogical reasons. This guilt can harm the parent’s emotional health if it is not dealt with. Some parents experience a spiritual crisis or blame the other parent for not giving the support which is needed. Most parents have aspirations for their children from the time of birth and can experience severe disappointment that the child will not be an actor, a nurse, a teacher or whatever they had in mind. In order for these parents to cope with this experience they have to deal with the “death” of the perfect child who existed in their minds and learn to love and accept the child they have.

The following were the common challenges shared by the parent-participants:

- Participant 1.** My child is 8-year-old; she had all the symptoms of autism. Most of the time she is irritated, sleepless at night, crying, aggressive and wanted to go somewhere but its lockdown and most of the time she wanted to eat chicken but we cannot afford.
- Question 1: Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?
- Answer : no.

Taking children with autism outdoor is really important but due to lockdown, going out is really impossible. (Chang & Chang, 2018) found that outdoor activities provide 7 main benefits to children with autism, including promoting communication, emotion, cognition, interaction, physical activity, and decreasing autistic sensitivity. This is a small but encouraging study and supports anecdotal observations of the impact of nature on children and young people with autism. This also fits with our observations at the Children’s Wood where we notice quite obvious positive changes in behaviour, stress levels, communication and sociability of children with autism.

Taking learning outdoors is very important for children with autism who, along with other groups, can struggle with classroom-based learning (Rickinson et al., 2012). It can help to make learning meaningful and enjoyable for the learner and we notice this in the wood, children are happy and engaged when they come to use the land for outdoor learning.

Natural England Report (2013) has studied school perceptions of access to and the benefit of nature. What they found was that there are three main benefits of outdoor learning: supporting the curricu-

lum (bringing the curriculum to life); skill development (social skills and well-being); and personal, social and health education. The report provides “strong recognition of the importance of varied learning environments and the need for more creativity in the curriculum.” and the outdoors can play a vital role.

**Participant 2.** My child is eleven and very sensitive this midst of pandemic and most of the time I am very problematic where to get financial support for his medicines. recently, we went through tausug traditional ritual healings and now he is doing fine.

**Question 1 :** Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

**Answer :** no.

The abilities and needs of people with autism vary and can evolve over time. While some people with autism can live normally with enough income, others have suffering so much from poverty. Especially those with autistic in the family, often has an impact on life and works. In addition, the demands on families providing care and support can be significant.

In addition, the current situation he effects of the Corona virus crisis on workers are more acute in low-income families. Research has shown that the livelihoods of low-income workers are more at risk than the livelihoods of those in higher-paid roles, with many lower paid workers employed in the sectors that have been bearing the brunt of the economic crisis Resolution Foundation (May 2020).

**Participant 3.** My child was diagnosed autistic and she has experienced depression, aggressiveness, hyperactivity disorder and seizures twice this pandemic covid 19 during lackdown. She was enrolled in SPED before but the father was disappointed on how teacher handle our child. We experienced rejection of our child and that was very devastating.

People with autism often have co-occurring conditions, including epilepsy, depression, anxiety and attention deficit hyperactivity disorder as well as challenging behaviours such as difficulty sleeping and self-injury. The level of intellectual functioning among people with autism varies widely, extending from profound impairment to superior levels. (WHO 2021).

The following participants who refuse to share pictures and names but they answer the interview questions.

To wit:

**Participants 4.** I don't want to give any picture because I am shy my child being exposed or shown to others. Lani is 16 and we were suffering for sleepless and restless days for 13 years. Because she was 3 years old when started with the symptoms of Autism like aggressiveness, uncontrolled movements of her hands, and can't talk normally like us.

**Question:** Have you consulted a Doctor and do you give any medicine for Lani?

**Answer :** Consulting a Doctor is not easy because our money is just enough for the foods of our family.

**Question 1 :** Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

**Answer :** no.

**Participants 5.**

**Question:** Have you received any financial assistance for your child from the government or private sectors?

**Answer :** no, not even 1. What I always received is criticism from neighbors and they don't want my child.

Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 6.**

Question: Have you avail any privileges for your child like discounts from restaurants, pharmacy and transportation?  
Answer : no, I didn't even heard any of these privileges before  
Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 7.**

Question: Have your child attended any programs for autistic children.  
Answer : no, I only heard about program about physically disabled children and those children with speech and hearing problems.  
Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 8.** My children is always aggressive and irritable, he loves climbing inside the house and he always slap his siblings.

Question: Have your child attended any programs for autistic children?  
Answer : no, not even once.  
Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 9.** My child cannot talk a normal language; she has her own world talking alone with her own language.

Question: Have your child attended any programs for autistic children?  
Answer : no, not even once.  
Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 10.**

Question: Have your child attended any programs for autistic children?  
Answer : no.

**Participants 11.** My autistic child is always compared to his siblings by our relatives.

Question: Have your child attended any programs for autistic children?  
Answer : no.

**Participants 12.** My autistic child is always being criticized by others. I can bear the pain of being scratch or slap but not the criticisms.

Question: Have your child attended any programs for autistic children?  
Answer : no.  
Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

**Participants 13.** My wife was being a talk or subject of criticism. People accused her of taking pills for family planning and do not want to get pregnant and this is the reason for abnormality of our child.

Question: Have your child attended any programs for autistic children?  
Answer : no.

**Participants 14.** We are Suffering for 6 years, my wife was always sad and obviously, stress and complaining about our child situations.

Question: Have your child attended any programs for autistic children?

Answer : no.

Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

Answer : no.

**Participants 15.** We always experienced sleepless nights and other kids at home are also affected by his noise. We give him medicines before but is really expensive and we have no choice but to stop the maintenance.

Question: Have your child attended any programs for autistic children?

Answer : no.

Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

Answer : no.

**Participants 16.** We always experienced sleepless nights and other kids at home are also affected by his noise. We give him medicines before but is really expensive and we have no choice but to stop the maintenance.

Question: Have your child attended any programs for autistic children?

Answer : no.

**Participants 17.** People say that its cursed for us having an autistic child. But for us couple, we are blessed because she is a blessing from Allah.

Question: Have your child attended any programs for autistic children?

Answer : no.

Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

Answer : no.

**Participants 18.** Experiencing sleepless nights most of the time really affects the whole family and works.

Question: Have your child attended any programs for autistic children?

Answer : no.

Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

Answer : no.

**Participants 19.** Having 1 autistic Child is like having a 20 children. It's a big responsibility but we have to accept that it is all God plan.

Question: Have your child attended any programs for autistic children?

Answer : no.

Question1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?

Answer : no.

**Participants 20.** Having 1 autistic Child is like having a 20 children. It's a big responsibility but we have to accept that it is all God plan and we have no choice but to accept the fact.

Question 1: Have your child attended any programs for autistic children?

Answer : no.

Question 1 : Have your received any privileges for your child like discounts at pharmacy, restaurants or transportation etc..?  
Answer : no.

A researcher of this current study and husband used to receive scratches at the back, faces and some part of their body when their child is aggressive and wanted to go out this lockdown and they always get depressed.

Similarly, Rubio and her husband, like many other parents with similarly situated children, have been left with no option but to think of their own ways to alleviate their kids' pain. For normal parents, this may be a minor issue. But for us, it always feels three times the struggle. That's why I hope they can ease our burden by allowing us to travel. But of course, we will prove to them that we will not violate the rules, like going into grocery stores. We are gonna do our part to avoid the spread of the virus. We just want minimal disruption to the child's routine. (Elemia, 2020).

## CONCLUSION

The study revealed that the current situation of lockdown has led to worsening in behavioral, social, and developmental domains of the autistic children in the province of Sulu. The parents and family members are affected by the condition of children with autism and facing hard times coping up with all these challenges this midst of pandemic covid 19, as well as with poverty.

## RECOMMENDATION

From the findings and conclusions of the study, the researcher believed that during this pandemic, Department Social Welfare and Development (DSWD), should reach out the low income family with special children like autism and others. It is also strongly recommended the need for parenting and relationship strengthening programs among low-income minority parents where the burden of relational and parental stressors due to having autistic child contributes to conflict that may lead to separation or divorced. Training for the parents by experts for Autism can help them to cope with their children's disability and reduce mental and emotional stress. Moreover, recently published opinion-based articles related to COVID-19 and children with autism suggested ideas that align with our findings; highlighting the importance of the special education services to children with ASD and advising them to maintain close contact with the parents through weekly consultations and/or the provision of a "hotline" that could aid in managing general and COVID-19-related issues that arise (Lim et al., 2020; Narzisi, 2020; Pellicano et al., 2020; Smile, 2020; Yahya & Khawaja, 2020). Finally, the privileges received by parents and children with autism in some other places shall be observed in the province of Sulu.

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# QUALITY MANAGEMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE OF A STATE COLLEGE

**Christine B. Diocos, PhD**

Director, Quality Assurance Management Center  
Iloilo State College of Fisheries  
Tiwi, Barotac Nuevo, Iloilo

## ABSTRACT

*This descriptive-correlational research was employed to determine the quality management practices and organizational performance of a state higher education institution. The respondents of the study were randomly selected 97 faculty, and 74 administrative staff and 150 students of the Iloilo State College of Fisheries consisting of five campuses, namely: Main Tiwi Campus, Barotac Nuevo Campus, Dingle Campus, Dumangas Campus and San Enrique Campus. An adapted and validated research survey questionnaire from Shiroya (2015) on quality management practices and organizational performance was utilized. Data gathered were analyzed using mean, standard deviation and Pearson product moment coefficient of correlation. Results revealed that top management commitment and customer focus is very highly practiced in the institution. Highly practiced are education and training, employee involvement, continuous improvement, incentive and recognition system, process and control monitoring system, process flow management and managing relationships with suppliers and service providers. The findings showed that organizational performance of the institution slightly increased. There is significant increase in the teamwork and cooperation among employees within a team or unit, quality of products/ services provided by one unit to another unit and quality of products/ services provided by employees to our customer. Suggestions from employees, skills levels of employees, teamwork and cooperation among employees belonging to different teams or units, communication between management and employees, employees attitude towards quality, employees pride towards work and flow of information slightly increased while occurrence of non-conformities slightly decreased. Pearson  $r$  results indicated that education and training, customer focus, continuous improvement, process flow management, incentive and recognition system and employee involvement are significantly correlated with quality performance.*

**Keywords:** *quality management system (QMS), quality management practices, organizational performance*

## INTRODUCTION

Higher education institutions face many pressures and challenges resulting from rapid expansion in student enrolment, shortages of funding, declining quality of graduates, lack of qualified staff and faculty, and increasing competition between various public and private colleges and universities (Ariff, Zaidin, & Sulong, 2007). Education in the Philippines is recognized as a key force for development and modernization. This has caused an increase in the demand for its access. As do higher education institutions in other countries, Philippine higher education face many challenges, resulting from the advancement of science and technology, economic growth, social changes, and the internationalization and globalization of the world economy.

The emergent concepts of globalization and internationalization, and the impacts of Association of South East Asian Nations (ASEAN) Economic Integration have resulted in an urgent need to enhance quality assurance (QA) in higher educational institutions (Sipacio, 2015). Higher education institutions



recognizes the importance of establishing, implementing and strengthening its quality management system to provide them with the advantage in national and international markets by providing high quality services and producing globally competitive products to satisfy the needs of both national and international standards.

As such, the study of quality management practices requires not only the understanding of organization's standardized processes, activities and good practices, but also which norms and values that, translated into performances and actions, direct and control an organization with regard to quality leading to meet customers' needs and expectations.

Like other higher education institutions, the Iloilo State College of Fisheries strongly adheres to its commitment of achieving the highest level of performance and to deliver quality services to all its customers. The importance of improving the quality of education is based on the following reasons: (1) internationalization and globalization (2) SUC Leveling, (3) budget allocation under normative financing, (4) university conversion and (5) granting of Performance-based Bonus. Implementing Quality Management System (QMS) is part of the strategic intent of ISCOF in delivering high-quality education to its students since 1998. The institution believes that to be at par with other leading higher education institutions and consistently meet customer needs, there is a need to strengthen its international standards-based Quality Management System (QMS). Identification of the quality management practices and factors that affects organization's performance will enable the institution to improve its education service system in order produce high-quality graduates. Effective implementation of the quality management system is vital to consistently manage internal and external requirements in accordance with internationally agreed standards.

It is in this premise that prompted the researcher to study the quality management practices and organizational performance of the Iloilo State College of Fisheries to ensure for continuous improvement and customer satisfaction.

### **Statement of the Problem**

This study was conducted to determine the relationship of quality management practices and organizational performance of the Iloilo State College of Fisheries.

Specifically, it sought to answer the following questions:

1. What is the extent of quality management practices of ISCOF in terms of (a) top management commitment, (b) education and training, (c) customer focus, (d) employee involvement, (e) supplier/service provider quality management, (f) continuous improvement, (g) process flow management, (h) incentive and recognition system, and (i) process control and monitoring?
2. What is the level of organizational performance of ISCOF?
3. Do quality management system practices significantly correlate with organizational performance?

### **REVIEW OF RELATED LITERATURE**

A Quality Management System (QMS) is a formalized system documenting processes, procedures, and responsibilities for achieving quality policies and objectives. A QMS helps coordinate and direct organization's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis (ASQ, 2017). It comprises activities by which the organization identifies its objectives and determines the processes and resources required to achieve desired results (Barbecho, 2018). According to Gaspersz (2008), QMS is a set of documented procedures and standard practices for a management system that aims to ensure the suitability of a process and a product (or service) that meets the needs of certain requirements specified by the customer and the organization. Hammar (2017) also defines quality management system as a set of internal rules that are defined by a collection

of policies, processes, documented procedures and records. He further added that this system characterizes how a company will accomplish the creation and conveyance of the item or benefit they give to their clients.

Abdul Rahman, Mahyuddin, and Mohd Rahim (2006) stressed that the implementation of the QMS in the programs has helped the faculty and departments to be more creative, innovative and determined in developing, managing, and maintaining the processes and the standard of quality education. In an increasingly competitive education industry, a QMS can be regarded as a necessary system in monitoring and evaluating the performance of the programs and as means to become competitive.

There are many factors to be considered in the implementation of the quality management system. Critical success factors such as teamwork, leadership and management commitment, communication, continuous improvement, employee involvement, total customer satisfaction and training positively influence the HEIs performance (Zakuan et al., 2012). According to Pushpa (2016), vision and plan statement, employee involvement, customer focus, reward and recognition, education and training, commitment of top management and quality management supplier are the critical success factors to a successful Total Quality Management (TQM).

The study of Motita (2015) revealed that the TQM practices such as quality planning, customer satisfaction, employee involvement, continual process improvement, performance measures and supplier relationship are being observed at a high extent in the NCR- SUCs, as assessed by the administrators, faculty and non-teaching personnel.

## METHODOLOGY

This study utilized descriptive-correlational research method. Descriptive, in the sense that information is collected from a group of people to describe some aspects or characteristics of the population of which that group is a part (Fraenkel and Wallen, 2003). Correlation research method was used to find out the direction and extent of relationship between variables of population under study (Ardales, 1992). It is establishing the relationship among two or more variables are studied without any attempt to influence them.

The respondents of the study were randomly selected 97 faculty, 74 administrative staff and 150 students of the Iloilo State College of Fisheries, a state higher institution in the Province of Iloilo, Philippines consisting of five campuses, namely: Main Tiwi Campus, Barotac Nuevo Campus, Dingle Campus, Dumangas Campus and San Enrique Campus. The sample size was computed using Slovin's Formula.

A research survey questionnaire on quality management practices and organizational performance adapted from Shiroya (2015) was utilized in this study. Since the researcher made few modifications, experts in the field of quality assurance validated the research instrument for face and content validity. Part I consisted of items that determined the extent of quality management practices in terms of top management commitment, education and training, customer focus, employee involvement, supplier/ service provider quality management, continuous improvement, process flow management, incentive and recognition system, and process control and monitoring. The researcher employed the following scale of means and their corresponding description:

<b>Mean Score</b>	<b>Descriptive Rating</b>
3.40 – 4.00	Very highly practiced
2.80 – 3.39	Highly practiced
2.20 – 2.79	Moderately practiced
1.60 – 2.19	Rarely practiced
1.00 – 1.59	Not practiced

Part II determined the level of organizational performance of the institution. The researcher employed the following scale of means and their corresponding description:

Mean Score	Descriptive Rating
4.00 – 5.00	Significantly Increased
3.00 - 3.99	Slightly Increased
2. 00 – 2.99	Slightly Decreased
1.00 – 1.99	Significantly Decreased

Permission to conduct the study was obtained from the offices of the SUC President and Vice Presidents for Administrative and Academic Affairs and channeled through the Deans. When permission was granted, the researcher personally distributed the research instrument among the randomly selected respondents.

The data gathered was computed using descriptive statistic such as mean and standard deviation. Pearson product moment coefficient of correlation was used to determine the relationship between quality management practices and organizational performance.

## RESULTS AND DISCUSSIONS

### DESCRIPTIVE DATA ANALYSIS

**Table 1: Quality Management Practices**

CATEGORY	M	SD	DESCRIPTION
Top management commitment	3.417	.44824	Very highly practiced
Education and training	3.398	.52398	Highly practiced
Customer focus	3.412	.50476	Very highly practiced
Employee involvement	3.394	.53813	Highly practiced
Supplier/ service provider quality management	3.202	.62988	Highly practiced
Continuous improvement	3.394	.52457	Highly practiced
Process flow management	3.214	.50675	Highly practiced
Incentive and recognition system	3.324	.53024	Highly practiced
Process control and monitoring	3.233	.55715	Highly practiced

Study revealed that top management is very highly commitment in implementing the QMS of the institution. A quality policy statement was formulated which is consistent with the institution’s VMGO. Top management demonstrates its commitment to the implementation and sustenance of the established QMS by leading, communicating and uniting everyone in the organization to achieve the institution’s desired goals and by providing the resources necessary to accomplish them.

The institution’s QMS is very highly focused on customer satisfaction. There is a variety of mechanisms in getting customer feedback. The institution utilized customer feedback system and customer satisfaction survey to monitor program and services outcomes. Mendoza et al.(2014) stressed that customer’s needs and expectations need to be identified and achieved. The institution needs to improve their customer services through enhanced management practices to realize their vision. Customer satisfaction is always an important part of the ISO – QMS for continual improvement.

Respondents agreed that continuous learning through education and training will equip each and every employee with the tools required to be an effective part of the QMS. Achievement of quality requires constant learning for everyone in the institution. Results revealed that education and training is highly practiced in the institution.

Engaging competent and empowered people at all levels is highly practiced by the institution as indicat-

ed in high employee involvement. Essential to the successful implementation of a quality management system is employee involvement. Respondents believed that every employee is important to maintaining the quality management system running as it should. Involving employees in the planning contributes greatly to the successful implementation of the quality management system for they are the ones who will use the system. Irrespective of their position in the institution, everyone is involved in the QMS. Teamwork provides an atmosphere of mutual relationship, involvement, and participation throughout the institution.

The institution highly practiced processes for continuous improvement. It is a never ending process involving establishing goals and measuring progress towards achieving those goals. An institution with established quality management system makes continual improvement as its permanent objective. The institution continually improve the suitability, adequacy and effectiveness of the QMS. The results of analysis and evaluation of customer feedback determine the needs or opportunities that shall be addressed as part of continual improvement.

The practice of incentive and recognition system is high. Employees were given due credits for their outstanding performance in maintaining and improving the quality management system.

The institution has a high process and control monitoring system. Effective measurement of its performance through approved monitoring and evaluation system are used for the continual improvement of the system, processes and procedures of the institution. There is thorough analysis and evaluation of feedback, complaints, and nonconformances to improve processes and services to meet the changing needs of customers. The implementation of monitoring and measurement activities at appropriate stages to verify that criteria for control of processes or outputs, and acceptance criteria for products and services, have been met.

Process flow management requires identifying all of the processes in the institution and their interdependence and then managing these processes as a complete system. This is highly practiced in the institution. All activities in the institution are treated as a process. This will provide for a systematic definition of activities in order to meet the stated goals and identify the resources required to meet those goals. Managing relationships with relevant interested parties such as suppliers and service providers is high. The institution and its suppliers and service providers are interdependent. The mutually beneficial relationship between them increases the ability of both to add value. According to Zakuan et al. (2010), effective supplier quality management can be achieved by cooperation and long term relationship with the suppliers. This argument is also supported by Zineldin and Fonsso (2000), who found that developing supplier partnership and long-term relationships can increase the organization's competitiveness and thus, improve performance.

Quality assurance is a holistic approach covering all the processes in a higher education institution, in order to serve the students and other stakeholders in expected quality standards. The success of a quality assurance system depends on the support of the management. Hence, quality assurance should also cover the strategic management, process management and measuring-monitoring system which interact with each other for enabling the institutions to improve its processes (Kaveci, Uygun & Ilyas, 2012 ).

**Table 2: Organizational Performance**

CATEGORY	M	SD	DESCRIPTION
Employees attitude towards clients	3.457	1.047	Slightly increased
Skills levels of employees	3.819	.744	Slightly increased
Occurrence of non-conformities	2.571	.939	Slightly decreased
Teamwork and cooperation among employees within a team or unit	4.086	.856	Significantly increased
Teamwork and cooperation among employees belonging to different teams or units.	3.991	.956	Slightly increased
Communication between management and employees	3.914	.942	Slightly increased
Employees attitude towards quality	3.943	.842	Slightly increased

Employees pride towards work	3.924	.805	Slightly increased
Flow of information	3.924	.829	Slightly increased
Quality of products/ services provided by one unit to another unit	4.029	.765	Significantly increased
Quality products/ services provided by employees to our customer	4.067	.737	Significantly increased
Quality of products/ services provided to us by suppliers/ service providers.	3.952	.699	Slightly increased
<b>Organizational Performance</b>	<b>3.806</b>	<b>.598</b>	<b>Slightly increased</b>

Study revealed that organizational performance of the institution slightly increased. However, there is significant increase in teamwork and cooperation among employees within a team or unit, quality of products/ services provided by one unit to another unit and quality of products/ services provided by employees to the customers. Improvement in terms of the behavior of employees, which shows greater sense of belongingness, greater participation and cooperation in the establishment of objectives, and more active in promoting teamwork within a unit. Products and services provided by the institution meets customer needs and expectations.

Employees attitude toward clients, skills levels of employees, teamwork and cooperation among employees belonging to different teams or units, communication between management and employees, employees' attitude towards quality, employees' pride towards work, and flow of information slightly increased.

Occurrence of non-conformities (NCs) slightly decreased. Nonconformity is the failure to meet one or more of the existing requirements. If a non-conformity exist, root cause and corrective actions are identified to prevent the NC to occur in the future.

According to Zipporah (2016), QMS implementation has positive effects on overall organizational performance and implementing does pay off since the benefits accrued include improved quality, employee satisfaction, productivity, employee participation, teamwork, communication, profitability and greater market.

## INFERENCEAL DATA ANALYSIS

**Table 3: Relationship of Quality Management Practices and Organizational Performance**

CATEGORY	ORGANIZATIONAL PERFORMANCE	
	R	SIG
<b>QUALITY MANAGEMENT PRACTICES</b>		
Top Management Commitment	.183	.061
Education and Training	.270**	.006
Customer Focus	.268**	.006
Employee Involvement	.195*	.047
Supplier/ Service Provider Quality Management	.133	.175
Continuous Improvement	.239*	.014
Process Flow Management	.221*	.023
Incentive and Recognition System	.221*	.024
Process Monitoring and Control	.139	.158

\* $p < .05$ , \*\* $p < .001$

Pearson product moment coefficient of correlation results revealed that education and training, customer focus, continuous improvement, process flow management, incentive and recognition system and employee involvement are significantly correlated with organizational performance. This means that the implementation of quality management systems has an impact on the organization and its performance. Development of human resources through education and training is significant in order to enhance employee job performance, which results in improving the performance of the organization as a whole.

Focusing on customers' needs and expectations greatly affects how the organization functions effectively and efficiently. Promoting continuous improvement play important role in the success of the organization. This has been supported by Ramasamy (2009) who claimed that total quality management is an approach of an organization centered on quality, based on the participation of all its members and aimed at a long-term success through customer satisfaction and benefits to the member of the organization and the society.

Effective process flow management ensures that the organization's standardized and documented operating processes and procedures work towards optimizing its performance. Employee involvement leads towards achieving higher individual and organizational performance.

According to Bazayit (2003) important factors for a successful implementation process are upper management support, employee involvement and commitment, customer focus, quality education and training, teamwork, and use of statistical techniques. The results were also strongly supported by Mosadegh Rad (2006). His study revealed that support and commitment of top management, effective and strong leadership, strategic quality planning, communication of mission statement, maximizing employees' understanding of the vision, values and quality goals of the organizations, training and development, effective human resources management, employee's empowerment, employee's commitment, and voluntary participation are some of the key factors towards successful implementation of TQM. Furthermore, the study of Lin and Jang (2008) revealed that a comprehensive ISO 9001 model should support four key constructs, namely, top management support, quality planning, employee involvement and continuous improvement.

Similarly, incentive system motivates employees to work better thus increasing the organization's performance. There is need for focusing over empowering and rewarding the employees of the along with support in process management, which are acting as the nerves of quality management as per the study of Prashanth (2017).

## **CONCLUSIONS**

Based on the findings, the following conclusions were arrived at:

Top management is fully committed and actively involved in the effective implementation and sustainability of the quality management system. The institution focuses on enhancing customer satisfaction considering their needs and expectations. Constant training and involvement of every employee in the institution is evident. Documentation of the standardized operating procedures indicated that process flow management of the institution is maintained. Relationship with suppliers/ service providers have been effectively managed. The monitoring and measurement mechanism of the institution ensured that process performance is properly examined and assessed at all stages.

The implementation of quality management system provides positive impact on the organizational performance of the institution. It reduced the occurrence of non-conformities and improved teamwork, co-operation and quality of products and services.

The quality management practices of the institution in terms of education and training, customer focus, continuous improvement, process flow management, incentive and recognition system and employee involvement play important roles in improving organizational performance of the institution.

## **RECOMMENDATIONS**

Based on findings and conclusions of this study, the researcher recommends the following:

A continuous review and monitoring be regularly done to ensure the continuous improvement of the

suitability, adequacy, and effectiveness of the Quality Management System to continuously improve in line with the market demands, and compliance with national and international mandatory rules and regulations for customer satisfaction.

There is a need to improve the organizational performance of the institution.

The institution may expand its faculty and staff development programs in order to enhance necessary competencies and evaluate its effectiveness. Faculty and staff development programs include the grant of scholarship for continuing professional development, mentoring, trainings, job rotations, re-assignments.

Periodic gathering and monitoring customers' perceptions of the degree to which their needs and expectations have been fulfilled be conducted through customer surveys, customer feedback on delivered products and services, meetings with customers, interview of interested parties, exit interview of out-going students and personnel, conduct of focused group discussion and use of evaluation forms after each activity.

Benchmarking with nationally accredited and internationally certified institutions be done to see their processes with a goal of identifying and observing their best practices.

The Awards and Merit System of the institution be strengthened to further encourage and motivate employees to apply all the requirements of the International Standard within the determined scope of its QMS and maintain and ensure availability of documented information to support the operation of its processes.

Effective implementation of the QMS is not the responsibility of one person or one unit. All must be involved in improving the quality of products, services and processes. This can be done through continuous awareness training, workshop sessions, consultation meeting and follow up activities on the QMS in all levels.

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# EMPLOYERS' FEEDBACK ON STUDENT INTERNSHIP: THE CASE OF BOHOL ISLAND STATE UNIVERSITY

**Deliarita O. Casundo, PhD, Emmylou Maputol PhD, and Alma Mae J. Bernales**

College of Technology and Allied Sciences

Bohol Island State University

Candijay Campus

Cogtong, Candijay, Bohol

## ABSTRACT

*This study was conducted to all the direct supervisors of the selected public and private offices in the province of Bohol to analyze the practicum performance and the learning outcomes of the second batch of graduating students of the Office Systems Management Program of Bohol Island State University-Candijay Campus in the School Year 2018-2019. The researchers used a descriptive survey method utilizing the BISU System Standardized On-the-Job Training evaluation instrument in measuring the internship performance of the students focusing on the three major domains namely; job/technical skills, people skills and soft skills. A total of sixty-five (65) evaluation reports from all various employers/direct supervisors were analyzed. The overall performance of the students during their internship in both public and private offices was rated as outstanding based on their employer's feedback. Hence, the on the job trainee students had manifested the job skill, people skill and soft skill with excellence always. The researchers highly recommended that the on the job trainee students should apply their experiences and skills gained on their actual work experience for their future employment. Moreover, it is recommended that the faculty handling Administrative Office Systems Management subject must continue with their teaching techniques and strategies so that the next batch of the on the job training students can apply their learning and maintain outstanding performance.*

**Keywords:** *Employer, feedback, students, internship, and performance*

## INTRODUCTION

Over the past decade, higher education is a driver of economic competition in the knowledge-based economy. Higher education aims to raise higher skills of graduates and professionals to sustain an internationally competitive job market to benefit the industry or society more generally. Mina, Garcia and Reyes (2020) also pointed out that higher education is a critical phase wherein students need to acquire the knowledge, skills, and competencies needed to address the complex social, economic and even political issues they have to face in the real world.

However, many have criticized that education, especially in the rural areas, does not have much relevance to the real world and that knowledge production carried out is the absence of some practical goal. In fact, Salaveria (2013) reported that many universities here in the Philippines are suffering in terms of quality and academic reputation, resulting in mediocre graduates. In 2018, the Philippine Statistics Authority reported an estimated 5.3% unemployment rate. Of the unemployed, 21% were college graduates.

To resolve this situation, higher education institutions (HEIs), especially state universities, play a significant role in producing quality graduates that will contribute to the economic development of the country. Faculty training and curriculum development are some of the strategies applied by universities in improving the quality of graduates. To this effect, the curriculum development is one aspect that needs feedback from different stakeholders.

Feedback from stakeholders, especially the industry partners, are vital in improving the curriculum of an undergraduate program. Bohol Island State University Candijay Campus – a local state university in Bohol, has recently opened a new program Bachelor of Science in Office Systems Management (BSOSM). Being a newly offered program, determining the effectiveness of academic courses provided to the first batch of graduates is critical to the program curriculum development.

Basing on the outcomes-based education pedagogy, this paper proposes a framework for measuring the effectiveness of curriculum by assessing the students' internship performance.

## **STATEMENT OF THE PROBLEM**

The study's primary aim was to determine employers' feedback on student practicum performance and their learning outcomes at the end of the practicum. Specifically, it sought to answer the following specific objectives:

1. What is the profile of the respondents in terms of:
  - 1.1 sex; and
  - 1.2 office assigned?
2. What is the employers' feedback on students' practicum performance in terms of:
  - 2.1 job skills;
  - 2.2 people skills; and
  - 2.3 soft skills?

## **REVIEW OF RELATED LITERATURE**

Outcomes-based education (OBE) describes an educational process that is based on trying to achieve specified outcomes in terms of individual student learning. One distinct characteristic of OBE is that it tries to determine the desired state in individual students by describing the actual capabilities they should develop as a result of their school education. In OBE learning, all educational programs and instructional efforts are designed to have produced specific, lasting results in students by the time they leave the school. Furthermore, industry involvement is a critical input, to be able to clearly define graduate outcomes (Yusof et al., 2017).

Meanwhile, the most practical learning experience that students could have is the internship. Thus, it is considered an essential part of the academic curriculum. An internship is an opportunity for undergraduate students to incorporate work-related experience and knowledge into their formal education in a university by taking part in supervised and planned work in a real-world professional environment. Consequently, it facilitates the transition between classroom theory and everyday practice. An internship is defined as a situation in which an advanced college student gains supervised practical experience while employed in an office.

Furthermore, a previous study revealed that students perceive internships to have a valuable impact on their effectiveness as future employees (Moghaddan, 2011). Similarly, Peach, Ruinard and Webb (2014) confirmed that the work experience component of the internship has the potential to reinforce the professional learning achieved in a traditional university environment as well as promoting the development of generic skills. Thus, feedback on students' internship performance is considered to be precarious. Feedback from the employers could give relevant insights into the effectiveness of learning provided to the students. For Jamil, Shariff and Abu (2012), Business Management students' internship performance was used as a basis for assessing the curriculum development by the faculty. Feedback from the employers in the said study showed that the students acquired meaningful work knowledge, demonstrated good working skills with the right attitudes at the workplace. This suggests favorable feedback from the employers.

According to Shah, Grebennikov and Nair (2015) the assessment of employer feedback on university graduates is vital because of the following reasons: (1) to ensure that university courses and curriculum are relevant to the changing needs of employers and industry; (2) to assess the trends and changes in the external operating environment, which may impact the labor market; (3) to identify the extent to which graduates in university and non-university providers (e.g., private providers) have the skills and attributes which employers identify as high importance and low satisfaction in early career graduates; and (4) to enhance the engagement between employers and the education providers.

The objective of the study is to analyze employers' feedback on students' internship performance of Bachelor of Science in Office Systems Management fourth-year students School year 2017-2018 both public and private offices in terms of Job skills, People skills, and Soft skills.

## METHODOLOGY

This study employed the descriptive survey method with the aid of the BISU system standardized job training evaluation instrument focusing on the three (3) major domains, they are: a) Job/Technical Skills, b) People Skills, and c) Soft Skills. The respondents of the study were all the direct supervisors of the selected public and private offices in the province of Bohol. The instruments were personally distributed by the researchers to the direct supervisors for them to assess the student practicum performance of the second batch graduating Bachelor of Science in Office Systems management students in the S.Y. 2018-2019. This type of assessment can provide much toward determining the gaps in the curriculum of the said program. After the required number of hours of internship, the trainees gathered the data from their respective direct supervisors and the instruments were placed in a sealed envelope for the confidentiality of the data.

## FINDINGS

This section presents the data, analysis, and interpretation of the data gathered from the Evaluation Form distributed.

**Table 1. Students' Socio-Demographic Profile as to Sex  
N=65**

SEX	FREQUENCY (Y)	PERCENT %
Male	8	12.31
Female	57	87.69
<b>Total</b>	<b>65</b>	<b>100%</b>

In total, the sixty-five evaluation forms are successfully collected. Table 1 presents a more significant proportion of the female students with a frequency of fifty-seven (57) or 87.69%, while its male counterpart summed up to eight (8) or 12.31%. It shows that female students dominated over the male respondents.

**Table 2. Students' Socio-Demographic Profile as to Office Assigned  
N=65**

OFFICE ASSIGNED	FREQUENCY (Y)	PERCENT %
Private	17	26.15
Government	48	73.85
<b>Total</b>	<b>65</b>	<b>100%</b>

As to office assigned, more than half of the respondents were assigned to government offices with a frequency of forty-eight (48) or 73.85%, while there were only seventeen (17) assigned to private offices.

**Table 3. Employers’ Feedback on Students’ Internship Performance as to Job Skills  
N=65**

Items	WM	DV	Rank
1.Applies knowledge and uses sound judgment in the performance of assigned tasked.	4.42	O	7
2.Exhibits basic clerical/secretarial skills.	4.58	O	3
3.Exhibits skills in handling business forms, proper use of telephone, planning, and organizing meetings and conferences, and records management.	4.30	O	9
4.Manifests the importance of a wholesome business personality that is necessary for today’s workplace.	4.43	O	6
5.Exhibits proficiency in keyboarding principles and techniques in keying business documents.	4.44	O	5
6.Demonstrates proficiency in communication and information technology.	4.32	O	8
7.Works with maximum flexibility in a multi-tasking office environment.	4.60	O	2
8.Learns willingly new knowledge and methods.	4.66	O	1
9.Works with accuracy, thoroughness, and neatness.	4.57	O	4
<b>Sub-composite Mean</b>	<b>4.52</b>	<b>O</b>	<b>Outstanding</b>

Legend:

Scale Range	Description
4.20-5.00	Outstanding (O)
3.40- 4.19	Very Satisfactory (VS)
2.60-3.39	Satisfactory (S)
1.80-2.59	Fair (Fair)
1.00-1.79	Needs Improvement (NI)

As presented in table 3, it can be gleaned that all items under Job Skills received a rating of “Outstanding” from the employers with a composite mean of 4.52. Hence, it can be deduced that student trainees had manifested their job skills with excellence. Further, results imply that the student trainees have gained the abilities that made them excel in their assigned job/task.

**Table 4. Employers’ Feedback on Student Internship Performance as to People Skills  
N-65**

Items	WM	DV	Rank
1.Takes direction and guidance from superior openly and positively.	4.65	O	1
2. Observes proper decorum in dealing with co-workers/ superiors.	4.61	O	2
<b>Sub-composite mean</b>	<b>4.63</b>	<b>O</b>	<b>Outstanding</b>

Legend:

Scale Range	Description
4.20-5.00	Outstanding (O)
3.40- 4.19	Very Satisfactory (VS)
2.60-3.39	Satisfactory (S)
1.80-2.59	Fair (Fair)
1.00-1.79	Needs Improvement (NI)

It can be observed from Table 4 that the “people skills” garnered a composite mean of 4.63, described as Outstanding. Thus, intern students have related or interacted well with the people in their respective offices.

**Table 5. Employees' Feedback on Students' Internship Performance as to Soft Skills  
N=65**

Items	WM	DV	Rank
1.Influences others in the team to accomplish targets.	4.27	O	8.5
2.Makes sound judgment and manifests critical thinking.	3.84	VS	11
3.Sets clear target in the completion of assigned tasks.	4.32	O	7
4.Prioritizes multiple tasks.	4.53	O	4.5
5.Executes and completes work as instructed.	4.53	O	4.5
6. Works with minimum amount of supervisions.	4.42	O	6
7.Communicates orally effectively.	4.24	O	10
8.Communicates in writing effectively.	4.27	O	8.5
9. Demonstrates Filipino values and industry desired values	4.65	O	3
10. Demonstrates commitment to the job.	4.70	O	2
11.Complies with internship/OJT guidelines and requirements of the company	4.74	O	1
<b>Sub-composite mean</b>	<b>4.41</b>	<b>O</b>	<b>Outstanding</b>

Legend:

Scale Range	Description
4.20-5.00	Outstanding (O)
3.40- 4.19	Very Satisfactory (VS)
2.60-3.39	Satisfactory (S)
1.80-2.59	Fair (Fair)
1.00-1.79	Needs Improvement (NI)

Table 5 shows the intern student performance as to soft skills. Overall, the soft skills was described as 'Outstanding' as it has obtained a weighted mean of 4.41. Hence, intern students possessed personal attributes that enabled them to interact effectively and harmoniously with the other people in their assigned task/job.

**Table 6. Summary of Employers' Feedback on Students' Internship Performance  
N=65**

Parameters	WM	DV	Rank
1.Job Skills	4.52	O	2
2.People Skills	4.63	O	1
3.Soft Skills	4.41	O	3
<b>Grand Composite Mean</b>	<b>4.52</b>	<b>O</b>	<b>Outstanding</b>

Legend:

Scale Range	Description
4.20-5.00	Outstanding (O)
3.40- 4.19	Very Satisfactory (VS)
2.60-3.39	Satisfactory (S)
1.80-2.59	Fair (Fair)
1.00-1.79	Needs Improvement (NI)

Table 6 shows the summary of employees' feedback on students' internship performance. It can be gleaned that people skills ranked as first with a weighted mean of 4.63 described as Outstanding. While soft skills obtained the lowest rank with a weighted mean of 4.41 described Outstanding.

Overall, students' internship performance gained a grand composite mean of 4.52, described as Outstanding. Thus, intern students of the second batch of the Bachelor Science in Office Management Systems in the School Year 2018-2019 had performed well in their on the job training. Further, the said intern students have applied their knowledge on how to efficiently perform their assigned task, how to relate well and how to have a harmonious relationship with the people in their assigned work place.

## CONCLUSION

In the light of the analyzed data, the researchers formulated the following conclusions.

- The overall performance of the students during their internship in both public and private offices was rated as “Outstanding” by their immediate supervisors. Hence, the internship students had manifested job skill, people skills, and soft skill with excellence always. This goes to show that they have applied what they have learned from their Administrative Office System Management subject and from their Campus training. Further, faculty handling the said subject was effective in transferring her knowledge to the internship students.

## RECOMMENDATION

Below are the researchers’ recommendations based on the findings of the study.

The researchers highly recommended that the on the job trainee students should apply their experiences and skills gained on their actual work experience for their future employment. Moreover, it is recommended that the faculty handling Administrative Office Systems Management subject must continue with their teaching techniques and strategies so that the next batch of the on the job training students can apply their learning and maintain outstanding performance. Lastly, it is recommended that for further study, the questionnaires will not be distributed to the supervisors only but also to the peers and self to make the result reliable.

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# ROLE OF PROBLEM-BASED LEARNING PEDAGOGY IN DEVELOPING CRITICAL THINKING SKILLS AMONG SELECTED STEM STUDENTS

**Donnabel B. Bihasa**  
PhDEM - English  
Emilio Aguinaldo College - Manila

## ABSTRACT

*Problem-Based Learning (PBL) is a method that uses real world problems to motivate students, identify and apply research concepts and information, work collaboratively, and communicate effectively (Dutch et al., 2001). Interview and evaluation test was used as well as purposive sampling in choosing 20 grade 11 STEM strand students for they have the characteristics that the study needs. Data was interpreted using weighted mean and qualitative discourse analysis. The study has also revealed that PBL pedagogy enhances the understanding of the students that results into a higher quality and more efficient knowledge obtained, which when compared to the traditional way of teaching the "Spoon Feeding" method, students exhibited more sign of excitement and enthusiasm towards the topic, and also encouraged the students to think on their own for the solution becoming more independent and self-reliant.*

**Keywords:** *Problem – Based Learning (PBL), Pedagogy, PBL Pedagogy, Critical Thinking Skills, Disciplinary habits*

## INTRODUCTION

Education is the most powerful weapon which one can use to change the world (Mandela, 2003) for it touches the minds and acts of a person. Yet, the knowledge is at its peak when given in a good manner. Efforts to develop the insight and intelligence of a student result to various teaching strategies. One of these techniques is Problem-Based Learning or PBL.

Wood (2003) defines PBL as a process that uses identified issues within a scenario to increase knowledge and understanding. It is an utter opposite of the spoon-feeding technique that allow learners to ingest knowledge from the situational problems.

PBL was said to originate in 1966 when the "founding fathers" of the Faculty of Medicine at McMaster University conceptualized an approach to medical education that focus on individual student-physician (Neufeld and Barrows, 1974). This method of learning developed over the years and spread fairly fast throughout the world. Twenty-first century skills necessitate the implementation of instruction that allows students to apply course content, take ownership of their learning, use technology meaningfully, and collaborate.

Genareo and Lyons (2015) suggested that there are 6 steps in implementing and assessing PBL; (1) identify outcomes/assessments. Through this, students can reflect and evaluate their disciplinary habits; (2) design a scenario that would help them build their interests and motivate them into brainstorming and discussions; (3) introduce PBL to the students to help them familiarize the teaching strategy; (4) after having the problems, students will have to research for possible solutions; (5) synthesis of their learning and research. This is where summative assessments usually occur; and (6) assessing the performance of the students.

As time goes by, people's minds tend to mature and adapt more to the growing environment. However,

several people who lack of understanding and logical judgment due to mediocrity are likely to be excluded in this maturity. The dearth of critical thinking skills utilized within the classroom greatly diminishes the students' chance for success (Irfaner, 2006). Critical thinking skill is not only used in the four corners of the classroom. It was proven that highly successful business leaders possess this skill in order to overcome obstacles, deal with problems, and make wise decisions. Still, there are students who lack the motivation to use their critical thinking skills and eventually bump their grade level and intellect (O'Brien, 2013). Through the problem-based learning strategy, wherein students get to discuss, communicate and brainstorm with their peers, students may enhance their critical thinking skills throughout the performance. For the benefit of the following generations, a firm foundation of education is a way to the betterment of the mind's critical thinking. PBL suggests the promotion of students' thinking ability into working greater function (Pijl-Zieber, 2006). According to a school vision statement, the institution foresee that their excellence and pedagogical means is at peak within the year 2026. PBL pedagogy is a key to ensure the development of students' mental capability into achieving greater heights.

### **Background of the Study**

For the benefit of the following generations, a firm foundation of education is a way to the betterment of the mind's critical thinking.

This research was conducted to developed new knowledge about the teaching-learning situation to improve educational practices through problem-based learning.

Problem-based learning is a pedagogical approach that allows students to obtain life-long learning by generating solutions to a complex problem. These solutions can only be obtained by using critical thinking skills. Critical thinking is a combination of lower order thinking skills and higher order thinking skills. It refers to the ability of obtaining information by remembering and understanding knowledge and using the obtained information to guide a behavior by analyzing, evaluating and creating reasonable decision. However, students that came from different background and have various skills and abilities also require different types of approach. Yet, several studies proved that PBL effectively develop the students when the learners engage more with their study group to analyze situational problems and sufficient and efficient facilitators guide the learners.

### **Statement of the Problem**

This study was designed to explained Problem Based Learning or PBL pedagogy and its help in developing critical thinking skills of selected grade 11 STEM students.

This study sought to answer the following questions:

1. What are the benefits of PBL to students?
2. How do students use critical thinking skills in learning situations?
3. How can PBL help in developing students' critical thinking skills?
4. How effective is PBL in the learning environment compared to traditional learning strategy?

## **METHODOLOGY**

Qualitative research design called phenomenology was used in this study. Phenomenology has been practiced unknowingly for many centuries, but the term was first officially introduced by Johann Heinrich Lambert in the 18th century and was launched by Edmund Husserl in his work, Logical Investigations, in the early 20th century. It is a research method based on the academic disciplines of philosophy and psychology and is used to understand how human being experiences a certain phenomenon (Giorgi, 2012).



Phenomenology is being conducted through variety of methods including interviews, conversations, participant observation, action research, focus meetings, analysis of diaries and other personal texts. Open-ended questions are used on interviews to let the respondents to fully describe the experience from their own perspectives.

A phenomenological research study typically follows four steps (Hycner, 1985): (1) Researcher should begin with the practice of epoche to identify any preconceived beliefs, opinions or notions about the phenomenon being researched and brackets out any presuppositions in an effect to approach the study of the phenomenon from an unbiased perspective; (2) it requires that the researcher becomes totally absorbed in the study and remains open in order to understand the real meaning of the phenomenon as perceived by those who experienced it; (3) it involves the researcher becoming full immersed into the data gathered to develop themes that can be used to describe the experience from the perspective of those that lived it; and (4) the researcher will use his or her understanding of the data to describe and define the phenomenon and communicate it to others.

The method of purposive sampling was used by the researchers to gather sample that significantly contribute to the research. Purposive sampling is a non-probability sampling in which the researcher purposively chooses their respondents to achieve higher quality of data gathered. It ensures that the sample group represents certain characteristics and met the target number of respondents. It is useful because they often provide significant insight into a particular phenomenon, which can act as lessons (or cases of best practice) that guide future research and practice. To attain a richer and more in-depth understanding, the researcher purposively gather sample students who are achievers or honor students.

## **RESULTS AND DISCUSSION**

Based on the analysis and interpretation of data, the following findings are hereby summarized:

It was found that students practice their analytical skills into solving and deciphering problems. PBL also have the tendency to develop a student's thinking skills. Students' independence from the instructors permits them to think and create flexibly.

In addition, PBL enhances the mental stability of the learners to skillfully use in certain problems. It also motivates students to engage with the learning environment and let them express their own understanding and perceptions of a topic. Also, PBL allows students to extract further information which then strengthens their built-up knowledge regarding the topic.

PBL pedagogy enhances students' independence and critical thinking skills that urges them to be free to a wider range of solutions. The researchers discovered that the students use critical thinking skills in logical and deductive reasoning, such as when inferring answers to situations or problems. In real life situations it utilizes critical thinking skills for when in need of decision making in buying grocery items, assessing certain matters, and/or weighing the importance of events or materials. The utilization of critical thinking skills is also evident in problem-solving. There are instances wherein provision of multiple solutions happens due to the use of critical thinking skills. In learning environments, such as a classroom, critical thinking skills are manifested for academic and creative writing purposes. Problem-based learning sustains critical thinking skills in a way that it is considered as key criteria in obtaining further knowledge and motivating the students to apply research concepts, work collaboratively and communicate effectively with any situations in life. it promotes students' mindset and enables them to engage themselves more in the learning environment which will help in enhancing their cognitive and mental ability. Out of all the 20 respondents, majority of the students possess the characteristics of a critical thinker. They consider themselves critical thinkers who can discover new ideas between the lines, yet, unfortunately, being fully immersed in identification and evaluation of hidden and abstract situations hinder them to become a fully developed critical thinker.

PBL is effective in terms of honing critical thinking skills of students (Etherington, 2011). PBL signifi-

cantly increases engagement and the aspiration of students to learn for it gives the feeling of curiosity and excitement. Also, it helps the students understand the matter clearly as they discovered the lesson on their own.

## **CONCLUSION**

Based on the findings that the researchers accumulated, the researchers therefore conclude that:

Creativity and the ability to work independently without the lecture and instructions given by the teacher are just some of the main asset in PBL, but students tend to find working independently a lot harder than the traditional method. On the bright side, students think that it is a great opportunity for them to discover some unfamiliar problems that encouraged them to improve their self-understanding as well as their logical reasoning of the things that they have experienced.

It also engages the students to become more interactive with other people that lead to an additional ideas and knowledge about a certain case. The students are motivated to make use of their higher thinking skills that gives them an access to look for alternative solutions into problems that they encountered and will encounter, whether it may be a mathematical problem or something academic-related or in a complex and deep cases.

The students critical thinking skills are challenged due to an evaluation on how things are related, on analyzing how possible solutions help solve something and lastly on how they do it on their own ways that will eventually benefit them not only on how they see a mathematical problem but most especially on how they see problems encountered in our daily lives. In addition to that, students got to be aware of the ideas of others through brainstorming, but it doesn't only help in gaining further information thus, it also enhances how they engage socially.

## **RECOMMENDATIONS**

Based from the findings and conclusions given, the researcher offered the following recommendations:

1. For Academic Institutions to incorporate and strengthen Problem Based Learning teaching strategies and techniques or Problem Based Learning pedagogy into their curricula through implementing more group activities, group works, and cooperative learning projects.
2. For Parents to monitor and assist their children's school of choice whether or not Problem Based Learning strategies or Problem Based Learning pedagogy is used in the institution, due to the fact that the researcher has assessed that students become enticed to explore new knowledge and information. Through PBL students also become enthusiastic and curious which makes them more interested in learning.
3. For Teachers to implement Problem Based Learning teaching strategies into their way of teaching, by incorporating more group based works, group based activities and group interaction to be the focus throughout the class.
4. For Students to focus on what they can gain from PBL rather than perceiving its process negatively. It can help in developing students' critical thinking which cannot only be used in academic-related matter but also in solving real-life problems.
5. For Future Researchers to widen the scope of this study to further gain more knowledge on the effectiveness of PBL to students. And that another similar study can be conducted in the future which may enhance the quality of this existing research.

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# LEADERSHIP STYLES AND SUPERVISORY COMPETENCE OF MASTER TEACHERS IN SELECTED SCHOOLS OF NATIONAL CAPITAL REGION: BASE REFERENCE FOR COMPETENCY UPGRADING

**Dr. Elvira B. Bagacina**  
Master Teacher II  
Upper Bicutan Elementary School  
Deped/Taguig City And Pateros  
General Santos Avenue, Upper Bicutan, Taguig City

## ABSTRACT

*This study aimed to determine leadership styles and supervisory competence of Master Teachers in selected schools of National Capital Region in which the result served as base reference for competency upgrading. It primarily focused on determining the leadership styles such as democratic leadership, laissez-faire leadership, autocratic leadership, transformational leadership, charismatic leadership. It also focused on the level of competence of master teachers in their supervisory functions in terms of; instructional supervision, school improvement, pupils development; and staff development. To attain the objectives of the study, the researcher used the descriptive method of research. It involved 97 samples from a population of 112 master teachers in the National Capital Region. Purposive sampling was used wherein a subset of individuals were randomly selected by the researcher to represent an entire group as a whole. The main instrument used was the researcher-made survey questionnaire. Unstructured interviews and observation were used by the researcher in verifying some points. Data were collected, tabulated and statistically treated. Based on the findings of this study, the following conclusions were formulated: Respondents have average level of leadership styles. Level of competence in performing their supervisory function in instructional supervision, school improvement, pupil development, and teacher and staff development had different ways of performing function that caters for their specific jobs and tasks. The leadership styles of the master teachers do not significantly affect their level of competence in performing supervisory functions. The base reference that may recommend are improvement of in-service trainings and some various seminars, workshops and innovative team building, in which they could utilize it in their leadership and supervisory functions and personal enhancement as a middle manager.*

**Keywords:** Leadership style, Supervisory, Competence, Master Teachers, Upgrading

## INTRODUCTION

Leadership indulged through leaders fractioned the influence of the confidence of the people towards the organizations and its constituents. As defined by Fullan (2007), leadership is “the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers”. Effective leaders realize that in order to persuade others to follow, they must cultivate trustworthy relationships. Similarly, Owens and Valesky (2015) declared that leadership is more than simply how one behaves towards people or what one does; it is how one works through other people to achieve goals.

Accomplishing school endeavors was in great need of head teachers that were holistic in all aspect of leading his subordinates and his organization. According to Sigford (2005), one of the most fundamental responsibilities of a school leader is to set the focus and direction of a school. Additionally, as reported by Fiore (2009), “school administrators must regularly exhibit positive leadership characteristics,”

while they “make literally dozens of decisions daily on a multitude of issues” (Mason, 2007). However, leaders in the environment of management who is not in an advocating change has many external environmental forces which affect his performance, such as economics, technology and even governmental regulations that has a profound impact on such environment. With few resources, workers have realized that they must do more with less; they understand that jobs need to be restructured and new management systems need to be developed. They also know that if an organization is going to be efficient and effective, the work force must maximize to the fullest.

In addition to the tremendous amount of everyday leadership duties, effective administrators realize the significant relationship between their leadership style and teacher morale (Whitaker et al., 2009). “The top management should be conscious of keeping their workers satisfied, because their leadership has great impact on morale” (Mooney, n.d). The most operational and competent administrators recognize the morale within their school directly correlates with employee satisfaction (Schaefer, 2016). Furthermore, the quality of a school’s leadership directly influences teacher decisions regarding remaining in or leaving the teaching profession (Long, 2015).

Moreover, the motivation of leaders towards school environment is one of the elemental notions that could largely influence their sentiments towards the institution. It is unimaginable to lead people if they do not have basic competence and if they feel threatened because of their lack of preparation for it.

Leadership is a process in which the leaders take actions to try to increase the awareness of what is right and important. As well, it is a process to raise motivational maturity and to move beyond their self-interests for the good of the school or society. Through the development of their teachers, they optimize the development of their school as well. High performing teachers build high performing organizations. The researcher conducted this study to determine the leadership styles and supervisory competence of master teachers in selected schools in National Capital Region to know what recommendation needs to upgrade in terms of their level of competence.

### **Statement of the Problem**

This study aimed to determine the leadership styles and supervisory competence of Master Teachers in Selected Schools in National Capital Region as Base Reference for Competency Upgrading

Specifically, it sought to answer the following questions.

1. What leadership styles are embraced by the master teachers?
  - 1.1 Democratic leadership;
  - 1.2 Charismatic leadership;
  - 1.3 Autocratic leadership;
  - 1.4 Transformational leadership; and
  - 1.5 Laissez-faire leadership
2. What is the level of competence of the respondents in the performance of their Supervisory functions in the area of:
  - 2.1 Instructional supervision
  - 2.2 School improvement
  - 2.3 Pupils development; and
  - 2.4 Teacher/Staff development
3. Do the leadership styles of the master teachers significantly affect their level of Competence in performing their supervisory functions?

### **Hypothesis**

The leadership styles of the master teachers do not significantly affect their level of competence in performing supervisory competence.

## **Reviewed of Related Literature and Studies**

Leadership is the process of influencing one another. It is the personality that a person should have if he/she will lead a particular group and change them to a better one. Bringing new outcomes, motivating one another and creating a climate for growth are the factors of leadership. Through there are items that leadership listed with different trials, still a leader should stand-out and lead for possible solution. Leadership develops skills and talents of an individual.

Steers, (2000) thought that one of the most important aspects of leadership is coming together and putting up a good job. It is also the job of the principal to create and sustain high performance. Kokemuller, (2007), Martin, (2000), Griffins, (2000), Oyentunyi (2006), Mehrota, (2005), Leithwood (2005), and Sammons, (2004) leaders must give value and importance to their subordinates as they go through their tasks and obligations to people and to the community as well.

This is similar to the study conducted by Cherry, Kessler, Felton, Bailey, De Torro, Mac Nulty's, (2004) the leadership styles among foreign Secondary School head teachers which revealed that majority of the head teachers are moderate level of management competence knowledge and moderate level of leadership styles towards a positive attitudes in leadership and management. On the other hand, Odubuker, (2007), Mpierwe, (2007), Linenburg, (2010), Barnette, (2003) similar to the present study as it also found that the basic way of leading the people is to listen and be with your people and apply what are those things that are talked and agreed by the majority.

Moreover, it is also alike with the study conducted by Perdiguerra (2004), Rivera, (2004), Andres, (2004) on leadership skills: Its Influence to the management competency of Teachers at the Public National High School, that there was a significant difference in leadership styles of the respondents when grouped as to age. The study showed that head teachers confined to the old group had different level of leadership styles and strategies of managing the people while those in the young group had quite aligned to level of techniques in leading or managing people wherein they work hand in hand when it comes to task and responsibility. It was also found out that there was a significant difference in leadership styles and management competence of the respondents when grouped as to teaching experience.

In part of this, Martires, (2008), Sison, (2008) command in way that they are please of your people as to the extent that they are still contented to what are they doing and they will not get annoyed. Working with passion through into your heart and mind would give more factors and contribute to each particular tasks to perform for. According to them Luistro, (2011), Salvador, (2006), Bago, (2005) and Castillo, (2005) Filipino students deserve with the creativity and commitment that is required of a father of family as well as to lead the group, community, school and in any organization as well.

On the other hand, Arcadio, (2001), Guevarra, (2000), Guiterrez, (2002) , Dijamco, (2003), Francisco, (2005) effective school leaders know on how to focus the work to the school essentials, and to the people articulations about what is right and wrong and for the goods of others and to the organization as well. Indeed, the concept, findings and conclusion from different sources are related in many aspects to the present study in the sense that they revealed circumstances, effects and condition that justified and confirmed the present investigation which finally served as bases for the favorable outcomes in the development of the researcher's study.

## **Methodology**

To attain the objectives of the study, the researcher used the descriptive method of research. The study involved 97 samples from a population of 112 master teachers in the National Capital Region. Purposive sampling was used wherein a subset of individuals were randomly selected by the researcher to represent an entire group as a whole. The main instrument that served as the data gathering tool was the researcher-made survey questionnaire. It was validated by the Dean and Associate Professors of the same university where the researcher studied. Unstructured interviews and observation were also used by the researcher in verifying some points. Data were collected, tabulated and statistically treated.

## Findings

Organized according to the specific questions in the statement of the problem, the following were the findings of the study.

### 1. Leadership styles are embraced by the master teachers.

The respondents' Leadership styles embraced by the master teachers show that transformational leadership style got the highest frequency of 32 or 32.99 percent. In charismatic leadership style the frequency of 29 or 29.90 percent was obtained, while democratic leadership got a frequency of 23 or 23.71 percent. And, the laissez-faire leadership has a frequency of 11 or 11.34 percent. However, out of 5 leadership styles autocratic leadership got the lowest frequency of 2 or 2.06 percent.

### 2. The Level of competence of the respondents in the performance of their supervisory functions.

2.1 The respondents were competent in Instructional Supervision as attested by an over-all weighted mean of 3.04. One of the mandates of master Teachers is to perform instructional supervision through observation, monitoring, mentoring and coaching of teachers who needed interventions in skills and content delivery.

2.2. The respondents were competent in School Improvement function as shown by an over-all weighted mean of 2.73. Ensuring that the school should be a safe and conducive learning place is one of the responsibilities of a master teacher in which they monitor the school and classroom environment.

2.3 The respondents were competent in Pupil Development function as manifested by an over-all weighted mean of 3.16. Master teachers conduct demonstration teaching and sharing of effective techniques and strategies to make the teaching and learning process effective. They also make action researches that will help improve pupil's performance. They also evaluate teacher-made test and interpret result for further instructional intervention.

2.4 The respondents were competent in Teacher and Staff Development as attested by an over-all weighted mean of 2.81. Assisting in designing capacity development programs for teachers and serving as speaker and facilitator in in-service training is another responsibility of master teachers for continuous professional development.

### 3. The leadership styles of head teachers significantly affect their level of Competence in performing supervisory functions.

3.1 The respondents were competent in performing their supervisory function when grouped according to their embraced leadership styles with an overall weighted mean of 2.94.

3.2 The data of the respondents revealed the significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function. In the area of instruction, the null hypothesis was majority rejected and the rest are accepted. In democratic leadership with an obtained result of 51.004 its probability value of .045 the null hypothesis is rejected. In charismatic leadership with a result of = 42.385 its probability value of .002 the null hypothesis is rejected. And also like with the transformational leadership with an obtained result of = 36.516 and has a probability value of .002 the null hypothesis. While, the laissez-faire leadership with a result of = 32.511 its probability value of .093 the null hypothesis is accepted. And the autocratic leadership too, with an obtained result of = 27.308 its probability value of .079 the null hypothesis is accepted.

3.3 The data of the respondents as revealed for the democratic leadership with a chi-square value of 56.113 and has a probability value of .089, charismatic leadership with a chi-square value of 38.576 and has its probability value of .05 and laissez-faire leadership with a chi-square value of 30.431 and



has a probability value of .077, shows that the null hypothesis is accepted, which means that there is no significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function in the area of school improvement. However, data revealed shows that in the autocratic leadership the chi-square value of 24.224 and has a probability value of .001 and in transformational leadership with a chi-square value of 38.197 and has a probability value of .077, means that the null hypothesis is rejected which means that there is a significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function in the area of school improvement.

3.4 The data of the respondents revealed for the charismatic leadership with a chi-square value of 32.442 and has a probability value of .000 while, transformational leadership with a chi-square value of 37.776 and has a probability value of .000 are significant thus, the null hypothesis is rejected. While, democratic leadership with a chi-square value of 49.152 and has a probability value of .078, autocratic leadership with a chi-square value of 19.791 and has a probability value of .203, and laissez-faire leadership with a chi-square value of 26.564 and has a probability of .061 shows that the null hypothesis is accepted which means that there is no significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function in the area of pupils development.

3.5 The data of the respondents revealed for the democratic leadership with a chi-square value of 32.160 and has a probability value of .003, charismatic leadership with a chi-square value of 44.251 and has a probability value of .000, transformational leadership with a chi-square value of 41.384 and has a probability value of .024 while, laissez-faire leadership with a chi-square value of 29.662 and has a probability value of .048 shows that null hypothesis is rejected therefore it means that is a significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function in the area of teacher and staff development. However, in autocratic leadership with a chi-square value of 20.677 and has a probability value of .083, the null hypothesis is accepted which means that it has no significant relationship between the leadership styles and the level of competence of head teachers in performing supervisory function in the area of teacher and staff development.

## **CONCLUSIONS**

Based on the findings of this study, the following conclusions were formulated:

1. Respondents have average level of leadership styles and average level of competence in performing their supervisory function, they also vary on their embraced, used and applied style of leadership based on their ideals.
2. Level of competence in performing their supervisory function in instructional supervision, school improvement, pupil development, and teacher and staff development had different ways of performing function that caters for their specific jobs and tasks.
3. The leadership styles of the master teachers do not significantly affect their level of competence in performing supervisory functions.
4. The base reference that may recommend is through improvement of in-service trainings and some various seminars, workshops and innovative team building as well, that the master teachers could utilize it in their leadership and supervisory functions and its personal enhancement as a middle manager.

## **RECOMMENDATIONS**

In view of the aforementioned conclusions, the following recommendations are hereby offered:

1. The master teachers should be provided with programs of mass awareness for leadership styles and

its supervisory functions. They should be given an extensive, long- term and continuous professional development plan through seminars/ trainings to improve level of competence in performing supervisory function. These trainings/ seminars should be properly evaluated.

2. The master teachers and teachers should have a shared vision so that they will collaboratively relate to each other. They must show good leadership for faculty members. Since, the school is an organization the head teachers must display a high professionalism standard.
3. There is a need to revisit the functions, duties and responsibilities of Master Teachers in order to perform well according to the professional standards.
4. A thorough evaluation of qualification standards for Master Teachers should be observed in order to meet qualified instructional leaders equipped with skills and leadership potentials that will address effective instructional supervision.
5. Instructional leaders like master teachers should also be mentored by supervisors for the needed technical assistance in their supervisory work.
6. It is highly suggested that the head teachers must have a thorough planning in scheduling activities and other works in achieving common goals. The master teachers must include the teachers in identifying strategies for improving student's achievement. It is suggested that the head teachers as one of the leaders in school must assist the teachers to work towards a common goal.
7. Encourage school managers to be acquainted with the art and science of leadership and its competence to supervisory functions in order to support their teachers in schools, and recommends similar study to the future researcher to be undertaken in a broader area to include principal as respondents, other form of principal/master teachers leadership styles and performance in their supervisory functions and the other scale of teacher morale.

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# EMOTIONAL INTELLIGENCE OF FOURTH YEAR STUDENTS OF COLLEGE OF EDUCATION IN ISABELA STATE UNIVERSITY- ECHAGUE CAMPUS

**Genevive Datul Garcia**  
Assistant Professor IV  
Isabela State University-Echague Campus  
San Fabian, Echague, Isabela

## ABSTRACT

*This descriptive study aimed to determine the emotional intelligence of the 149 selected fourth year students during the school year 2018-2019 under the Bachelor of Education program of Isabela State University, Echague, Isabela. The demographic profile of the respondents as to sex and general weighted average in their General Education Subjects were described. The perceived emotional intelligence of the respondents in terms of self-awareness and self-management; the differences of emotional intelligences and the profile of respondents were also determined. The emotional intelligence questionnaire of Silver and Clarent (n.d.) was adapted as the primary instrument of this study. Findings revealed that 1) majority of the respondents were female and had a general weighted average ranging from 2.0- 2.25; 2) most of the statement-indicators on the emotional intelligence under the domain of self-awareness were rated "usually" and the statement "has a sense of humor about oneself" was rated "almost always". The statement "goes beyond what is required or expected" was also rated "almost always" under the self-management domain and the rest were rated "usually"; and 4) the emotional intelligence in relation to the academic performance, emotional self-awareness and self-confidence under the self-awareness domain has no significant difference to the respondents' emotional intelligence according to their academic performance. Accurate self-assessment is the only category under the said domain that shows significant difference to emotional intelligence when grouped according to their academic performance. In the domain of self-management, emotional self-control, adaptability and achievement have no significant difference to the respondents' emotional intelligence based from their academic records. Behaving consistently under the domain of transparency and initiating actions to create possibilities for the future under the domain of initiative recoded a significant difference in the respondents' emotional intelligence in terms of self-management.*

**Keywords:** *emotional intelligence, self-awareness, self-management, fourth year students, bachelor of elementary education,*

## INTRODUCTION

Human are living in a fast changing community where survival is not easy. If a person is not fit to what the world requires him or her, it will lead to elimination. An individual can survive if he possesses strong determination and the willingness to accept and overcome challenges in all aspects. A person's life is worthy if he lives happily and he can only achieve this if he is fit in all aspects like physical, mental, social, spiritual, and emotional. Likewise, these intelligences are essential particularly to students who are aiming a better future. To achieve these goals, a student should have a good academic performance in all courses or subjects. Having a good academic performance can be an indicator and can determine the type of life a person wants to be in the future.

Emotional intelligence is just one of the vital aspects of life and it plays an important role in the development of an individual.

Naghavi and Redzuan (2011) showed that being high and emotionally intelligent is important to improve academic performances. In the current environment where students are expected to perform multi roles with efficiency and effectiveness, it deemed necessary to develop their right attitude and emotional intelligence towards the unseen complexities of life and the attainment of quality education. As emotional intelligence is a subset of social intelligence with the ability to understand and monitor one's own feelings and allow him/ her to acquire the required data for his/ her academic achievement which is an outcome of education and the extent at which the education goal has been achieved.

Emotion is an important aspect of one's life and its occurrence creates fears, worries, anxieties, annoyance, anger, resentment, and irritability in achieving a desired goal. These negative feelings must be replaced by the feelings of hope, courage, and willingness to learn and excel more, as one is developing not only the academic well-being of a child, but also his emotional well-being (Sanchez, 2013).

Thus, to bring the students in certainty of successful academic achievement, it is highly important to develop their personality with emotional intelligence. It would not only make them competent, but also being able to analyze the reasons of failure. Being intelligent is usually associated with being high in academic and intellectual aspects and being emotionally intelligent is not only an issue of upbringing as decades ago when the first attempts were made to measure intelligence. It took shape and began to be seen as synonymous with academic abilities.

At present, all efforts are exerted to provide quality education to students in today's schools. With this, we can develop the competencies among children which describe their ability to use emotions effectively and productively. Emotion is a common component in persuasion, social intelligence, and attitude change. Much of attitude researches emphasized the importance of emotion components. Emotion works with the cognitive process, or the way a person thinks, about an issue or situation.

Activating an emotion node, attitude change may be possible. If there is not enough motivation, an attitude will not change; if the emotion appeal is overdone, the motivation can be paralyzed thereby preventing attitude change.

From the above observations of the researcher as educator, there are different theories on how the emotional intelligence of an individual affect his totality as a being. Hence, this study was conceptualized to determine the emotional intelligence of the fourth year college students under the Bachelor of Education program of the Isabela State University-Echague Campus.

## **OBJECTIVES OF THE STUDY**

This research study generally aimed to determine the emotional intelligence of the fourth year students under the Bachelor of Education program of the Isabela State University, Echague Campus.

Specifically it sought to:

1. Describe the profile of the respondents in terms of sex and performance in the general education subjects;
2. Determine the respondents perception on their level of emotional intelligence in terms of:
  - a. Self-awareness; and
  - b. Self-management.
3. Determine the significant difference in the respondents' perception about their emotional intelligence when grouped according to their profile variables.

## **REVIEW OF RELATED LITERATURE AND STUDIES**

Emotional Intelligence (EI) has been defined as the ability to empathize, persevere, control impulses, communicate clearly, make thoughtful decisions, solve problems, and work with others in a way that

earns friends and success (Stone, 2005). These are the abilities that allow an individual to recognize and regulate emotion, develop self-control, set goals, develop empathy, resolve conflicts, and develop skills needed for leadership and effective group participation (Elias, 2004).

Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth.

Emotional intelligence is said to be the capacity of an individual to “monitor one’s own and others’ feelings and emotion, to discriminate among them and to use the information to guide one’s thinking and action” (Salovey, Peter & Mayer, 1990, p. 189). It has been postulated that EI improves with age. EI is based on the model of emotion that is mostly governed by the limbic system in the brain which is responsible for impulses, drives and feelings (Goleman, 2004). Goleman (2014) suggests that EI can be improved through training, provided it includes the limbic system (Goleman, 2004). This system adapts better when receiving “motivation, extended practice and feedback” (Goleman, 2004, p. 86). It started gaining popularity when the book of the same title, *Emotional Intelligence*, written by a psychologist Daniel Goleman, was published in 1995. Goleman depicted EI using the following framework of five domains or competencies (Goleman, 1998, 2004): Self-awareness: the ability to understand and/or recognize one’s emotional state of being and how it affects others. It can be recognized by realistic self-appraisal, self-confidence, welcoming feedback and a self-deprecating sense of humor; Self-regulation: the ability to control one’s emotion and to redirect negative emotion into something positive. It can be distinguished by one’s integrity, ease in adapting to changes and uncertainties, and trustworthiness; Motivation: the driving force that helps an individual to persistently reach their goal. It can be recognized by one’s commitment to an organization, strong will to achieve something, and being positive even in the face of adversity; Empathy: the individual’s ability to understand the emotional state of someone and to treat them appropriately based on that emotional state. Its hallmark includes cultural sensitivity; and Social skills: the ability to create or build rapport with other individuals or build or expand networks by effectively managing relationship with them. It is indicated by one’s ability to persuade, to lead teams and to lead change.

According to Kremenitzer and Miller (2008), improving emotional intelligence among pre-service teachers should be a fundamental element in their education programs and can be further enhanced and reinforced through continuous professional development activities. Similarly, Elkins and Low (as cited in Nelson, Low and Nelson, 2005) reported that pre-service teachers have a crucial need to acquire communication competence and emotional intelligence.

## **RESEARCH METHODOLOGY**

The study utilized the descriptive method of research to determine the emotional intelligence of the fourth-year college education students of Isabela State University-Echague Campus when they are grouped according to their profile.

The respondents of this study were randomly selected, 149 samples from the 244 enrolled fourth year students from College of Education-Isabela State University-Echague Campus, School Year 2018-2019. This is a representation taken at 95% confidence level at 5% percent margin of error. The number of the respondents were computed using Research Advisor, a computer program designed to compute number sample respondents based on the total population of respondents.

The researcher modified and adapted the Emotional Intelligence Questionnaire of Silver and Clarent (n.d.) in collecting the needed data.

The emotional intelligence questionnaires were used to measure the degree of the student-respondents’ emotional intelligence. The questionnaires were categorized into two parts. Part I focused on the profile

of the student-respondents while Part II focused on the two domains of emotional intelligence: self-awareness and self-management.

Domain 1. Self-Awareness. Includes items on emotional self-awareness, accurate self-assessment, and self-confidence.

Domain 2. Self-Management. Includes items on emotional self-control, transparency, adaptability, initiative, achievements, and optimism.

Frequency counts, percentages and means were used to describe the profile of the respondents; Mann Whitney U Test and Kruskal-Wallis H-Test were used to determine the difference in the level of emotional intelligence according to the profile of the student-respondents.

## FINDINGS

### Profile of Respondents

Table 1 presents the frequency distribution of respondents in terms of sex and performance in the general education subjects.

As shown in the table, most of the respondents are females and 32 (21.48%) are males. This shows that fourth year students under the bachelor of education program is dominated by females since teaching is mostly preferred by women.

In terms of performance in the general education subjects, majority of the respondents obtained an average range of 2.00-2.25. An average of 1.00-1.75 were obtained by the 26 (17.45%) student-respondents and 25 (16.78%) of them obtained a general weighted average of 2.5-3.00.

**Table 1. Profile of Respondents**

Profile	Frequency (n= 149)	Percent (100.00)
<b>Sex</b>		
Female	117	78.52
Male	32	21.48
<b>Performance in the General Education Subjects</b>		
1.0 to 1.25	11	7.38
1.5 to 1.75	15	10.07
2.0 - 2.25	98	65.77
2.5 - 2.75	19	12.75
3.00	6	4.03

### Perceived Respondents' Emotional Intelligence

Table 2 indicates the respondents' perception about their emotional intelligence in terms of self-awareness and its components.

**Emotional Self- Awareness.** As gleaned from the table, the student-respondents usually emotional self-aware as indicated in the three statement-indicators with their corresponding mean: “knows how own feelings impact own performance” (4.32); “recognizes the situations that trigger own emotions” (3.86); and “Excuses own feelings” (3.66).

**Accurate Self-Assessment.** Under accurate self- assessment, there were three indicators were rated as “usually” with their corresponding mean: “Acknowledges own strength and areas of weakness” (4.30); “It is not defensive in receiving new information or perspective about oneself: (4.17); and “Compensate



for own limitations by working with others with the necessary strengths” (4.06); and the statement “Has a sense of humor about oneself” (4.43) was rated “almost usual.”

**Self-Confidence.** Most of the indicators in self- confidence were rated “usually” as follows: “Feels confident to work without the need for direct supervision”; “Believes oneself to be among the most capable for a job and likely to succeed is decisive” (4.04); “Presents self in an assured, forceful, impressive and unhesitating manner.” ; “Has personal presence (i.e. Stand out in a group)” (3.78); “Speaks out for a course of action one believes in even when others disagree” (3.69); and “Assumes significant personal or professional risk accomplish important goals (e.g. challenging powerful others with an unpopular point of view )” (3.52).

**Table 2. Respondents' Perception about their Emotional Intelligence in terms of Self-Awareness**

Statements	Mean	Description
<b>Emotional Self-Awareness</b>		
Excuses own feelings	3.66	Usually
recognizes the situations that trigger own emotions	3.86	Usually
Knows how own feelings impact own performance	4.32	Usually
<b>Accurate Self-Assessment</b>		
Acknowledges own strength and areas of weakness	4.30	Usually
Has a sense of humor about oneself	4.43	Almost Always
It is not defensive in receiving new information or perspective about oneself	4.17	Usually
Compensate for own limitations by working with others with the necessary strengths	4.06	Usually
<b>Self-Confidence</b>		
Feels confident to work without the need for direct supervision	4.04	Usually
Believes oneself to be among the most capable for a job and likely to succeed is decisive	4.04	Usually
Presents self in an assured, forceful, impressive and unhesitating manner.	3.78	Usually
Has personal presence (i.e. Stand out in a group)	3.78	Usually
Assumes significant personal or professional risk accomplish important goals (e.g. challenging powerful others with an unpopular point of view )	3.52	Usually
Speaks out for a course of action one believes in even when others disagree	3.69	Usually
<i>3.51-4.33-Usually</i>		<i>4.34-5.16-Almost Always</i>

Table 3 indicates the respondents’ perception about their emotional intelligence in terms of self-management.

**Emotional self-control.** As gleaned from the table, all statement-indicators in emotional self-control were rated as “usually”: “Publicly admits to mistake even when it is not easy to do so” (4.31); “Calm other in stressful situations” (4.24); “Behaves calmly in stressful situations” (4.18); Stays composed and positive, even in trying moments” (4.16); “Behaves consistently with own stand values and beliefs” (4.05) “Resist the impulse to act immediately” (3.96) “Confronts unethical actions in other” (3.94); and “Acts on own values even when there is a significant risk” (3.68).

**Adaptability.** Under adaptability, there were five indicators which were rated as “usually” as follows: “Smoothly juggles multiple demands” (4.20); “Be comfortable with ambiguity” (3.89); “Willing changes ideas or perceptions based on new information on contrary evidence”; “Applies standard procedures flexibly (e.g. alters normal procedures to fit a specific situation)” (3.71); and “Adapts by changing overall strategy, goals or project to fit the situation” (3.69).

Initiative. Five statement-indicators under initiative were rated “usually” as follows: “Cuts through red tape and bends the rules when necessary to get the job done” (4.19); “Seeks information in unusual ways or from source not typically used” (4.07); “Acts rather than simply waiting to study actions of others” (4.04); “Initiates actions to create possibilities for the future” (3.99); and “Finds and acts upon present opportunities” (3.85); and the statement-indicator “Goes beyond what is required or expected” (4.39) was rated “almost always.”

**Achievement.** Under achievement, there were four indicators which were rated as “usually” as follows: “Sets measurable and challenging goals for oneself or others” (4.24); “Expresses dissatisfaction with the status quo and seeks ways to improve performance” (4.21); “Understand the underlying causes of someone’s feelings behaviors or causes” (4.11); and “Sets own standards and uses them to judge performance” (3.89).

**Table 3. Respondents' Perception about their Emotional Intelligence in terms of Self-Management**

Statements	Mean	Description
<b>Emotional self-control</b>		
Resist the impulse to act immediately	3.95	Usually
Behaves calmly in stressful situations	4.18	Usually
Stays composed and positive, even in trying moments	4.16	Usually
Calm other in stressful situations	4.24	Usually
Transparency		
Behaves consistently with own stand values and beliefs	4.05	Usually
Publicly admits to mistake even when it is not easy to do so	4.31	Usually
Confronts unethical actions in other	3.94	Usually
Acts on own values even when there is a significant risk	3.68	Usually
<b>Adaptability</b>		
Willing changes ideas or perceptions based on new information on contrary evidence	3.71	Usually
Applies standard procedures flexibly (e.g. alters normal procedures to fit a specific situation)	3.71	Usually
Smoothly juggles multiple demands	4.20	Usually
Be comfortable with ambiguity	3.89	Usually
Adapts by changing overall strategy, goals or project to fit the situation	3.69	Usually
<b>Initiative</b>		
Finds and acts upon present opportunities	3.85	Usually
Acts rather than simply waiting to study actions of others	4.04	Usually
Cuts through red tape and bends the rules when necessary to get the job done	4.19	Usually
Goes beyond what is required or expected	4.39	Almost Always
Seeks information in unusual ways or from source not typically used	4.07	Usually
Initiates actions to create possibilities for the future	3.99	Usually
<b>Achievement</b>		
Sets own standards and uses them to judge performance	3.89	Usually
Expresses dissatisfaction with the status quo and seeks ways to improve performance	4.21	Usually
Sets measurable and challenging goals for oneself or others	4.24	Usually
Understand the underlying causes of someone’s feelings behaviors or causes	4.11	Usually
<i>3.51-4.33-Usually</i>	<i>4.34-5.16-Almost Always</i>	

### Difference on the emotional intelligence of the respondents when grouped according to their sex

As reflected in table 4, the sex of the respondents have no significant difference in their emotional intelligence in the domains which include the emotional self-awareness, accurate self-assessment, and self-confidence since the recorded z values are greater than 0.05 level of significance leading to the acceptance of the null hypothesis. This implies that male and female fourth year students have the same level of emotional intelligence.

This finding give an idea on the statement of Mayer, Roberts, & Barsade, (2008) that self-awareness helps the person to name and understand his emotions, and push him toward change. Thus, self-awareness can help individual to find out the impact of his actions and the more important impact of his emotions on others.

**Table 4. Difference on the emotional intelligence in terms of self-awareness of the respondents when grouped according to their sex**

Items	Z	Sig.
<b>Emotional Self-Awareness</b>		
Excuses own feelings	0.87 <sup>ns</sup>	0.39
recognizes the situations that trigger own emotions	0.31 <sup>ns</sup>	0.76
Knows how own feelings impact own performance	1.13 <sup>ns</sup>	0.26
<b>Accurate Self-Assessment</b>		
Acknowledges own strength and areas of weakness	0.32 <sup>ns</sup>	0.75
Has a sense of humor about oneself	1.73 <sup>ns</sup>	0.08
It is not defensive in receiving new information or perspective about oneself	0.60 <sup>ns</sup>	0.55
Compensate for own limitations by working with others with the necessary strengths	0.05 <sup>ns</sup>	0.96
<b>Self-Confidence</b>		
Feels confident to work without the need for direct supervision	0.50 <sup>ns</sup>	0.62
Believes oneself to be among the most capable for a job and likely to succeed is decisive	0.12 <sup>ns</sup>	0.91
Presents self in an assured, forceful, impressive and unhesitating manner.	0.27 <sup>ns</sup>	0.78
Has personal presence (i.e. Stand out in a group)	0.36 <sup>ns</sup>	0.72
Assumes significant personal or professional risk accomplish important goals (e.g. challenging powerful others with an unpopular point of view )	0.82 <sup>ns</sup>	0.41
Speaks out for a course of action one believes in even when others disagree	0.47 <sup>ns</sup>	0.64

<sup>ns</sup> Not Significant

Table 5 indicated the sex of the respondents has no significant difference in their emotional intelligence particularly in the domains of transparency, adaptability, and achievement since the recorded z values with their significant values are greater than the critical value leading to the acceptance of the null hypothesis at 0.05 level of significance. This signifies that male and female have the same emotional intelligence in the said three domains.

On the other hand, calming others in stressful situations under the emotional self-control domain and cutting through red tape and bends the rules when necessary to get the job done under the domain of initiative have significant difference when grouped according to the respondents' sex since the established z values with their corresponding significant values are lesser than 0.05 leading to the rejection of the null hypothesis. This implies that male and female have different emotional intelligence on these statements.

**Table 5. Difference on the emotional intelligence in terms of self-management of the respondents when grouped according to their sex**

Items	Z	Sig.
<b>Emotional Self-Control</b>		
Resist the impulse to act immediately	0.64 <sup>ns</sup>	0.52
Behaves calmly in stressful situations	0.90 <sup>ns</sup>	0.37
Stays composed and positive, even in trying moments	0.10 <sup>ns</sup>	0.92
Calm other in stressful situations	2.30 *	0.02
<b>Transparency</b>		
Behaves consistently with own stand values and beliefs	0.12 <sup>ns</sup>	0.90
Publicly admits to mistake even when it is not easy to do so	1.00 <sup>ns</sup>	0.32
Confronts unethical actions in other	0.09 <sup>ns</sup>	0.92
Acts on own values even when there is a significant risk	0.61 <sup>ns</sup>	0.54
<b>Adaptability</b>		
Willing changes ideas or perceptions based on new information on contrary evidence	0.76 <sup>ns</sup>	0.44
Applies standard procedures flexibly (e.g. Alters normal procedures to fit a specific situation)	0.42 <sup>ns</sup>	0.68
Smoothly juggles multiple demands	1.07 <sup>ns</sup>	0.28
Be comfortable with ambiguity	0.94 <sup>ns</sup>	0.35
Adapts by changing overall strategy, goals or project to fit the situation	0.14 <sup>ns</sup>	0.89
<b>Initiative</b>		
Finds and acts upon present opportunities	0.82 <sup>ns</sup>	0.41
Acts rather than simply waiting to study actions of others	0.38 <sup>ns</sup>	0.71
Cuts through red tape and bends the rules when necessary to get the job done	2.37 *	0.02
Goes beyond what is required or expected	1.23 <sup>ns</sup>	0.22
Seeks information in unusual ways or from source not typically used	0.72 <sup>ns</sup>	0.47
Initiates actions to create possibilities for the future	0.15 <sup>ns</sup>	0.88
<b>Achievement</b>		
Sets own standards and uses them to judge performance	1.17 <sup>ns</sup>	0.24
Expresses dissatisfaction with the status quo and seeks ways to improve performance	1.77 <sup>ns</sup>	0.08
Sets measurable and challenging goals for oneself or others	0.85 <sup>ns</sup>	0.40
Understand the underlying causes of someone's feelings behaviors or causes	0.64 <sup>ns</sup>	0.52

\*Significant      <sup>ns</sup> Not Significant

### **Difference in the Respondents' Emotional Intelligence when grouped according to their Performance in the General Education Courses**

Table 6 shows the difference in the respondent's emotional intelligence in terms of the self-awareness to their performance to their General Education courses.

It is disclosed in table 6 that the performance of the respondents in their general education courses has no significant difference with their emotional intelligence in the domains of emotional self-awareness and self-confidence since the chi-square values with their corresponding significant values are greater than the critical value leading to the acceptance of the null hypothesis at 0.05 level of significance. This signifies that the emotional self-awareness and self-confidence of the respondents have effect on their performance in their general education course. However, three statements in the domain of accurate self-assessment have significant difference with their performance in their general education course since the recorded chi square values are less than the critical value leading to the rejection of the null hypothesis at 0.05 level of significance. This implies that accurate self-assessment has direct impact on the respondents' performance in their general education course.

**Table 6. Difference in the Respondents' Emotional Intelligence in terms of Self-Awareness when grouped according to their Performance in the General Education Courses**

Items	Chi-Square	Sig.
<b>Emotional Self-Awareness</b>		
Excuses own feelings	1.72 <sup>ns</sup>	0.42
recognizes the situations that trigger own emotions	2.45 <sup>ns</sup>	0.29
Knows how own feelings impact own performance	3.98 <sup>ns</sup>	0.14
<b>Accurate Self-Assessment</b>		
Acknowledges own strength and areas of weakness	8.14 *	0.02
Has a sense of humor about oneself	11.12 *	0.00
It is not defensive in receiving new information or perspective about oneself	4.88 <sup>ns</sup>	0.09
Compensate for own limitations by working with others with the necessary strengths	6.60 *	0.04
<b>Self-Confidence</b>		
Feels confident to work without the need for direct supervision	3.42 <sup>ns</sup>	0.18
Believes oneself to be among the most capable for a job and likely to succeed is decisive	2.84 <sup>ns</sup>	0.24
Presents self in an assured, forceful, impressive and unhesitating manner.	1.75 <sup>ns</sup>	0.42
Has personal presence (i.e. Stand out in a group)	3.45 <sup>ns</sup>	0.18
Assumes significant personal or professional risk accomplish important goals (e.g. challenging powerful others with an unpopular point of view )	4.71 <sup>ns</sup>	0.09
Speaks out for a course of action one believes in even when others disagree	2.85 <sup>ns</sup>	0.24
*Significant <sup>ns</sup> Not Significant		

As revealed in table 7, the performance of the respondents in their general education courses have no significant difference with their emotional intelligence especially in the domains of emotional self-control, adaptability, and achievement since the recorded chi square values with their corresponding significant values are higher than the critical value, leading to the acceptance of the null hypothesis at 0.05 level of significance. On the other hand, behaving consistently with own stand values and beliefs under the domain of transparency and initiating actions to create possibilities for the future under the domain of initiative have significant difference with their performance in their general education courses since the established chi square values with their corresponding significant values are lesser than the significant value, signifying the rejection of the null hypothesis at 0.05 level of significance. This implies that behaving consistently and initiating actions have effect to the respondents' performance in their general education courses.

According to the theory of Bar-On (2000) and Mayer et al. (1997), who focus on educational outcomes as well as workplace outcomes. Emotional intelligence in the context of work has been shown to inspire others to problem-solve, cooperate, and work to find equitable ways to develop solutions that benefit all sides of a conflict (Goleman, Boyatzis, & McKee, 2002).

**Table 7. Difference in the Respondents' Perceived Emotional Intelligence in terms of Self-Management according to their Performance in the General Education Courses**

Items	Chi-Square	Sig.
<b>Emotional self-control</b>		
Resist the impulse to act immediately	3.23 <sup>ns</sup>	0.20
Behaves calmly in stressful situations	2.60 <sup>ns</sup>	0.27
Stays composed and positive, even in trying moments	1.02 <sup>ns</sup>	0.60
Calm other in stressful situations	2.22 <sup>ns</sup>	0.33
<b>Transparency</b>		
Behaves consistently with own stand values and beliefs	6.64 *	0.04
Publicly admits to mistake even when it is not easy to do so	1.80 <sup>ns</sup>	0.41

Confronts unethical actions in other	0.59 <sup>ns</sup>	0.74
Acts on own values even when there is a significant risk	5.27 <sup>ns</sup>	0.07
<b>Adaptability</b>		
Willing changes ideas or perceptions based on new information on contrary evidence	2.47 <sup>ns</sup>	0.29
Applies standard procedures flexibly (e.g. Alters normal procedures to fit a specific situation)	0.97 <sup>ns</sup>	0.61
Smoothly juggles multiple demands	2.35 <sup>ns</sup>	0.31
Be comfortable with ambiguity	4.02 <sup>ns</sup>	0.13
Adapts by changing overall strategy, goals or project to fit the situation	5.61 <sup>ns</sup>	0.06
<b>Initiative</b>		
Finds and acts upon present opportunities	4.68 <sup>ns</sup>	0.10
Acts rather than simply waiting to study actions of others	0.94 <sup>ns</sup>	0.63
Cuts through red tape and bends the rules when necessary to get the job done	1.29 <sup>ns</sup>	0.52
Goes beyond what is required or expected	3.92 <sup>ns</sup>	0.14
Seeks information in unusual ways or from source not typically used	3.10 <sup>ns</sup>	0.21
Initiates actions to create possibilities for the future	5.95 <sup>*</sup>	0.05
<b>Achievement</b>		
Sets own standards and uses them to judge performance	1.22 <sup>ns</sup>	0.54
Expresses dissatisfaction with the status quo and seeks ways to improve performance	5.27 <sup>ns</sup>	0.07
Sets measurable and challenging goals for oneself or others	4.18 <sup>ns</sup>	0.12
Understand the underlying causes of someone's feelings behaviors or causes	4.73 <sup>ns</sup>	0.09

\*Significant <sup>ns</sup> Not Significant

## CONCLUSIONS

1. Majority of the respondents were female and had a general weighted average ranging from 2.0- 2.25.
2. The perceived emotional intelligence of the respondents under the domain of self-awareness, only one of the statement-indicators was rated "almost always", it is the "Has a sense of humor about oneself", and the rest was rated "usually". Self-management domain have the same result with self-awareness, there is only one that was rated "almost always" and it is the statement "Goes beyond what is required or expected", and the remaining indicators were rated "usually".
3. Self-awareness and its components has no significant difference in the respondents' emotional intelligence according to their sex. For the self-management, there were only two indicators marked as "significant", one is under the category of emotional self-control and another from initiative category.
4. The emotional intelligence in relation to the academic performance, emotional self-awareness and self-confidence under the self-awareness domain has no significant difference to the respondents' emotional intelligence according to their academic performance. Accurate self-assessment is the only category under the said domain that shows significant difference to emotional intelligence in accord to their academic performance. In the domain of self-management, emotional self-control, adaptability and achievement has no significant difference to the respondents' emotional intelligence based from their academic records. "Behaves consistently with own stand values and beliefs" (transparency) and "Initiates actions to create possibilities for the future" (initiative) are the only ones that have a significant difference in the respondents' emotional intelligence in terms of self-management.

## RECOMMENDATIONS

The results of the study suggested the following be given utmost consideration:

1. School authorities and experts of emotional problems/issues should develop programs to enhance the emotional intelligence of the students.
2. Levels in the different domains which incurred low among student-respondents should be dealt with by the person himself through the assistance of parents, teachers, and other emotionally intellectual individuals.
3. Though the findings of this study were restricted to the domains of scholastic achievement particularly academic performance of the fourth year students, emotional intelligence may also be associated with early career preferences or occupational aspirations of students.
4. Teachers, through the help of guidance counsellors, may develop a program on emotional intelligence to help students improve their academic performance.

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# EFFECTS OF GEOGRAPHICAL LOCATION ON THE CHARACTERISTICS OF RURAL BANKS

**Jennifer Buendia Cabaron, DPA, PhD**  
Associate Professor IV

**Richard Regencia Cabaron, PhD (CAR)**  
Research Chairperson

Jose Rizal Memorial State University  
Dapitan City, Zamboanga del Norte

## ABSTRACT

*This paper assessed the characteristics of selected rural banks in the Philippines in terms of assets, capital, loan portfolio, and deposit. In addition, the characteristics of the rural banks were compared with respect to location. Frequency, percentage, and t-test were utilized in this study. The results showed a significant difference in the different banks' assets, capital, deposits, and loan portfolios. It implies that the characteristics of rural banks' differences were statistically significant. Also, the rural banks located in the Philippines, like in Luzon, Visayas, and Mindanao, their locations do not differ when it comes to these banks' characteristics.*

**Keywords:** *asset, capital, deposits loan portfolio, geographical location, rural bank*

## INTRODUCTION

Rural banks in the Philippines were primarily developed to promote and expand the rural economy. They generally cater to small borrowers, including farmers, entrepreneurs, market vendors, business owners, wage earners, teachers, and cooperatives (Meslier-Crouzille, Nys, and Sauviat, 2012). The characteristics of companies refer to return on assets, size, leverage, and the sector of activity in which they operate (Lassala, Apetrei, and Sapena, 2017). Koralun-Bereźnicka (2013) described asset structure as a combination of the various asset components that are identified as financial fixed assets; tangible fixed assets; current assets; and current investments and cash in hand in a bank. Olatunji and Tajudeen (2014); Koralun-Bereźnicka,(2013) cited in Mwaniki, Omagwa, Maina, Kigaru, Korir-Rugutt, Agina, and Ram, (2017) found out that investments in fixed assets have a strong and positive statistical impact on the profitability of banking sector in Nigeria. Similarly, assets structure has also been widely reported by corporate finance literature to affect the firm's financial structure significantly.

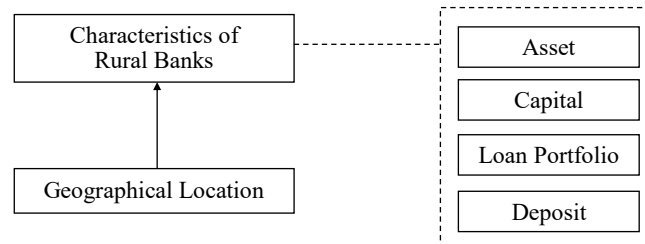
The study made use of integrated theories such as the financial management theory of Khan and Jane (2007), and Ab-Rahim, Kadri, Ee-Ling, and Dee, (2018), and the Agency-based models of Jensen, 1986; Berger and Ofek, 1995; Servaes, 1996; and Denis, Denis, and Sarin, 1997). The financial management theory refers to the financial statement analysis as a process of assessing the relationship of the financial statement's components to better understand its performance and position (Khan and Jane 2007; Ab-Rahim, Kadri, Ee-Ling, and Dee, (2018).

The agency-based models of corporate expansion suggest that bankers might expand geographically to extract the private benefits of managing a larger “empire” even if this lowers loan quality and increases bank fragility (Jensen, 1986; Berger and Ofek, 1995; Servaes, 1996; and Denis, Denis, and Sarin, 1997). These add to the body of knowledge as underpinning theories for evaluating how the characteristics of rural banks in the Philippines differ geographically. Based on the literature discussed above, the author came up with the conceptual framework:



This paper assessed the characteristics of selected rural banks in the Philippines and how these banks differ geographically. In this study, the characteristics of rural banks refer to assets, capital, loan portfolio, and deposit. The bank organization, ownership and capital requirements, powers, supervision, and general conduct of the business of rural banks are governed by the provisions of the Rural Banks Act. Rural banks in the Philippines are regulated by Bangko Sentral Ng Pilipinas (BSP).

Thus, the authors came up with the conceptual framework:



**Figure 1. Research Model of the Study**

### OBJECTIVES OF THE STUDY

This study aimed to determine the effects of geographical location on the characteristics of selected rural banks in the Philippines. Specifically, it seeks to answer the following research objectives:

- 2.1 To evaluate the characteristics of selected rural banks in the Philippines in terms of:
  - 2.1.1 asset;
  - 2.1.2 capital;
  - 2.1.3 loan portfolio; and
  - 2.1.4 deposit.
- 2.2 To test the significant difference in geographical location when grouped according to the characteristics of selected rural banks.

### REVIEW OF LITERATURE

In October 2014, the BSP announced large, across-the-board increases in minimum capital requirements for small banks. For rural and cooperative banks, minimum capital was raised from P5million - 100million to P20million - 200million, depending on location and branch numbers. Minimum capital was also increased for most savings banks, formally called thrift banks, from P250million - 1billion to P200million - 2billion, compared to average assets of P381million for rural banks, P455million for cooperative banks, and P12.4billion for savings banks as of September 2014 ("Oxford Business Group - Economic Research & Foreign Direct Investment Analysis," 2019).

Capital is a significant source of loan-based funds for rural banks. It is necessary to strengthen bank capital to stabilize the rural banking system by improving institutional resilience in the face of adverse shocks (<http://www.bsp.gov.ph>). Working capital is an essential measure for all businesses, regardless of their size. It is a signal of a company's operating liquidity. Having enough working capital means that the company should be able to pay for all of its short-term expenses and liabilities. Looking at the financial statements, equity or capital is an indicator of bank size of all banks, either publicly listed and unlisted entities. (Schildbach, Schneider, and AG, 2017). According to Korzeb and Samaniego-Medina (2019), banks with foreign capital are not entirely interested in sponsoring activities aimed at sustainable development.

The loan portfolio is the largest asset and the most significant source of income for banks; consequently,

most banks advance huge portions of financial resources as loans to clients (Addai and Pu, 2015). They added that a loan portfolio is the principal source of interest income and forms a higher proportion of bank assets. Further, the revenues of banks depend on lending. As a result, banks' financial performance and success depend on how effectively lending activities are managed (Addai and Pu, 2015). Financial institutions such as commercial banks, rural banks, or lending institutions can strengthen their loan portfolios by systematically evaluating lending and investment activities' environmental and social risks. By minimizing financial, liability, and reputational risks arising from social and ecological issues, they create long-term value for their business (<https://www/ifc.org>).

The rural banks can accept deposits such as saving and time deposits, Open current or checking accounts, provided they have net assets of at least five million (P5,000,000) conform to that guidelines as may be established by the Monetary Board ([www.bsp.gov.ph](http://www.bsp.gov.ph)). Cohen and Kaufman (1965), cited in Boadi, Li, and Lartey (2015), asserted that deposits are vital for both developed and developing countries because they allow depositors to earn interest on cash that they do not need right away. It also provides a platform for banks to transfer cash to firms and individuals that require them urgently.

A seminal paper by Ryan (1952) looked into the bank capital, size, and location of banks in the United States. His study found out that banks grouped are dispersed geographically. He concluded that concerning the size and location of banks, there is a very close relationship between the size of banks and "centers of population. Goetz, Laeven, and Levine (2016) state that geographic diversification does not affect loan quality. The findings support claims that regional growth reduces risk by lowering exposure to idiosyncratic local hazards but contradict arguments that expansion, on the net, increases risk by reducing Bank Holding Companies' ability to oversee loans and control risks.

Panigrahi (2011) conducted a study in the Indian private sector firms; he looked into whether the location determines capital structure. The author sought to understand the importance of the firm's area in making the capital structure decisions of Indian companies. The findings show that the average figures and ratios are different in all the companies' regions. He concluded that the location of a company strongly influences the flow of funds. In the study of Amer and Mohammed (2017), the location of the branch has a high impact on attracting deposits. This is because the Islamic banks in Palestine tend to choose their branch locations based on the concentration of deposits, selected sites based on the size of business activity in the surrounding area, and this is consistent with the study of Almejyesh & Rajha (2014), which concluded that geographical spread plays an important role in attracting deposits.

## METHODOLOGY

### Sample

The data on characteristics of selected rural banks in the Philippines are described in terms of asset, capital, deposit, and loan portfolio retrieved from the Bangko Sentral ng Pilipinas (BSP). The final sample size was 101 rural banks in which their balance sheets were publicly published as of March 31, 2019. Given the populations' sample size, 101 rural banks in the Philippines that publicly published their balance sheets were examined. If the rural banks would not agree to participate in the study, at least 70% to 80% was the target sample size or  $n=80$ .

This study was limited to 80 selected rural banks in the Philippines. With a population of 440 active rural banks in the Philippines, only 121 publicly publish their financial statements on the BSP website ([http://www.bsp.gov.ph/banking/psoc\\_rb](http://www.bsp.gov.ph/banking/psoc_rb)).

Table 1 shows the geographical distribution of respondents. Out of 80 rural banks, 56 or 70% were located in Luzon, 14 or 17.50% in Mindanao, and 10 or 12.50% in the Visayas.

**Table 1. Geographical Distribution of Respondents**

Location	No. of respondents	Percent
Luzon	56	70.00%
Visayas	10	12.50%
Mindanao	14	17.50%
<b>Total</b>	<b>80</b>	<b>100.00%</b>

### **Instrument**

For the characteristics of selected rural banks, the researcher utilized secondary data retrieved from the BSP website, which their balance sheets publicly published as of March 31, 2019.

### **Procedure and Data Analysis**

In this study, the researcher used a google search engine to retrieve the one hundred-one (101) rural banks listed on the BSP website. The statistical software was performed using IBM-SPSS, and statistical significance was evaluated at the 0.05 level. First, descriptive statistics were calculated to examine the characteristics of selected rural banks in terms of asset, capital, loan portfolio, and deposits. Then t-test was applied to discover whether significant differences could exist between the characteristics of rural banks and their geographical location in the Philippines.

## **RESULTS AND DISCUSSION**

### **Rural Banks Assets**

Table 2 presents the characteristics of the selected rural banks in the Philippines in terms of assets. Based on the data gathered from the BSP website, it is worth noting that 50% of the banks have declared assets of at least Php700M. Other banks (25%) claimed their assets between Php300M and Php499M, while 20% asserted assets between Php500M and Php699M. Only 5% of the banks claimed their assets the lowest, between Php100M and Php299M.

**Table 2. Characteristics of selected rural banks in the Philippines in terms of assets**

Assets	N	%	Cumulative %
Php 100M - 299M	4	5.0	5.0
Php 300M - 499M	20	25.0	30.0
Php 500M - 699M	16	20.0	50.0
Php 700M & above	40	50.0	100.0
<b>Total</b>	<b>80</b>	<b>100.0</b>	

Asset here is defined by Koralun-Bereźnicka (2013) as the asset structure, a combination of the various asset components that are identified as financial fixed assets; tangible fixed assets; current assets; and current investments and cash in hand in a bank. It presented from Table 2 that 50% of the rural banks have assets from 700 million Pesos and above, which indicates that rural banks have a strong asset structure. A total of forty banks has this asset level. It shows they have a good mix of bank assets, which can be used in rural bank operations. However, the rest of the banks still have below the 700Million pesos level, with four banks getting the lowest asset level, Php 100 million - Php 299 million.

### **Rural Banks Capital**

Table 3 shows the characteristics of selected rural banks in the Philippines in terms of capital. For Bangko Sentral ng Pilipinas (BSP), capital is a significant source of loan-based funds for rural banks. It is

necessary to strengthen bank capital to stabilize the rural banking system by improving institutional resilience in the face of adverse shocks (<http://www.bsp.gov.ph>). As can be gleaned from Table 3, most rural banks have capital from less than Php 100M to Php 299M. However, this capital meets the minimum requirement of BSP for rural banks. Seven rural banks have large capitalization, from Php 700M and above. It implies that the majority of rural banks have small capitalization.

**Table 3. Characteristics of selected rural banks in the Philippines in terms of capital**

Assets	N	%	Cumulative %
Less than Php100M	29	36.3	36.3
Php 100M - 299M	30	37.5	73.8
Php 300M - 499M	11	13.8	87.5
Php 500M - 699M	3	3.8	91.3
Php 700M & above	7	8.8	100.0
<b>Total</b>	<b>80</b>	<b>100.0</b>	

In October 2014, the BSP announced significant, across-the-board increases in minimum capital requirements for small banks. For rural and cooperative banks, minimum capital was raised from P5million - 100million to P20million - 200million, depending on location and branch numbers. (<https://oxfordbusinessgroup.com>). Those rural banks that participated in this study all qualified in terms of minimum capital requirements.

Umoh (1991, cited in Abusharba, Triyuwono, Ismail, and Rahman, 2013) pointed out that insured banks must have enough capital to cushion for absorbing possible losses or provide funds for its internal needs and expansion. Also, they ensure security for depositors and the depositor insurance system.

### Rural Banks Deposit

Table 4 shows the characteristics of the selected rural banks in the Philippines in terms of deposits. Five percent of rural banks have less than Php 100M, 11.30% Php 100M-299M, and around 45% have deposits from Php 300M to Php 699M. Thirty-eight-point eight percent (38.8 %) have deposits from Php 700M and above, which indicates that 31 rural banks have large deposits coming from their customers.

According to Ledgerwood et al. (2013, cited in Osei, 2015), a bank deposit is money placed into a banking institution for safekeeping by the depositor. This means that the account holder has the right to withdraw the deposited funds. The bank's deposit itself is a liability to the depositor, which is treated as their liability.

Thus, if the rural banks that participated in this study have large deposits, it can be implied that they have many depositors, whether big or small, that entrusted their money to these rural banks. The bigger the deposits, the bigger the rural bank's liability to its depositors. However, it can imply that the rural banks have many depositors, indicating their confidence in the rural bank to take care of their deposits and make them grow because of interest earned from these.

**Table 4. Characteristics of selected rural banks in the Philippines in terms of deposit**

Assets	N	%	Cumulative %
Less than Php100M	4	5.0	5.0
Php 100M - 299M	9	11.3	16.3
Php 300M - 499M	27	33.8	50.0
Php 500M - 699M	9	11.3	61.3
Php 700M & above	31	38.8	100.0
<b>Total</b>	<b>80</b>	<b>100.0</b>	

## Rural Banks Loan Portfolio

Table 5 shows the characteristics of the selected rural banks in the Philippines in terms of their loan portfolios. It can be gleaned that the rural banks have an extensive loan portfolio, from Php700M and above comprises 28.8%, with Php300M to 499M comprising 30%, giving almost 50% or 40 rural banks have extensive loan portfolio.

This result implies that the majority of the rural banks are earning from interest income, and it is their primary source of revenue. However, the large loan portfolio also implies that most rural banks are exposed to high credit risk and loan defaults if they have non-performing loans. The purpose of rural banks is lending; thus, it is expected that they accept loans from the community, such as farmers and agricultural entities. But a large portfolio does not always mean high-interest income if the borrowers cannot pay their loans and worse if they default from paying the loans.

According to Addai and Pu (2015), the loan portfolio is a tremendous asset and the most significant income for banks; consequently, most banks advance huge portions of financial resources as loans to clients. They concluded that the loan portfolio is the principal source of interest income and forms a higher proportion of bank assets.

**Table 5. Characteristics of selected rural banks in the Philippines in terms of the loan portfolio**

Portfolio	N	%	Cumulative %
Less than Php100M	9	11.3	11.3
Php 100M - 299M	16	20.0	31.3
Php 300M - 499M	24	30.0	61.3
Php 500M - 699M	8	10.0	71.3
Php 700M & above	23	28.8	100.0
<b>Total</b>	<b>80</b>	<b>100.0</b>	

Further, the revenues of banks depend on lending. As a result, banks' financial performance and success depend on how effectively lending activities are managed (Addai and Pu, 2015). However, if the loan portfolio is not handled well, it will turn into a non-performing loan that affects banks' profitability.

Financial institutions such as commercial banks, rural banks, cooperative banks, or lending institutions can strengthen their loan portfolios by systematically evaluating the environmental and social risks of lending and investment activities. By minimizing financial, liability, and reputational risks arising from social and ecological issues, they create long-term value for their business (<https://www/ifc.org>).

## Test of Difference on Characteristics of Rural Banks and their Geographic Location

Presented in Table 7 is the Test of Difference on Characteristics of Rural Banks and their Geographic Location. Based on the result of the t-test on the difference in the bank characteristics such as asset, capital, deposit, and loan portfolio, and that of their geographic location, it can be gleaned that there is no significant difference at 0.05 significant level. It means that wherever the rural banks are located in the Philippines, like in Luzon, Visayas, and Mindanao, their locations do not differ in these banks' characteristics. For instance, most of the rural banks (55 out of 80 banks) are located in Luzon (See Table 1). This concentration in one geographical area in the country, like in Luzon, does not differ in rural banks' characteristics. Hence, there is no significant difference in the characteristics of the rural banks such as asset, capital, deposit, and loan portfolio, and their geographic location cannot be rejected at a 95% confidence level.

However, this result is contrary to what Zimmerman (1996) has observed in his study of small commercial banks in California. His findings show that two factors out of four affected the financial perfor-

mance of these small banks. The first two factors are conditions related to geographical location. According to Zimmerman (1996), commercial banks operate in the regional market, and there may be significant variations in local economic conditions.

**Table 7. Test of Difference on Characteristics of Rural Banks and Geographic Location**

Characteristics of Rural Banks	Geographic Location	<i>N</i>	<i>M</i>	<i>SD</i>	<i>p</i>	Interpretation
Asset	Luzon	55	1931190852.78	4130930004.08	0.517	Not Significant
	Visayas	10	646063174.11	342572498.60		
	Mindanao	15	2679895718.87	6089056464.58		
Capital	Luzon	55	376549490.09	775209316.66	0.589	Not Significant
	Visayas	10	161871144.05	105468230.02		
	Mindanao	15	488352760.40	1001454470.96		
Deposit	Luzon	55	1411576005.45	3185805551.32	0.564	Not Significant
	Visayas	10	424839716.07	232091370.57		
	Mindanao	15	1841603993.84	4449854187.40		
Loan Portfolio	Luzon	55	1234630386.08	3091342534.26	0.633	Not Significant
	Visayas	10	359616348.76	236065411.89		
	Mindanao	15	1136828886.43	1365849277.28		

In the case of this researcher's study, the rural banks in the Philippines, at least for those who participated in the study, appear to have no regional variations that significantly differentiate the bank characteristics. The Visayas and Mindanao regional economic conditions are similar to rural banks in Luzon, particularly Metro Manila, the country's commercial hub.

Another study that contradicted the result of this researcher's analysis was the study of Panigrahi (2011). He surveyed the Indian private sector firms; he looked into whether the location determines capital structure. The author sought to understand the importance of the firm's area in making the capital structure decisions of Indian companies. The findings show that the average figures and ratios are different in all the companies' regions. He concluded that the location of a company strongly influences the flow of funds.

A seminal paper by Ryan (1952) looked into the bank capital, size, and location of banks in the United States. His study found out that banks grouped are dispersed geographically. He concluded that concerning the size and location of banks, there is a very close relationship between the size of banks and "centers of population." This suggests that this researcher's study where there is no significant difference between rural banks' characteristics and their geographic location can be explained by the fact that the geographic areas generally located in Luzon (70%) dominate the absence of regional variation.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, the researchers concluded the following:

1. Rural banks in the Philippines have characteristics that differ significantly from one another. The differences are in their assets, capital, deposits, and loan portfolio of the rural banks. This is because the rural banks either have a large customer base or few clients or have low capital to finance the loans. The findings also showed that the banks should manage their loan portfolios well not to deplete their capital although they have good deposits. The loans may become non-performing loans in the long term, so the banks need to be cautious of the risks.
2. In general, the results negate the agency-based model of corporate expansion's arguments that bankers might expand geographically to extract the private benefits of managing a larger "empire" even if this lowers loan quality and increases bank fragility. For future research, there is a need to look into why geographical location does not affect the rural banks in terms of their characteristics.

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# PERCEIVED EFFECT OF ONLINE DISTANCE LEARNING DELIVERY MODALITY AND PROBLEMS ENCOUNTERED: ON LEARNERS' PERFORMANCE AND ACADEMIC ACHIEVEMENT

**Ma. Chona C. Apole**

Department of Education, District of Guindulman,  
Bohol, Philippines

**Leandro C. Torreon**

Bohol Island State University- Candijay Campus,  
Cogtong, Candijay, Bohol

## ABSTRACT

*The aim of this study was to determine the students' perception on the effect of online distance learning delivery modality and problems encountered on learners' performance and academic achievement. A descriptive- documentary design and correlational- survey design has been adopted and responses from 168 randomly selected participants comprising 106 learners and 62 teacher-respondents from the 9 private elementary and secondary schools in the province of Bohol implementing the online distance learning delivery modality (asynchronous online learning) during the School Year 2020-2021 were collected through online questionnaire using google form. The results of the study revealed that the online distance learning delivery modality and problems encountered has significant impact on learners' performance. Likewise, learners' academic achievement greatly depends on the learners' performance during the online distance learning. The study presented evidence that despite some problems encountered related to online distance learning modalities, learners learned to adjust and manifested positive impact on their learning progress. Based on the findings and conclusions of the study, the researcher recommends that school administrators should take necessary action that would probably include series of trainings, seminars, and workshops for the teachers necessary for instructional preparation and delivery especially to these current instructional trends in times of pandemic. Furthermore, learners should cooperate with their teachers in the teaching-learning process using the online distance learning platforms to achieve higher academic performance.*

Keywords: *online distance learning; student perception; performance; achievement; asynchronous*

## INTRODUCTION

Educational institutions (schools, colleges, and universities) in the Philippines are currently based on blended methods of learning; this refers to a learning delivery that combines face-to-face with any or a mix of online distance learning, and TV/Radio-based Instruction. Blended learning will enable the schools to limit face-to-face learning, ensure social distancing, and decrease the volume of people outside the home at any given time. Critical for implementation will be the production of needed teacher's and learner's learning materials (LR Portal and DepEd Commons will be maximized), as well as the support of media institutions like TV and radio stations (Llego, 2020). The sudden outbreak of a deadly disease called COVID-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world (Dhawan, 2020).

The COVID-19 has resulted in schools shut across the world. Globally, over 1.2 billion children are out of school. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Research suggests that online e-learning has been shown to increase retention information, and take less time, meaning the changes corona virus



have caused might be here to stay (Lalani & Li, 2020).

Nowadays, we all are staying in our homes due to the lockdown policy implemented by the government. However, learning should not halt. Different countries worldwide have introduced various answers during the pandemic to continue the education process - the introduction of distance learning. These are online learning platforms such as google, TV broadcasts, guidelines, resources, video lectures and online channels were introduced (UNESCO, 2020). With schools to reopen its doors the following school year, it's vital to plan how schools will be able to pursue their mission of implementing quality education to every student.

The Department of Education (DepED) emphasized that it would not necessarily mean that teachers and learners will go to schools and learn inside the classrooms and devised various modalities to ensure that online learning a choice among all others in this new learning environment (DepEd, 2020). Similarly, in the higher education institutions, new normal would-be virtual classrooms. The Commission on Higher Education suggested to strengthen online platforms and blended learning such as but not limited to google classroom, messenger, zoom, edmodo, Facebook and YouTube (CHED, 2020). In addition, both will adopt numerous learning delivery options such as but not limited to face-to-face, blended learnings, distance learnings, and home-schooling and other modes of delivery (CHED, 2020; DepEd, 2020). However, the implementation would pose such problems on students who have limited internet access, no gadgets, and the poor.

Educational institutions are increasingly adopting and implementing online learning and asynchronous communication tools. Asynchronous communication “enables groups that are separated in time and space to engage in the active production of shared knowledge” (Gunawardena, Lowe, & Anderson, 1997, p. 410). Educators are faced with the question of understanding the pedagogical characteristics of online learning and asynchronous communication tools to best serve students (Vonderwell, 2007). Various schools, colleges, and universities have discontinued in-person teaching. As per the assessment of the researchers, it is uncertain to get back to normal teaching anytime soon. As social distancing is preeminent at this stage, this will have negative effects on learning opportunities. Educational units are struggling to find options to deal with this challenging situation (Dhawan, 2020). Thus, the researcher encourages conducting a study about online distance learning delivery modality and problems encountered to determine its effect on learners' performance.

## LITERATURE BACKGROUND

The deadly and infectious disease Corona Virus also known as Covid-19 has deeply affected the global economy. This tragedy has also shaken up the education sector, and this fear is likely to resonate across the education sector globally. The Covid-19 pandemic outbreak forced many schools and colleges to remain closed temporarily. Several areas are affected worldwide and there is a fear of losing this whole on-going semester or even more in the coming future.

De Noyelles, Mannheimer Zydney, and Baiyun Chen (2014) reviewed the literature on asynchronous online discussions. They discovered that asynchronous online discussions are improved when instructors modeled good social presence, required participation in the discussions, and graded the discussions. De Noyelles et al. also uncovered three types of prompts that improved asynchronous online discussions: (a) problem-based prompts, (b) project-based prompts, and (c) debate-based prompts. De Noyelles et al. also discovered six types of teacher responses to students' posts that improved discussions: Questioning student responses, playing devil's advocate, providing timely, modest instructor feedback, allowing students to facilitate discussions, providing structure or protocol prompts, and providing audio feedback.

Online education has become increasingly popular in the U.S. higher education within the last two decades, and most higher education institutions believe that this method of instruction will be critical for the future of higher education (Allen & Seaman, 2014). The accessibility of the internet and flexibility of online courses have made online education an integral part of higher education (Li & Irby, 2008; Luyt,

2013; Lyons, 2004). In addition, financial issues facing many higher education institutions and students' demands shift the focus of these institutions more toward using online education (Limperos, Buckner, Kaufmann, & Frisby, 2015). Given the opportunities that online education provides for faculty, students, and institutions, the amount of attention it has received is not surprising (Konetes, 2011).

Educational Technology has absolutely revolutionized the entire education system. Until recently, the teachers used to be the sole interpreter of knowledge to the learners and the textbooks the sole resource. Educational technology has affected the conventional roles and it has opened the new areas of teacher functions such as management of resources and management of learning. Today, teachers have a range of media to assist and supplement the instructional work (Parankimalil, 2015).

The rapid developments in technology have made distance education easy (McBrien et al., 2009). Most of the terms (online learning, online distant learning, open learning, web-based learning, computer-mediated learning, blended learning, m-learning, for ex.) have in common the ability to use a computer connected to a network, that offers the possibility to learn from anywhere, anytime, in any rhythm, with any means" (Cojocariu et al., 2014).

Online learning can be termed as a tool that can make the teaching-learning process more student-centered, more innovative, and even more flexible. Online learning is defined as "learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students" (Singh & Thurman, 2019).

According to the report of Akamai (2017), the Philippines has the lowest internet connectivity in Asia. Besides, such challenges would be equity gaps, students' security and safety, quality of learning compromised and poor assessment results (Winthrop, 2020). Changes on the grading system, assessment and evaluation of student's performance will also be a challenge to every administrator. In addition, laboratory activities in sciences and other subjects that require performance such as Physical Education and culture and arts would be limited to paper and pen test, unless schools will require students to be physically present to be assessed through performance tests. In addition, extra-curricular activities in school such as scouting, proms, sports intramurals, contests, and foundation day will be reduced and discontinued. In terms of teaching, teacher training to online instruction, blended learning and distance learning is also recommended to adjust to the new instructional format (Toquero, 2020). Teacher competencies in both pedagogy and technology should be reinforced. This transition to the new normal, from the four corners of the classroom to the borders of virtual reality, every learning institution needs to study how successful online learning is in providing quality education and outcomes-based education to students (Basilaia & Kvavadze, 2020).

With no face-to-face classes allowed yet, DepED Bohol has opted to adopt the Distance Learning Modality and the Blended Learning Modality in areas where these are applicable. By Distance Learning Modality, a lesson for the week can be delivered through the internet and can be viewed by computers or tablets and mobile phones, or television or radio-based learning where students get modules in flash drives and view these on computers or listen through radios with USB ports, when these are available. There is also a Printed Module-Based Distance Learning where teachers prepare modules ahead and these are distributed to students and the learners can take the classes anytime. In some places, schools may adopt to a Blended Learning where lessons can be delivered on the internet, through radios and printed modules and there are times when kids are asked to come to class when face-to-face classes would already be allowed. Lessons are changed every week according to the needed competencies which a student should get in a real physical school. They must pass their activity sheets through their parents who also claim the modules they would use by the following week (Chiu, 2020).

The unique potential of online environments to benefit teaching and learning has been the subject of much discussion in distance learning literature (Benson, 2003; Gallini & Barron, 2001–2002; Tallent-Runnels, et al., 2006). For example, Tallent-Runnels et al. reviewed findings suggesting that "in asynchronous discussions, students had more time to think about their discussions ... (which) improved the

depth and quality of responses” (p. 96), and that the “online environment may offer a unique social advantage as compared to the traditional classroom” (p. 97). Gallini & Barron (2001–2002) found that nearly all the 153 online students they surveyed reported increased communication with instructors (88%) and other students (97%) compared to their traditional course experiences.

Furthermore, Rice (2006) found that online teaching strategies make best use of the unique potential of the online environment when they are highly interactive and based on a constructivist model that encourages students to be active, independent learners. In a meta-analysis comparing achievement, attitudes, and retention between FTF and distance courses, Bernard et al. (2004) found that active learning (problem-based formats with collaboration among students) fostered better achievement and attitudes, though only in asynchronous (e.g., Web-based) formats.

## **STATEMENT OF THE PROBLEM**

This study primarily aimed to determine the effect of online distance learning delivery modality and problems encountered on the learning performance of the learners of selected private elementary and secondary schools in Bohol during the school year 2020-2021. Specifically, it sought to answer the following sub-problems:

1. What is the profile of the teacher-respondents in terms of:
  - 1.1 age;
  - 1.2 sex;
  - 1.3 highest educational attainment; and
  - 1.4 teaching experience?
2. What is the profile of the learner respondents in terms of:
  - 2.1. age;
  - 2.2. sex;
  - 2.3. grade level; and
  - 2.4. academic achievement?
3. What online distance learning platforms are utilized by the respondents?
4. What technology are used by the respondents in online distance learning?
5. What connectivity are used by the respondents to access the internet?
6. What is the assessment of the respondents on the online distance learning delivery modality used by the teachers?
7. What is the perception of the respondents on the problems encountered related to online distance learning as to:
  - 7.1. preparation;
  - 7.2 teaching delivery; and
  - 7.3 learners’ progress?
8. What is the assessment of the respondents on the learners’ learning performance?
9. Is there a significant relationship between the learners’ academic achievement and the:
  - 9.1 online distance learning delivery modality;
  - 9.2 problems encountered related to online distance learning; and
  - 9.3 learners’ learning performance?
10. Is there a significant relationship between the learners’ learning performance and:
  - 10.1 online distance learning delivery modality; and
  - 10.2 problems encountered related to online distance learning?

## **RESEARCH METHODOLOGY**

The study was conducted at the private elementary and secondary schools in Bohol namely: Holy Name University, Holy Spirit School of Tagbilaran, Unitas Learning Center, Great Minds Leadership Academy, Bohol Wisdom School, Bohol Child Head Start, Tagbilaran Grace Christian School, International

Academe of EnScieMa and Advance Christian Academy – Banawa Inc. The study employed a Descriptive-Documentary Design and Correlational – Survey Design with the aid of a questionnaire (printed questionnaire and google form) as a gathering tool in collecting the necessary information of the respondents’ perception to determine the effect of online distance learning delivery modality and problems encountered on the learning performance of the learners. There are no wrong answers because everyone entitles to his own views. Through this process, the collected data and information existed.

The questionnaire was modified and adapted from Muuro, Wagacha and Oboko (2014) on Students’ Perceived Challenges in an Online Collaborative Learning Environment: A Case of Higher Learning Institutions in Nairobi, Kenya and from Osharive (2014) on Social Media and Academic Performance of Students.

The participants were the Grade 4 up to Grade 10 students in the said private schools. The research-subject of this study were the one hundred - six (106) randomly selected learners comprised of eighty (80) females and twenty-six (26) male respondents. Further, there were a total of sixty-two (62) randomly selected teacher respondents comprised of fifty-five (55) females and seven (7) males from the said private schools. For statistical purposes, the answers on the Online Distance Learning Delivery Modality, Problems Encountered on the Learning Performance and Academic Achievement of the Learners were categorized as Strongly Agree, Agree, Disagree, and Strongly Disagree, with weight equivalents of 4, 3, 2 and 1 respectively from which the weight means were derived. To further test the significant result, Spearman Rank Correlation Coefficient was used.

### Statistical Treatment

This study used the following tests in interpreting the data:

**Percentage Formula.** To determine the profile of the respondents and the frequency of their answers on the listed items in the questionnaire, this formula was used. It is derived by dividing the frequency of responses by the number of cases and then multiplying the dividend by 100, or:

Formula:  $P = f/n \times 100$   
 Where: P = percentage  
 F = frequency of responses  
 N = number of cases

**Weighted Mean.** This is to be used to determine the perception of the respondents on the Online Distance Learning Delivery Modality, problems encountered related to Online Distance Learning and learners’ performance using the formula:

$$WM = \frac{\sum Fx}{N}$$

Formula: Weighted Mean  
 Where:  
 $\sum$  = summation of frequency of responses  
 F = frequency  
 X = value  
 N = number of the respondents

To determine the relationship of the online distance teaching delivery and problems encountered related to Online Distance Learning on the learners’ performance and academic achievement, Spearman Rank Correlation Coefficient was used.

Formula:

$$r_s = 1 - \frac{6\sum D^2}{n(n^2 - 1)}$$

Where:

- rs = Spearman Rank Correlation Coefficient
- $\sum D^2$  = sum of the squares of the difference between rank x and rank y
- n = sample size
- 6 = constant

## RESULTS AND DISCUSSIONS

This study was conducted among the learners' ages 8 - 17 of the private elementary and secondary schools in Bohol. The findings are herein presented and analyzed considering the various aspects of the research problem.

**Table 1. Profile of the Teacher-Respondents**  
N = 62

	Frequency	Percentage (%)	Rank
<b>1.1 Age</b>			
21 – 30 years old	50	80.65	1
31 – 40 years old	8	12.90	2
41 – 50 years old	3	4.84	3
51 years old and above	1	1.61	4
<b>Total</b>	<b>62</b>	<b>100%</b>	
<b>1.2 Sex</b>			
Male	7	11.29	2
Female	55	88.71	1
<b>Total</b>	<b>62</b>	<b>100%</b>	
<b>1.3 Highest Educational Attainment</b>			
Bachelor’s Degree Holder	45	72.58	1
With Units in Master’s Degree	12	19.35	2
Master’s Degree Holder	2	3.23	3.5
With Units in PhD/EdD	2	3.23	3.5
Doctorate	1	1.61	5
<b>Total</b>	<b>62</b>	<b>100%</b>	
<b>1.4 Teaching Experience</b>			
5 years and below	47	75.81	1
6 – 10 years	10	16.13	2
11 – 15 years	3	4.84	3
16 – 20 years	0	0.00	5
21 years and above	2	3.23	4
<b>Total</b>	<b>62</b>	<b>100%</b>	

To find out the reliability of the teacher respondents as a source of basic information, a look was made into their personal profile such as the age, sex, highest educational attainment, and teaching experience is taken.

**Age.** Majority of them belonged to the age bracket of 21-30 with fifty (50) or (80.65%). Meanwhile, only one (1) or (1.61%) were on the age bracket of 50 and above and was rank lowest.

**Sex.** Female teachers dominated the respondents’ population than male with a frequency of fifty-five (55) or (88.71%) and seven (7) or (11.29%), respectively.

**Highest Educational Attainment.** The result exhibits that forty-five (45) or (72.58%) were bachelor's degree holder. Meanwhile, twelve (12) or (19.35%) has M.A units, only two (2) or (3.23%) were master's degree holder and two (2) or (3.23%) had Doctorate units, and only one of them was Doctorate degree holder.

**Teaching Experience.** There were forty-seven (47) or (75.81%) had 5 years and below of teaching experience which rank the highest. On the other hand, only two (2) or (3.23%) had a teaching experience of above 21 years which rank the lowest.

**Table 2. Profile of the Learner-respondents**  
N = 106

	Frequency	Percentage (%)	Rank
<b>2.1. Age</b>			
12 years old and below	53	50.00	1.5
13 – 17 years old	53	50.00	1.5
18 years old and above	0	0.00	3
<b>Total</b>	<b>106</b>	<b>100.00%</b>	
<b>2.2 Sex</b>			
Male	48	45.28	2
Female	58	54.72	1
<b>Total</b>	<b>106</b>	<b>100.00%</b>	
<b>2.3 Grade Level</b>			
Grade 4	13	12.26	4
Grade 5	11	10.38	5
Grade 6	23	21.70	2
Grade 7	8	7.55	7
Grade 8	9	8.49	6
Grade 9	18	16.98	3
Grade 10	24	22.64	1
<b>Total</b>	<b>106</b>	<b>100%</b>	
<b>2.4 Academic Achievement</b>			
Outstanding (90-100)	71	66.98	1
Very Satisfactory (85-89)	23	21.70	2
Satisfactory (80-84)	12	11.32	3
<b>Total</b>	<b>106</b>	<b>100.00%</b>	

The profile of the learner respondents includes age, sex, grade level and academic achievement.

**Age.** Most of the respondents belonged to the age bracket of 12 years old and below with fifty-three (53) or 50.00% and 13 – 17 years old with fifty-three (53) or 50.00% of the learners.

**Sex.** It was more dominated by female learners than male ones with a frequency of 58 (54.72%) and 48 (45.28%), respectively.

**Grade Level.** There were 24 (22.64%) learners in Grade 10, 23 (21.70%) learners in Grade 6, 18 (16.98%) learners in Grade 9, 13 (12.26%) learners in Grade 4, 11 (10.38%) learners in Grade 5, 9 (8.49%) learners in Grade 8 and 8 (7.55%) learners in Grade 7.

**Academic Achievement.** There were 71 (66.98%) learners who were outstanding in terms of academic achievement with 90 – 100 general point average which ranks the highest while there were 12 (11.32%) learners who were satisfactory in terms of academic achievement with 80 – 84 general point average which ranks the lowest.

**Table 3. Online Distance Learning Platform Used by the Respondents**  
**N<sub>1</sub> = 62; N<sub>2</sub> = 106**

Online Platforms	Teachers			Learners		
	F	%	Rank	F	%	Rank
Google Classroom	28	45.16	2	56	52.83	1
Facebook	10	16.13	6.5	12	11.32	9
Facebook Messenger	39	62.90	1	48	45.28	2
Zoom	26	41.94	3	42	39.62	3
Google Forms	22	35.48	4.5	22	20.75	6
Edmodo	8	12.90	8	16	15.09	7
YouTube	10	16.13	6.5	24	22.64	5
Google Meet	22	35.48	4.5	33	31.13	4
MS Teams	6	9.68	9	14	13.21	8

There were 39 (62.90%) teachers who used Facebook Messenger and 56 (52.83%) learners who used Google Classroom as an online platform which ranks the highest, respectively. Meanwhile, there were 6 (9.68%) teachers who used MS Teams and 12 (11.32%) learners who used Facebook which ranks the lowest, respectively.

**Table 4. Technology Used in Online Distance Learning**  
**N<sub>1</sub> = 62; N<sub>2</sub> = 106**

Electronic Gadget/ Technology	Teachers			Learners		
	F	%	Rank	F	%	Rank
Laptop/ Desktop	59	95.16	1	80	75.47	1
Tablet/ iPad	8	12.90	3	9	8.49	3
Smartphone	38	61.29	2	74	69.81	2

There were 59 (95.16%) teachers and 80 (75.47%) learners who used laptop/desktop which ranks the highest. Meanwhile, there were 8 (12.90%) teachers and 9 (8.49%) learners who used tablet/iPad which ranks the lowest.

**Table 5. Respondents' Access to Internet Connectivity**  
**N<sub>1</sub> = 62; N<sub>2</sub> = 106**

Access to Internet	Teachers			Learners		
	F	%	Rank	F	%	Rank
Mobile Network Data	15	24.19	2	25	23.58	2
Wi-Fi Broadband	60	96.77	1	90	84.91	1

There were 60 (96.77%) teachers and 90 (84.91%) learners who used Wi-Fi Broadband which ranks the highest and 15 (24.19%) teachers and 25 (23.58%) learners who used mobile network data which ranks the lowest.

**Table 6. Perceived Effect of Online Distance Learning on Learner's Performance**  
**N<sub>1</sub> = 62; N<sub>2</sub> = 106**

Statements	Teachers		Learners		Overall		
	WM	VI	WM	VI	WM	VI	Rank
The online distance learning delivery modality... allows the learners to be more creative and imaginative.	3.00	S	3.10	S	3.05	S	11.5
helps the learners to find related knowledge and information for learning.	3.21	S	3.38	A	3.30	A	2
encourages the learners to communicate more with their classmates.	2.95	S	3.15	S	3.05	S	11.5
provides huge practicality for the learners being able to practice through PC or mobile.	3.32	A	3.30	A	3.31	A	1

allows the learners to learn more effectively and helps broaden their knowledge paradigm with the use of technology.	3.11	S	3.29	A	3.20	S	4
helps the learners develop receptive skills (Listening – Reading)	3.00	S	3.31	A	3.16	S	5.5
enables the learners to express their ideas and thoughts better.	3.03	S	2.92	S	2.98	S	15.5
solves many of our educational problems through technology-enabled learning.	2.85	S	2.91	S	2.88	S	24
saves time and effort for both teachers and learners.	2.84	S	3.08	S	2.96	S	17
engages the learners more than other forms of learning. It is easy to follow and understand.	2.71	S	2.89	S	2.80	S	25
helps rise the quality of teaching and learning because it integrates all forms of media: print, audio, video and animation.	3.11	S	3.17	S	3.14	S	7.5
improves the communication between the learners and teacher.	2.87	S	3.03	S	2.95	S	20
enhances the pedagogic value of a course.	2.90	S	2.99	S	2.95	S	20
gives the learners and their classmates plenty of opportunity to engage with the content and even ask them to find and discuss resources, grade their own assignments, and hold student-led discussions in the online forums.	2.94	S	3.04	S	2.99	S	14
makes the learners feel as supported as possible, since this online space is their classroom.	2.97	S	2.92	S	2.95	S	20
ensures the coursework caters to all learning types and allows the learners to flourish.	2.85	S	3.05	S	2.95	S	20
incorporates anything that can be accessed on the smartphone or mobile device.	3.06	S	3.17	S	3.12	S	9
provides a final summary or assessment that helps the learners to reflect on everything they've learned.	3.00	S	3.08	S	3.04	S	13
allows the learners to be responsible in the submission of learners' activity sheets.	2.89	S	3.42	A	3.16	S	5.5
has positive impacts on the learners.	2.77	S	3.06	S	2.92	S	23
provides the learners with learning opportunities that they otherwise would not have.	3.10	S	3.17	S	3.14	S	7.5
makes the learners feel bored and isolated.	2.53	S	2.78	S	2.66	S	26
makes the learners learn more than they expected.	2.87	S	3.02	S	2.95	S	20
offers comfortable and quality education.	2.85	S	3.10	S	2.98	S	15.5
gives the learners an easy access on online materials.	3.24	A	3.23	S	3.24	S	3
over-all, it is interesting and a favorable learning experience.	3.00	S	3.16	S	3.08	S	10
<b>Average Weighted Mean</b>		<b>2.96</b>	<b>S</b>	<b>3.10</b>	<b>S</b>	<b>3.03</b>	<b>Some-times</b>

Legend:

- 3.25 – 4.00 - Always
- 2.50 – 3.24 - Sometimes
- 1.75 – 2.49 - Rarely
- 1.00 – 1.74 - Never

Assessment on the Online Distance Learning Delivery Modality. The teacher and learner-respondents assessment as to Online Distance Learning Delivery Modality showed effective.

**Table 7.1 Perceived Effect of the Problems Encountered by the respondents on Learner's Performance as to Preparation**  
 $N_1 = 62; N_2 = 106$

I / The learners...	Statements	Teachers		Learners		Overall		
		WM	VI	WM	VI	WM	VI	Rank
	did not able to access a reliable internet connection (Wi-Fi and/or mobile network connection.	2.97	A	2.40	D	2.69	A	5
	don't have regular access to a computer or electronic gadget and internet service that meets technical requirements for participating in online distance learning.	2.84	A	2.00	D	2.42	D	1
	dedicate time each week to participate, study, and complete activities online.	3.23	A	3.30	S A	3.27	SA	11



am not comfortable working at a computer and willing to spend a lot of time in front of my laptop/computer and/or other electronic gadgets.	2.85	A	2.50	A	2.68	A	4
have self-discipline to get things done on time.	2.73	A	3.10	A	2.92	A	7
am totally convinced that I will get the same value of education from an online distance learning.	2.69	A	2.60	A	2.65	A	3
am willing to ask my classmates and instructors questions for clarification and continue to ask when I need more information.	3.10	A	3.30	S A	3.20	A	10
am persistent and like to work independently.	2.89	A	3.10	A	3.00	A	8
have convenience and an adjustable schedule.	3.19	A	3.10	A	3.15	A	9
am not comfortable working primarily with a text-based medium.	2.82	A	2.50	A	2.66	A	2
consider that high quality learning can take place without going to a traditional classroom.	2.90	A	2.70	A	2.80	A	6
<b>Average Weighted Mean</b>	<b>2.93</b>	<b>A</b>	<b>2.87</b>	<b>A</b>	<b>2.90</b>	<b>Agree</b>	

Legend:

- 3.25 – 4.00 - Strongly Agree
- 2.50 – 3.24 - Agree
- 1.75 – 2.49 - Disagree
- 1.00 – 1.74 - Strongly Disagree

Preparation. The learner-respondents preparation as to problem encountered was less serious.

**Table 7.2 Perceived Effect of the Problems Encountered by the Respondents on the Learner's Performance as to Teaching Delivery**  
N<sub>1</sub> = 62; N<sub>2</sub> = 106

Statements	Teachers		Learners		Overall		Rank
	WM	VI	WM	VI	WM	VI	
The teacher....							
motivates and inspires me to learn.	3.45	SA	3.44	SA	3.45	SA	8
provides engaging and relevant resources for my best learning experience.	3.47	SA	3.44	SA	3.46	SA	10
explains the topics in a way that I understand.	3.53	SA	3.35	SA	3.44	SA	6.5
supports the development of my learning.	3.47	SA	3.45	SA	3.46	SA	10
gives clear expectations and manage behavior.	3.29	SA	3.37	SA	3.33	SA	2
feedbacks on my progress in lessons.	3.44	SA	3.20	SA	3.32	SA	1
gives praise/merits when necessary.	3.61	SA	3.32	SA	3.47	SA	12.5
stretches and challenges my capabilities.	3.48	SA	3.51	SA	3.50	SA	18
shows willingness to offer help and advice.	3.58	SA	3.62	SA	3.60	SA	21
uses strategies to encourage active learning and helps develop critical thinking and problem-solving skills among learners.	3.55	SA	3.48	SA	3.52	SA	19
encourages independence and creativity.	3.56	SA	3.58	SA	3.57	SA	20
provides learner-centered lessons and activities that are connected to real-world applications.	3.48	SA	3.36	SA	3.42	SA	5
flexible in dealing with learners' needs (due dates, absences, make-up exams).	3.50	SA	3.42	SA	3.46	SA	10
provides constructive feedback to learners about assignments and questions and encourages them to reflect on how they can improve.	3.50	SA	3.39	SA	3.45	SA	8

uses appropriate strategies designed to accommodate the varied talents and skills of the learners.	3.45	SA	3.43	SA	3.44	SA	6.5
provides easy to access lessons.	34.0	SA	3.47	SA	3.44	SA	6.5
enforces rules constantly and fairly.	3.50	SA	3.45	SA	3.48	SA	15.5
communicates with the parents.	3.47	SA	3.34	SA	3.41	SA	3.5
gives variety of learning styles that will enhance our learning capabilities and teach us the importance of both group work and individual achievements.	3.42	SA	3.48	SA	3.45	SA	8
sets clear guidelines for the learners with a very clear set of expectations before we commence our studies.	3.52	SA	3.36	SA	3.44	SA	6.5
asks the learners for direct and honest feedback on how things are going.	3.53	SA	3.43	SA	3.48	SA	15.5
uses discussion, collaboration, video and audio clips and hands-on exercises with text and brief video lectures	3.45	SA	3.58	SA	3.52	SA	19
<b>Average Weighted Mean</b>	<b>3.48</b>	<b>SA</b>	<b>3.43</b>	<b>SA</b>	<b>3.46</b>	<b>SA</b>	<b>Strongly Agree</b>

Legend:

3.25 – 4.00 - Strongly Agree

2.50 – 3.24 - Agree

1.75 – 2.49 - Disagree

1.00 – 1.74 - Strongly Disagree

Teaching Delivery. The learners' problem encountered as to teaching management manifested not serious.

**Table 7.3 Respondents' Perception on the Problems Encountered related to Online Distance Learning as to Learners' Progress**  
N<sub>1</sub> = 62; N<sub>2</sub> = 106

Statements	Teachers		Learners		Overall		Rank
	WM	VI	WM	VI	WM	VI	
I/ I am....							
able to work independently.	3.00	A	3.33	SA	3.17	A	20
capable to actively communicate online via e-mail or discussions using other online platforms.	3.21	A	3.36	SA	3.29	SA	25
not able to attend online class on our scheduled date and time.	2.53	A	2.09	D	2.31	D	2
having difficulty expressing my opinion to others.	2.85	A	2.61	A	2.73	A	7
able to receive constructive feedback from others.	3.03	A	2.96	A	3.00	A	11
able to accept critical thinking and decision making as part of the learning process.	3.10	A	3.28	SA	3.19	A	23
able to manage my study time and personal time when both take place at home.	2.90	A	3.10	A	3.00	A	11
procrastinate a lot on the tasks given by the teacher.	2.84	A	2.90	A	2.87	A	8
able to pass my assignments/projects on specific dates just like on-campus classes.	2.82	A	3.34	SA	3.08	A	16
proactive and disciplined.	2.89	A	3.19	A	3.04	A	12.5
creative and organized.	3.00	A	3.12	A	3.06	A	14.5
inspired and motivated to keep doing my online tasks and assignments.	3.00	A	3.24	A	3.12	A	18

have a good time management.	2.77	A	3.08	A	2.93	A	10
responsible for my own learning.	2.94	A	3.42	SA	3.18	A	21.5
able to set goals and meet course deadlines.	2.84	A	3.36	SA	3.10	A	17
able to show what I am capable of.	3.05	A	3.23	A	3.14	A	19
have my own method and way of learning.	3.15	A	3.29	SA	3.22	A	24
not focus on the activity/task given by the teacher.	2.79	A	2.27	D	2.53	A	4
playing online games while answering the activities online.	2.65	A	1.76	D	2.21	D	1
well-prepared and made time to review my lessons.	2.77	A	3.07	A	2.92	A	9
not able to access some of the online activities because of poor internet connection.	2.87	A	2.42	D	2.65	A	5
not able to learn effectively about the assigned topics using online platforms.	2.66	A	2.39	D	2.53	D	4
good in typing and has good written communication skills.	2.84	A	3.02	A	2.93	A	10
not able to dedicate at least 4-6 hours per week for an online distance learning.	2.61	A	2.43	D	2.52	D	3
able to express myself better using PowerPoint presentations and videos than face-to-face interaction.	2.69	A	2.73	A	2.71	A	6
<b>Average Weighted Mean</b>	<b>2.87</b>	<b>A</b>	<b>3.16</b>	<b>A</b>	<b>3.02</b>	<b>Agree</b>	

Legend:

- 3.25 – 4.00 - Strongly Agree
- 2.50 – 3.24 - Agree
- 1.75 – 2.49 - Disagree
- 1.00 – 1.74 - Strongly Disagree

Learners' Progress. The learner's problems encountered as to progress was assessed as less serious.

**Table 8. Perception on the Learners' Learning Performance**  
 $N_1 = 62$ ;  $N_2 = 106$

Statements	Teachers		Learners		Overall		
	WM	VI	WM	VI	WM	VI	Rank
The usage of online platforms has helped improve my/learners' grades.	2.92	A	2.94	A	2.93	A	7
Engaging in academic forums using online platforms reduces my/learners rate of understanding.	2.63	A	2.74	A	2.69	A	12
I/learners perform well in academics with the use of online platforms.	2.85	A	2.97	A	2.91	A	9
Improper use of online platforms is a problematic issue that affects my/learners' academic life.	3.24	A	2.95	A	3.10	A	3
Online games and social media distract me from my/learners' studies.	3.45	SA	2.99	A	3.22	A	2
Hours spent online can never be compared to the number of hours I/learners spend in school.	3.40	SA	3.11	A	3.26	A	1
There is no improvement in my/learners grades using online distance learning delivery modality.	2.40	D	2.42	D	2.41	D	15
Because of online distance learning, I/learners have unlimited access to social media and this has affected my/learners academic performance negatively.	3.02	A	2.42	D	2.72	A	10
I/learners engage in academic discussions on Facebook messenger, Edmodo, google classroom, zoom, etc. and this has improved my/learners' academic performance.	3.02	A	3.04	A	3.03	A	5

I/learners make use of social media platforms to disseminate knowledge to my/learners' classmates.	3.13	A	2.96	A	3.05	A	4
I/learners answer the activities and assignments given by copying concepts/ideas from Google or Wikipedia.	2.79	A	2.52	A	2.66	A	13
I/learners perform well in online distance learning than face-to-face interaction.	2.53	A	2.49	D	2.51	A	14
During online class, I/learners set aside personal activities and make sure to finish on time the tasks given to me by my/learners teacher.	2.71	A	3.12	A	2.92	A	8
I/learners prefer to study and read online than play online games.	2.52	A	2.89	A	2.71	A	11
I/learners find online distance learning better and more useful than just stay at home self-studying.	2.79	A	3.09	A	2.94	A	6
My/learners grade suffers in online learning.	2.42	D	2.30	D	2.36	D	16
<b>Average Weighted Mean</b>	<b>2.86</b>	<b>A</b>	<b>3.06</b>	<b>A</b>	<b>2.96</b>	<b>Agree</b>	

Legend:

- 3.25 – 4.00 - Strongly Agree
- 2.50 – 3.24 - Agree
- 1.75 – 2.49 - Disagree
- 1.00 – 1.74 - Strongly Disagree

Performance of the Learners. It denotes that online distance learning delivery modality has positive impact towards learners' learning performance.

**Table 9.1 Relationship Between the Learners' Academic Achievement and the Online Distance Learning Delivery Modality**  
N = 106

Academic Achievement and..	r	p-value	Interpretation	Decision
Online Distance Learning Delivery Modality	0.077	0.432	Not Significant	Failed to Reject H <sub>0</sub>

*\*Correlation is significant at 0.05 level (2-tailed)*

Relationship between the Learner's Academic Achievement and the Online Distance Learning Delivery Modality. The result revealed that there is no significant relationship between the academic achievement of the learners and the online distance learning delivery modality,  $r(104)=0.077$ ,  $p=0.432$ , thus failed to reject the null hypothesis. This implies that the academic achievement of the learners is not defined by the learning delivery modality used. In a meta-analysis in higher education, Bernard et al. (2004) found that overall; there was no significant difference in achievement, attitude, and retention outcomes between distance education, which included online education, and the traditional face-to-face education.

**Table 9.2 Relationship Between the Learners' Academic Achievement and the Problems Encountered Related to Online Distance Learning**  
N = 106

Academic Achievement and..	r	p-value	Interpretation	Decision
Problems Encountered Related to Online Distance Learning	0.180	0.065	Not Significant	Failed to Reject H <sub>0</sub>

*\*Correlation is significant at 0.05 level (2-tailed)*

Relationship between the Learners' Academic Achievement and the Problems Encountered Related to Online Distance Learning. The result depicted that there is no significant relationship between the learners' academic achievement and the problems encountered related to online distance learning,  $r(104)$

=0.180,  $p=0.065$ , thus failed to reject the null hypothesis. This infers that there are a lot of factors that contributes or affects the learners' academic achievement that is why whatever challenges or problems a learner may encounter, this does not directly or relatively affect the learners' performance. A problematic learner may still excel in different learning areas and at the same time, a less problematic learners' grade may also suffer because of genetic factor. So, there is no significant relationship between the learners' academic achievement and the problems encountered related to online distance learning as to preparation, teaching delivery, and learners' progress.

**Table 9.3 Relationship Between the Learners' Academic Achievement and Learning Performance**  
N = 106

Academic Achievement and..	r	p-value	Interpretation	Decision
Learning Performance	0.219	0.024	Significant	Reject $H_0$

*\*Correlation is significant at 0.05 level (2-tailed)*

Relationship Between the Learners' Academic Achievement and Learning Performance. The result described that there is a sufficient evidence of a significant relationship between the learners' academic achievement and learning performance,  $r(104)=0.110$ ,  $p=0.264$ , thus reject the null hypothesis. This deduces that the academic achievement of the learners greatly depends on their learning performance during the online the online distance learning delivery modalities implemented by the schools.

**Table 10.1 Relationship Between the Learners' Learning Performance and the Online Distance Learning Delivery Modality**  
N = 106

Academic Achievement and..	r	p-value	Interpretation	Decision
Online Distance Learning Delivery Modality	0.376	<.001	Significant	Reject $H_0$

*\*Correlation is significant at 0.05 level (2-tailed)*

Relationship Between the Learners' Learning Performance and the Online Distance Learning Delivery Modality. The result clarified that there is sufficient evidence of a significant relationship between the learners' learning performance and online distance learning delivery modality,  $r(104)=0.376$ ,  $p<.001$ , thus reject the null hypothesis. This discloses that the online distance learning delivery modality can affect learners' learning performance.

**Table 10.2 Relationship Between the Learners' Learning Performance and the Problems Encountered Related to Online Distance Learning**  
N = 106

Learning Performance and..	r	p-value	Interpretation	Decision
Problems Encountered Related to Online Distance Learning	0.584	<.001	Significant	Reject $H_0$

*\*Correlation is significant at 0.05 level (2-tailed)*

Relationship Between the Learners' Learning Performance and the Problems Encountered Related to Online Distance Learning. The result described that there is sufficient evidence of a significant relationship between the learners' learning performance and the problems encountered related to online distance learning,  $r(104)=0.584$ ,  $p<.001$ , thus reject the null hypothesis. This simply means that learners' learning performance is affected by the problems encountered in their studies.

## CONCLUSION

The result of the study reveals that the online distance learning delivery modality and problems encountered has significant impact on learners' performance. Likewise, learners' academic achievement greatly depends on the learners' performance during the online distance learning. The study presented evidence that despite some problems encountered related to online distance learning modalities, learners learned to adjust and manifested positive impact on their learning progress. However, necessary measures should be considered in improving the quality of online distance learning to help the learners to have better learning experience during this time of pandemic. Furthermore, the ODL provides huge practicality for the learners being able to practice through PC or mobile. It gives the learners an easy access on online materials which is one of the reasons why they opt for online learning.

## RECOMMENDATION

In view of the foregoing conclusions, it is recommended that the school administrators should take necessary action that would probably include series of trainings, seminars, and workshops for the teachers necessary for instructional preparation and delivery especially to these current instructional trends in times of pandemic. The school administrators and teachers should enhance and innovate online distance preparation to encourage and convince the learners to participate the online modality. The teachers should improve and upgrade their teaching techniques especially in using online platforms aligned to the new educational reform as mandated in RA 10533. Furthermore, the pupils should devote time in attending the scheduled online class, and focus on the assigned topics using the platform, cooperate with their teacher in the teaching-learning process to achieve higher academic performance.

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# EXTENT OF COMPLIANCE OF SCHOOL-BASED FEEDING PROGRAM IN THE SCHOOLS DIVISION OF NORTHERN SAMAR

**Maricel A. Gorgonia**

Campedico Elementary School, Palapag II District  
Barangay Campedico, Palapag Northern Samar

## ABSTRACT

The Philippine government in its battle cry to combat hunger and malnutrition has developed school-based feeding program to reduce hunger and improve the nutritional status of school-aged children. This study aimed to develop complementary activities that would help sustain the school-based feeding program. Using the Input-Process-Output the study evaluated the extent of compliance of school-based feeding program implementers to the different program components and further assessed the work performance of feeding program implementers. Involved in the study were the SBFP beneficiaries from the Division of Northern Samar. Feeding coordinators, school heads, parent volunteers and pupil beneficiaries were chosen as respondents. Data were collected through survey questionnaires and group interview with pupil beneficiaries. Data were analyzed using descriptive statistics and thematic analysis respectively. The findings of the study showed that most of the feeding program coordinators were overburdened and lacks proper training likewise, majority of the school heads were teachers-in-charge, finished master's degree but training deficient relative to school-based feeding program implementation, parent volunteers earned the least income. Overall, the extent of compliance in the implementation of the school-based feeding program during the school year was very much complied and feeding program implementers worked very satisfactorily although parents volunteer complained that only few of them attend to their assignments religiously. It was recommended that program implementers must be properly trained prior to the implementation of the program.

**Keywords:** *School-Based Feeding Program; complementary activities; work performance; program implementers; compliance*

## INTRODUCTION

Malnutrition is one of the formidable problems all over the world today. There are growing body of literatures stating alarming figures of malnutrition and hunger worldwide. The number of undernourished people in the world has increased to an estimated 821 million in 2017 or one in every nine people.

Almost 63% of the world's undernourished people or 515 million live in Asia followed by Africa with 256.5 million (31%) and Latin America and Caribbean with 39.3 million. The situation is worsening in South Africa and most regions of Africa.

Malnutrition data for school-age children worldwide are indicative of acute malnutrition. An estimate of 52 million children under five were "wasted" and a total of 155 million children were stunted in 2016. In the US, a recent study reported that one in six children or 13 million in US is facing hunger and 59 percent of these children are from low-income families and said that they have come to school hungry. Ninety-two percent of the educators are concerned that hunger will impede their student's ability to succeed in their studies. (GCNF, 2017)

In 2012, the nutrition status report of the Department of Education in the Philippines identified more than half a million severely wasted enrolled children in the country's public elementary schools.



Recently the Department of Education identified a total of 1,823,443 severely wasted and wasted elementary school children all over the Philippines. In Eastern Visayas, there are a total of 26,664 severely wasted and 63,064 wasted children enrolled in public school in Region VIII. Locally, here in Northern Samar a total of 5,083 or 5.25% were recorded as severely wasted and 11,706 or 12.08% were wasted (DepEd Order No. 39.,s. 2017).

Education and learning depend on good health and nutrition, especially among young children. When children lack certain nutrients in their diet they suffer from hunger, malnutrition and diseases, their potential for learning is diminished compared when they are healthy and well nourished (Del Rosso, 1999 (Albert et al., 2015). Thus, school feeding programs serve as platforms for human development such as reducing hunger, aiding in the development of children, improving nutritional status and promoting good health, and reducing gender and social inequities by encouraging families to send their children to school (DepEd Order No. 54, s. 2013.) They work on the premise that improving the health condition of children improves their learning capacity and eventually, their academic performance as well (Albert et al., 2015)

Precisely, the Philippine government in its battle cry to combat hunger and malnutrition has developed feeding programs to reduce hunger, to aid in the development of children, to improve nutritional status and to promote good health as well as to reduce inequities by encouraging families to send their children to school given the incentive of being provided school feeding.

One of the chief implementers of feeding programs in the country is the Department of Education (DepEd). Its school feeding programs have existed since 1997 (then called the Breakfast Feeding Program). While the current DepEd School-based Feeding Program (SBFP) is on dealing with eradicating undernutrition of malnutrition that is common among Filipino school-age children. The DepEd SBFP, lasting for 100 days to 120 days for beneficiary schools, aims to restore at least 70% of beneficiaries (from severely wasted) to normal nutritional status and to improve class attendance by 85-100%. The DepEd also works with LGUs, NGO's and partners in the private sector, for other feeding programs outside of the SBFP. Proceeds from the operation of school canteens are also allowed for school feeding (Tabunda et al., 2015).

Submitted program terminal reports of the SBFP revealed that parents as part of the SBFP core group lack the participation as part of the program implementers, leaving additional burden and workload to teachers who are also overburdened by so many paperworks and teaching loads. This report is being confirmed by the study of Tabunda et. al (2015) that there was lack of volunteer parents in preparation and serving of food. Similarly, the study of Rivera (2017) also recommended to encourage the linkages with parent, local government units and other stakeholders.

The study of Reyes (2016) also recommended to make the parent greater number of involvement for ease of implementation of the feeding program. They have also noted that the budget for the program was insufficient and should be augmented. Most of the parent participants in this study recommended to extend the implementation of the SBFP because 120 feeding days seemed not effective in meeting the objectives of the program to rehabilitate the nutritional status of the feeding beneficiaries.

As shown in the result of the Impact Evaluation Study of DepEd's School Based Program, the stated goal of SBFP in SY 2013-2014 is to attain at least 75% of the beneficiaries to normal by the end of the feeding program but figured out that there was only 62% attainment and in this 62%, only 46% remain in normal nutritional status after 12 months. The study also noted that the attainment of nutritional goal depends not only on how well the SBFP was implemented and the circumstances and characteristics of the children's families and the children themselves.

Inasmuch as the SY: 2015-2016 SBFP is concerned it is worth noting that about 70% of the children verified to be wasted prior to the start of the feeding program attained normal nutritional status at the end of the feeding program but 10% of the children verified to have been normal prior to the feeding program had regressed to wasted or severely wasted by the end of the program. The study found indica-

tive result that while 60% of severely wasted beneficiaries attained normal nutritional status at the end of the program, only half or less than half of severely wasted beneficiaries remained normal a year or more after the feeding program. It is on his light, that the researcher wanted to do further investigation and later on design some alternative activities that will sustain the school based feeding program not only for 120 days but all throughout the school year.

Thus, this study determined the extent of compliance of school based feeding program in the Division of Northern Samar and designed complementary activities based on the findings of this study.

### **OBJECTIVES OF THE STUDY**

This study determined to find out the Implementation of School-based feeding program in the Division of Northern Samar. Specifically, this aimed to:

1. find out the profile of school-based feeding program implementers in terms of:
  - 1.1 feeding coordinator
    - 1.1.1 number of subjects taught
    - 1.1.2 number of years in the feeding program
    - 1.1.3 seminars attended related to feeding
  - 1.2 school head
    - 1.2.1 position/designation
    - 1.2.2 number of teachers
    - 1.2.3 educational attainment
    - 1.2.4 seminars attended related to feeding
  - 1.3 parent volunteers
    - 1.3.1 educational attainment
    - 1.3.2 occupation
    - 1.3.3 number of children beneficiaries on feeding program
    - 1.3.4 family income
2. determine the extent of compliance in the implementation of school based feeding program in terms of:
  - 2.1 budget allocation
  - 2.2 eligible activities
  - 2.3 complementary activities
  - 2.4 observance of 20-day cycle menu
3. identify the problems encountered in implementing the school-based feeding program
4. find out the work performance of program implementers and

### **REVIEW OF RELATED LITERATURE**

The Philippine government in its effort to achieve the Millennium Development Goals and reduce hunger, implemented the Food for Education Program (FFE) it was handed over to the Department of Education as the partner institution of implementing the feeding program in the country. DepEd first launched the Feeding Program in 1997 to address short-term hunger among public school children. Through the years, the program underwent changes in target beneficiaries, coverage, delivery mode and focus.

According to Maslow's theory of needs, there are certain minimum requirements that are essential for human needs to facilitate standards of living. These are known as psychological needs and they include food shelter and health. He further says that, a human being goes through a hierarchy needs starting with physical needs for example food to match higher needs like emotions. For a child to achieve this, caregivers like parents and teachers should ensure that they provide nutritious food to the children in order to have a healthy growth. Safety and security needs are referred to as freedom from fear and anxiety and

also protection from harm. (Maslow: 1943)

School-Based Feeding Programs have tremendous potentials to contribute and creating healthy school environments and improving education outcomes. Making healthy school environments requires a holistic approach that should combine various interventions to ensure that children are fit for school (Magno, 2017). Improving nutrition and health can lead to better performance, fewer repeated grades, and reduced drop-out rate. School-based feeding program addresses some of the nutrition and health problems of school-age children. If properly designed and effectively implemented, it can help increase the attention and concentration of pupils in the learning process. It can even motivate parents to enroll their children in school and encourage them to attend class regularly, therefore reducing absenteeism and increasing the duration of schooling. Through the intervention of the School Feeding Program, the quest for quality education will be realized if it will be implemented properly with utmost monitoring, coordination and supervision. (Casañas, 2017). The World Food Program School Feeding Policy stated that school feeding programs help reduce vulnerability to hunger and protect and promote livelihoods by investing in human capital through better health, nutrition and education. By doing so, school feeding can bridge emergency and recovery measures with medium-and-long-term developments in the efficient and effective manner. School feeding leads outcomes that are mutually reinforcing, helping to lift households out of poverty. School feeding facilitates education particularly for girls, leads to improved food security health and nutrition, which eventually contribute to ending hunger (World Food Program School Feeding Policy, 2009). School Feeding Programs (SFPs) are considered to be a sound investment in education. There is evidence that SFPs increase school enrollment enrolment and educational achievement particularly if supported by complementary actions such as deworming and micronutrient fortification or supplementation. (D.O No. 39 s. 2017). However, the study of Dei (2014) suggested that although the program has the potential to improve nutrition and health enrolment, attendance and cognitive development, there are still some challenges and areas that need to be addressed and improved. These challenges arise as a result of lack of effective monitoring and evaluation, geographical location of the school and other implementation flaws. The study of Dheressa (2011) also negated the above mentioned findings that school feeding programs have significant positive effect on school enrollment, class attendance and school dropout rate. In her study she investigated if school feeding program has significant positive impact on school enrollment, class attendance and student dropout patterns among primary school in Ethiopia. The study found no significant impact of school feeding program in any of the three school indicators—enrollment, attendance and dropout. Instead the result revealed that the 3 major factors affecting school enrollment are demand for child labor, cost of schooling, availability of school, teaching quality and school infrastructure, distance to school, the availability of food incentives and safety concerns.

On the other hand, the study of Rivera (2017) revealed that the school-based feeding program as to its coverage was outstanding while the duration and resources were very satisfactory and the financial allocation and facilities were adequate. Complementary activities were highly implemented and the strategies used by feeding program implementers were generally very satisfactory. Aguilar (2017) evaluated the implementation of the School-Based Feeding Program (SBFP) in 14 public elementary schools in the municipality of Silang for the school year 2014-2015. Findings of the study showed that inputs used in the program according to the documents gathered and to the perception of respondents both corresponded to a well adequate level. The implementation of the SBFP activities was categorized as well as implemented.

## **METHODOLOGY**

The study was conducted in the public elementary school in the Division of Northern Samar, it involved the cooperation of 26 feeding coordinators, 26 school heads, 52 parent volunteers, 24 from program monitoring and evaluation team and 152 pupil-beneficiaries which was chosen using simple random sampling and used the mixed method research design employing the Input-Process-Output that evaluated the different program components. Data were collected through two sets of survey questionnaires, the instrument is the product of modified integration of operational guidelines of the implementation of

school-based feeding program, which is subdivided into six parts. A group interview was also conducted with pupil beneficiaries. Data were analyzed and interpreted using descriptive statistics such as frequency counts, percentages and mean as well as thematic analysis respectively.

## FINDINGS

**Table 1.1 Profile of Feeding Coordinators**

Number of Subjects Taught	Frequency	Percentage
1-2	3	11.54
3-4	4	15.38
5-6	6	23.08
7-8	13	50
No. of Years as FC	Frequency	Percentage
0-1	21	80.77
2-4	4	15.38
8-9	1	3.84
Seminars	Frequency	Percentage
SBFP Orientation/Seminar	7	26.92
SBFP Seminar Regional Level	2	7.6
SBFP Seminar District Level	1	3.84
<b>Total</b>	<b>10</b>	<b>38.46</b>

Table 1.1 presents the profile of feeding program coordinators. As shown in the data, half of them taught 7-8 subjects (13 or 50%) while very few handled 1-2 subjects (3 or 11.54%).

As to the number of years as feeding coordinator, most of them assumed their duties for less than a year (21 or 80.77%) while only one teacher has been performing the duties for more than eight (8) years (1 or 3.84%). As to seminars attended, seven (7) out of 26 or 26.92% attended the school-based feeding program orientation/seminar conducted by the division office, while two (2) or 7.6% attended the Regional seminar on the implementation of school-based feeding program

**Table 1.2 Profile of School Heads**

Position	Frequency	Percentage	Educational Attainment	Frequency	Percentage
Principal IV	1	3.85	Doctoral Degree	1	3.85
Principal III	1	3.85	Doctoral Units	1	3.85
Principal II	1	3.85	Masters Degree	21	80.77
Principal I	5	19.23	Masters Unit	2	7.69
Head Teacher III	4	15.38	Baccalaureate	1	3.85
Head Teacher II	4	15.38	<b>Total</b>	<b>26</b>	<b>100</b>
Head Teacher I	3	11.54	Seminars Attended Related to Feeding	Frequency	Percentage
Teacher-In-Charge	7	26.92	SBFP Orientation/ Seminar	5	19.23
<b>Total</b>	<b>26</b>	<b>100</b>	(Re		
Number of Teachers	Frequency	Percentage	<b>Total</b>	<b>5</b>	<b>19.23</b>
40 & Above	1	3.85			
20-39	2	7.69			
20-29	2	7.69			
10-19	6	23.08			
9 & below	15	57.69			
<b>Total</b>	<b>26</b>	<b>100</b>			

Shown in table 1.2 is the profile of the school heads. Seven (7) or 26.92% were Teacher-In-charge and five (5) were Principal I. The rest are head teachers II, and III where there are four (4) or 15.38% each.

As regards the number of teachers supervised by the school head 15 or 57.69% supervised at least nine (9) teachers, followed by six (6) or 23.08% supervising 10-19 teachers and more than 40 were the lowest number of teachers supervised and managed. This suggests that a majority of the school heads can give more focus on the supervision and efficient implementation of the feeding program because they have lesser number of teachers under their supervision.

As to educational attainment of the school heads, a majority of them or 80.77 finished their master’s degree and only one (1) of them or 3.85% was doctorate degree holder.

On the seminars attended related to feeding, health and nutrition only five (5) out of 26 school heads or 19.23% attended the school-based feeding program orientation.

**Table 1.3 Profile of Parent Volunteers**

<b>Educational Attainment</b>	<b>Frequency</b>	<b>Percentage</b>
College Graduate	4	8.88
High School Graduate	9	20
High School Level	15	33.33
Elementary Graduate	7	15.55
Elementary Level	10	22.22
<b>Total</b>	<b>45</b>	<b>100</b>
<b>Occupation</b>	<b>Frequency</b>	<b>Percentage</b>
Teacher	2	4.44
Housewife	29	64.44
Saleslady	3	6.66
Helper	1	2.22
Day Care Worker	1	2.22
BNS	1	2.22
Janitor	7	15.55
Farmer	1	2.22
<b>Total</b>	<b>45</b>	<b>100</b>
<b>Number of Children beneficiaries on FP</b>	<b>Frequency</b>	<b>Percentage</b>
4	1	2.22
3	2	6.66
2	23	51.11
1	19	42.22
<b>Total</b>	<b>45</b>	<b>100</b>
<b>Family Income</b>	<b>Frequency</b>	<b>Percentage</b>
12,301-15,000	1	2.22
9,601-12,300	3	6.67
6,901-9,600	5	11.11
4,201-6,900	7	15.56
1,500 4,200	29	64.44
<b>Total</b>	<b>45</b>	<b>100</b>

Table 1.3 presents the profile of the parent volunteers. As shown in the table, a majority of the parent volunteers (15 or 33.33%) were high school graduates, and only four (4) or 8.88% were college graduate. This means that parents can understand how to prepare cheap yet nutritious food at home so that malnutrition could be avoided.

On the occupation a majority of the respondents or (77.77%) were housewives and one (1) or 2.22% percent each as helper, day care worker, BNS, janitor and farmer. This means that parents could do their task as feeding program volunteers because they do not have regular work to attend to. However, the

study of Adarayan-Morallos (2018) reported that parents' participation in feeding programs is only 54.17% of the feeding days because when planting and harvest season arrive, parents can no longer do their cooking task in school; because they choose to go to farm to earn a living. However, the study of Sanya (2014) found out that parents were willing to participate in the program despite economic hardship. In like manner, the study of Chaula (2015) recommended that Regional Administration and Local Government should encourage stakeholders and parents to support school feeding programs. That is why the study of Ramadhani (2014) has encouraged parents to build the culture of contributing for the proper implementation of the program, likewise Belinda (2015) also suggested that parents should be involved in the feeding program to avoid any failure in its implementation.

As to the number of child beneficiaries on feeding programs, a majority or 51.11% had two (2) children beneficiary followed by 1 child beneficiary or 42.22%.

As regards to the family income, majority of the parent volunteers have an income below 2,500 pesos and one or 2.22% has an income ranging from 15,000-17,500 pesos. This means that parents of the beneficiaries are economically incapable of providing the basic necessities which may impede the children to eat the right kind of food and get proper nourishment. Again, this affirms the study of Morallos (2018) that greater number of parents were self-employed and earned below the minimum income of 5,000 pesos which she implied that they were economically handicapped to afford basic necessities for their children. Reaffirming this was the study of Dheressa (2014) that household education level nor household income have significant effect on nutritional and economic values of school feeding program.

**Table 2. Extent of Compliance of Different Program Components**

<b>Sub-Indicators</b>	<b>Mean</b>	<b>Interpretation</b>
<b>Budget Allocation</b>	<b>4.50</b>	<b>Very Much Complied</b>
A.Nutritional Assessment of Beneficiaries	4.66	Very Much Complied
B.Creation of SBFP Core Group	4.51	Very Much Complied
C.Orientation of Program Implementers	4.35	Very Much Complied
D.Commodities	4.07	Much Complied
E.Procurement and Delivery	3.90	Much Complied
F.a.Food Preparation and Production	4.04	Much Complied
F.b.Serving of Food	3.90	Much Complied
F.c.Food Safety Practices	4.17	Much Complied
F.d.Feeding Facilities	4.16	Much Complied
<b>Grand Mean</b>	<b>4.22</b>	<b>Very Much Complied</b>
<b>Complementary Activities</b>		
a.Deworming	4.43	Much Implemented
b.Good Grooming and Hygiene	4.51	Much Implemented
c.Integration of Health Care Promotion and Wash in Schools Policy	4.25	Much Implemented
d.Gulayan sa Paaralan	3.30	Implemented
e.Waste Segregation and Composting	4.09	More Implemented
<b>Grand Mean</b>	<b>4.08</b>	<b>More Implemented</b>
<b>20-Day Cycle Menu</b>	<b>3.96</b>	<b>Much Complied</b>
<b>Grand Mean</b>	<b>4.08</b>	<b>Much Complied</b>

Table 2 presents the extent of compliance of the different program components. Generally extend of compliance got a mean of 4.08 or more implemented this goes to show that the program implementers adhered to the different program components as stated in the SBFP guidelines. As regards to budget allocation got a mean of 4.50 or very much complied. On the nutritional assessment of beneficiaries it got a mean of 4.66 or very much complied, creation of SBFP core group got a rating of 4.51 or very much complied, 4.35 or very much complied on orientation of program implementers, commodities was rated 4.07 or much complied, food preparation and production 4.04 or much complied, serving of food got a mean of 3.90 or much complied, food safety practices got 4.17 or much complied and feeding facilities got a rating of 4,16 or much complied.

On the extent of compliance to complementary activities it was generally rated more implemented with a mean of 4.08 as evaluated by the three sets of respondents. Good grooming and hygiene got a mean of 4.51 and gulayan sa paaralan got the lowest mean of 3.30 or more implemented, this goes to show that there is a need to strengthen the Gulayan sa Paaralan implementation for availability of vegetables in the school garden which can be used in the feeding program. Concerning the 20-day cycle menu, it had a mean of 3.96 which can be inferred that there is a need to improve the compliance.

**Table 3. Problems Encountered by the Feeding Program Implementers**

	Average Rank			Total	Rank
	FC	SH	PV		
A.Management Problems (There are times that food to be bought for the menu is not available)	21	17	14	52	1
B.Feeding Coordinators Problems (Additional workload for feeding coordinators)	19	16	13	48	1
C.Monitoring and Evaluation Problem (Inability to effectively monitor the food preparation to ascertain the quality of food and the feeding environment)	5	4	6	15	1

Table 3 presents the problems encountered by the program implementers during the conduct of the program. Results revealed that on the management problem the item “there are times that food to be bought for the menu is not available ranked as number 1, as a result they substitute the menu intended for the day because of the unavailability of food items to be bought in the market. This suggest that there is a need to strengthen the implementation of Gulayan sa Paaralan Program and encourage the community people to plant more fruits, vegetables and other farm products to supplement food and sustain the feeding program. Consequently, according to Jackson (2012), locally grown foods would not only provided food for schools but would also have an economic impact for the village as well. On the other hand, the problems of the feeding coordinators mainly concerned on item 8 which ranked 1, “additional workload for feeding coordinator”. Other problems that surfaced were the additional workload for feeding coordinators and teachers found it hard to do multi-tasking job because they had classes to handle. This finding denotes that the feeding coordinators were not only burdened with tons of paperwork related to the liquidation reports but they were also engaged in kitchen-works when parents fail to assume their duties. Similarly, the same problems were found out in the study conducted by Morillos (2018) which teachers claimed that they have to shoulder the responsibilities in lieu of parents due to the latter’s absence because of family and economic reasons. Along this Reyes (2016) recommended that the parents should make greater number of involvement in the program to ease the implementation.

On the part of monitoring and evaluation team problem emerged on the inability to effectively monitor the food preparation to ascertain the quality of food and lack of effective monitoring and evaluation. This result affirmed the study of Dei (2014) that problems arise as a result of lack of monitoring and evaluation. This was also supported by the findings of the study of Taylor and Ogbogu (2016) that heavy workload for teachers and lack of effective monitoring and evaluation were the major problems encountered during the school-based feeding program implementation.

On the other hand, the three least prevalent problems were, “food is prepared outside the school premises,” “quantity of food served is small,” and “food is brought home by the pupil recipient.”

**Table 4. Work Performance**

Sub-Indicator	Mean	Interpretation
a.Food Production Process	4.5	Outstanding
b.Food Safety	4.12	Very Satisfactory
c.Cleanliness and Condition	4.05	Very Satisfactory
d.Service	4.07	Very Satisfactory
e.School Head’s Program Leadership	3.64	Very Satisfactory
f.Participation of Parents and Feeding Coordinators	3.74	Very Satisfactory

g. Program Reporting	3.77	Very Satisfactory
h. Financial Accountability	3.41	Very Satisfactory
<b>Grand Mean</b>	<b>3.96</b>	<b>Very Satisfactory</b>

Table 4 presents the findings of the work performance of feeding program implementers as assessed by the program monitoring and evaluation team. Overall, they have rated the program implementers as very satisfactory (M=3.96) which means that they have performed their assigned task and responsibilities as members of SBFP core group. These findings affirm the study of Rivera (2016) that program implementers were (M=4.26) very satisfactory due to patiently implementing the SBFP. Accordingly, administrators were responsible for the preparation of foods and in charge during the feeding proper. Similar result was also revealed by Aguilar (2017) that SBFP activities were well implemented and the achievement outputs in the program imply an evaluation of very well attained. Dapulag (2018) has also found out that implementation of the school-based feeding program was very satisfactory, in which she indicated that the school feeding program was well managed and fully implemented in adherence to policy and guidelines during the entire duration of the program. However, the study of Ruiz and Guiking (2013) that the implementation of School Health and Nutrition Program to include school-based feeding program in public elementary schools in the Philippines has not been achieved to the highest level.

Given the mean of 3.96 or “very satisfactory”, this finding may entail to strengthen the participation of parent-volunteers as stated in DepEd Order No. 37, s. 2014 that food preparation may be handled by the homeroom PTA on rotation basis.

Specifically, the work performance of the feeding program implementers on food production process the monitoring and evaluating team rated as outstanding. Specifically, item 6 (M = 4.83), “appropriate standing time of food is followed,” and item 8 (M = 4.25), “food served is balance; with rice and viand,” was appraised as “outstanding.”

## CONCLUSION

Based from the findings of the study the following conclusions were drawn:

- Teaching loads of feeding coordinators were overburdened by the task because they have full teaching loads and lacks proper training in the implementation of the program.
- The task of managing and implementing the program is designated to new teachers since most of them assumed duty as feeding coordinator in less than a year.
- Majority of the school heads can give more focus on the supervision and efficient implementation of the feeding program because they have lesser number of teachers under their charge.
- Parents can prepare healthy and nutritious food at home, however they are financially incapacitated to provide their children sufficient and nutritious food at home
- Budget allocation for the school-based feeding program were highly utilized for the purpose of the program.
- Some areas in eligible activities needs to be improved to maximize the attainment of program’s goal
- Complementary activities was regularly conducted however, gulayan sa paaralan cannot augment the inadequacy of daily feeding ingredients, so there is a need to strengthen the implementation of this program
- Program implementers failed to prepare separate menu for severely waste and wasted beneficiaries
- Most of the food served were composed chiefly of vegetables and carbohydrates-rich foods
- 20-day cycle menu is not strictly followed due to unavailability of food to be bought in the market
- Parents are not always available to help in the preparation of food and other kitchen-related task, because at times they are working in the farm to earn a living
- Program implementers performed their work assignments in the feeding program however, most schools fail to identify corrective measures, solicit and raise funds for cash and in-kind donations



## RECOMMENDATIONS

Based from the findings that were revealed from this study it is the fervent hope of the researcher that the following recommendations will be address by the proper authorities.

- The Division Office must create a committee that will look into the criteria and qualification requirements to ensure proper selection of school beneficiaries.
- Since there are severely wasted and wasted beneficiaries a separate menu must be provided by a nutritionist or anyone who has the knowledge in the proper preparation of menu for severely wasted and wasted children so that nutritional deficiencies will be addressed and menu will be properly prepared.
- Parents and other family members should be encouraged to prepare and cook similar recipe prepared during the school-based feeding program so that their children will imbibe the value of eating healthy food and be taught of appreciating eating cheap yet nutritious food. Also, they should put into their routinary activities the observance and practice of proper hygiene taught by the teachers.
- Teachers should keep in mind that the ultimate target of the feeding program is towards better school performance of the pupils. Hence, they should continue to be resourceful when necessary food products are not available and there is low parent volunteers' turnout. It would be better if they show appreciation to these volunteers through various forms of recognition.
- Since majority of the feeding coordinators are new, school managers must see to it that these feeding coordinators be given due recognition by giving them incentives in a form of service credits, reduce teaching loads, and any forms of recognition and appreciation which may encourage them to stay in their post and remain dedicated in the designation/task assigned to them.
- The school heads should assume a co-captain role in implementing the program. They must adapt an active involvement in the feeding processes so as to inspire both the teachers and the parents to get active as well. They should also forge a stronger alliance with the Barangay Officials to assist them in encouraging the community people to produce more harvest in their crops and the market vendors to reserve food products that would be available to the feeding implementers.
- The parents should further heighten their engagement in the preparation and serving of food. In addition, those who are farmers by profession should assist the teachers and pupils in maintaining the production of vegetables from the schools' own garden. It is also proposed that they develop a more proactive behavior as far as hygiene and food choices of their children are concerned.
- The Schools Division Superintendent should ensure that the fund is downloaded in a timely manner so as to prevent lull in the implementation which disrupts the nutritional gains of the pupils. They also must lend a hand in convincing the community to pitch in food products.
- Another study should be conducted that includes other variables not covered in this study.

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# BEHAVIOR MANIFESTATIONS AND CONSTRAINTS IN THE USE OF THE MOTHER TONGUE AS MEDIUM OF INSTRUCTION

**Rubielyn L. Lagitnay**

Vista Hills Elementary School, Bayombong I District,  
DepEd Nueva Vizcaya

## ABSTRACT

*A lack of understanding of a language they are taught in means students are not gaining the knowledge they should. While efforts are made to improve students' abilities, these practices can lead to little or no learning, alienating experiences, high dropout rates, and repeat failure. For a child to reach his or her full potential, he or she must learn to speak in the mother tongue. The benefits of speaking the mother tongue, or native language, are numerous for the child. The researchers conducted their study in Cabarrogus District since it has the most native languages, and they found the use of the mother tongue to be effective on all levels, including cognitive, affective, and psychomotor. An input-process-output model was developed to illustrate the relationships between factors of pupil and teacher characteristics, and the indicators of pupil and teacher behavior in the study. Participants completed a structured questionnaire, which measured pupils' behavior in cognitive, affective, and psychomotor domains, as well as teacher concerns about using mother tongue in classrooms. Among teachers' observations, "often" the pupils displayed cognitive behaviors, but "always" the pupils displayed affective and psychomotor behaviors. Teachers' greatest concern regarding the teacher factor was having to deal with national tests, since these were given in English and Filipino, while they were using their mother tongue in the classroom.*

**Keywords:** *mother-tongue, behavior, constrains in teaching, input-process-output model*

## INTRODUCTION

“If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language that goes to his heart” -Nelson Mandela.

Based on Vygotski's model of understanding teaching, learning, and development, the social and cultural context plays a considerable role in influencing and shaping these experiences.

In the Philippines, cultural and linguistic diversity pose complex challenges to language policy in education. Having more than 7000 islands and 181 languages distinct to the country (1), the Philippines is a challenging environment for implementing a language policy that can satisfy all its citizens. Accordingly, language policies for Philippine schools have been subject to great fluctuations over the past century, with a new policy for nearly every generation.

Mother Tongue Based- Multilingual Education (MTB-MLE) is the government's banner program for education as a salient part of the implementation of the K to 12 Basic Education Program. Its significance is underscored by the passing of Republic Act 10523, otherwise known as the “Enhanced Basic Education Act of 2013.” Formal or non-formal, MTBMLE consists of the use of the learner's native language along with additional languages. Learners learn in the language they understand best - their mother tongue - and build a solid foundation in their mother tongue before adding additional languages (DepEd Order No. 74, s-2009).

Studies have shown that children with solid foundation in the mother tongue have stronger literacy skills

in the school language. The knowledge and skills they acquire in school will transfer to lifelong learning. For cognitive development, school activities expose learners to a wide range of thinking skills in L1 that they can effectively transfer to the other languages, once they have mastered them sufficiently to be able to think and articulate their thoughts in Filipino or English (2).

With the goal of making Filipino children lifelong learners in their L1 (MT), L2 (Filipino, the national language), and L3 (English, the global language) the learners are more than prepared to develop the competencies in the different learning areas. It helps them gain entry into the mainstream educational system, and in the end, contribute productively to their communities and to the larger society as Multilingual, Multiliterate, and Multicultural Citizens of the country (3).

This change is part of a growing trend around the world to strongly encourage the use of the mother tongue during a child's early school years. Throughout Southeast Asia, this is evident in the increasingly prevalent use of mother tongue-based education programs (4).

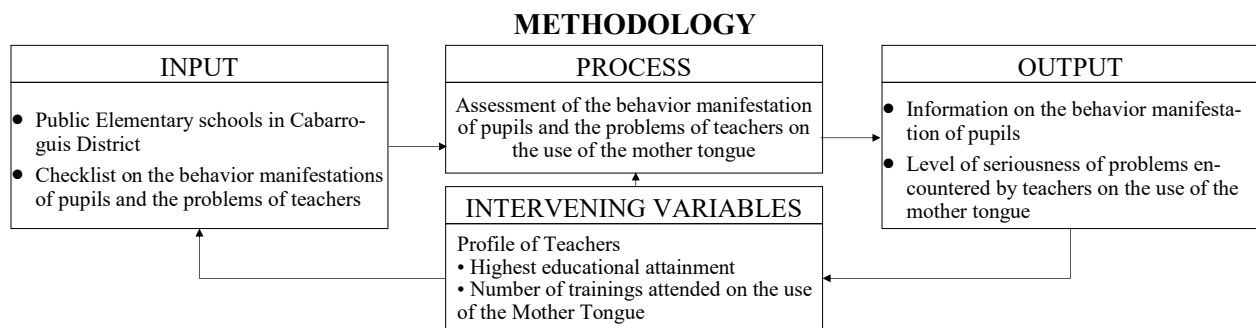
The UNESCO policy paper of 1953, on the importance of native and vernacular languages, recommends every child start formal education in his or her mother tongue. Psychologically and pedagogically (2), UNESCO clearly supports early reading, writing, and learning in the learner's native language. This position has since been strengthened by abundant researches that students learn to read and write most efficiently and effectively when instruction takes place through the medium of their mother tongue (5). Ample evidence indicates that students learn to read more quickly in their native tongue and also learn to read more easily in a foreign language than those who are first taught in a second language. As well, students who learn to read in their native tongue develop academic content and skills more quickly (6).

Teachers under the Department of Education are currently required to implement the MTB-MLE Program. Considering the discussed advantages, the research therefore conducted a study on pupil's behaviours in the classroom when the mother tongue is used. The study looked at how cognitive, affective, and psychomotor benefits are associated with the use of the mother tongue.

### STATEMENT OF THE PROBLEM

This study is primarily aimed at determining the teacher's perceptions on pupils behavior manifestations in cognitive, affective, and psychomotor domains on the implementation of the MTB-MLE program. Specifically, it aims to answer the following questions

1. What is the profile of the respondents in terms of highest educational attainment and number of trainings attended on the use of the Mother Tongue?
2. What are the behavioral manifestations of pupils using the mother tongue in the classroom?
3. What are the problems that affect the effective use of mother tongue in the classroom?
4. What is the relationship of the behavior manifestation of pupils using mother tongue in the classroom by profile and number of trainings?



**Figure 1. Conceptual Framework Showing THE RELATIONSHIPS OF**

The Input-Process-Output (IPO) was used in the study to show the relationships of the variables under study. The inputs in the study were the Grades 1 to 3 teachers from the 25 public elementary school of Cabarroguis District with the G-power as tool in determining the number of respondents.

This study used an adopted survey questionnaire from Sario M. et. al. (7) that asked teacher respondents to describe behavior manifestations by pupils in cognitive, affective, and psychomotor domains; as well as the checklist of problems concerning teacher, pupil, and teaching material factors. Another parameter described the problems encountered by the respondents on the use of the mother tongue as medium of instruction. The problems focused on the teacher factor, the pupil's factor and the teaching material factors. These inputs were used in assessing the behavior manifestations of pupils and in assessing the level of seriousness of the problems of teachers in using the mother tongue as medium of instruction.

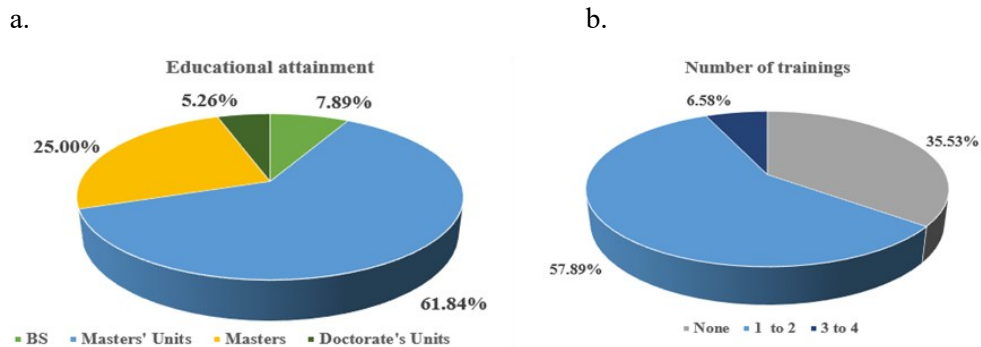
The expected output of this research was the baseline information on the behavior manifestations of pupils and the level of seriousness encountered by the teachers. The profile of the respondents was likewise described in this research. This include the number of years teaching; highest educational attainment; and the number of seminars and trainings on the use of the mother tongue as medium of instruction.

The data gathered in this study were statistically analyzed by means of frequency count, percentage, mean, t-test and ANOVA using the Statistical Package for Social Sciences (SPSS).

## FINDINGS

### Respondents Profile

The profile of the respondents is displayed in figure 2. Majority of these respondents were with master's units with 61.84 percent; 25.00 percent were master's graduates, 7.89 percent were BS degree holders, while 5.28 percent were with doctorate units. As to the number of trainings attended, 57.89 percent attended 1-2 trainings, 6.58 attended 3 to 4 trainings, while 35.53 have not attended any training at all.



**Figure 2. Percent distribution of respondents' profile.**

Respondents where group in terms of **a.** Educational attainment **b.** Number of trainings.

### Behavioral Manifestations of Pupils Using Mother Tongue in the Classroom

Using a rating scale, the respondents have rated thirty-two statements that describe cognitive, psychomotor, and affective behavioral manifestations.

A summary of the behavioral manifestations is shown in table 1.

**Table 1. Behavioral Manifestations of Pupils Using Mother Tongue in Each Domain**

Behavioral manifestation	Weighted Mean	Description	Indicator
Cognitive	3.15	Often	The respondents observe the pupils manifesting a certain behavior often times
Psychomotor	3.44	Always	The respondents observe the pupils manifesting a certain behavior all the time
Affective	3.34	Always	The respondents observe the pupils manifesting a certain behavior all the time
Legend: 3.26 – 4.00 2.51 – 3.25	Always (A) Often (O)	1.76 – 2.50 1.00 – 1.75	Rarely (R) Never (N)

In Table 1, the cognitive domain statements were perceived to be “often” manifested by the pupils. On the cognitive domain, children “often” demonstrate reasoning skills, and pupils all interact with the material, teacher and peers in meaningful ways in the classroom when using their mother tongue.

Students were perceived as feeling a sense of belongingness to the school on an affective level, as they have the freedom to express their ideas freely in class without feeling intimidated.

According to the manifestations of behavior on the psychomotor domain when mother tongue is used in the classroom, the children are “always” more communicative: they recite in chorus, share gossip, and tell stories. Clearly, pupils who use their mother tongue actively participate in class better.

There is still a long way to go for children to acquire the language requirements for speaking English in grade school (8). The mother tongue is a starting point for reading in the early grades. Studying the effects of lessons related to students’ own experiences, prior knowledge, and other backgrounds (9), there was a significant increase in participation. Since children learn best in their native language, the songs, poems, and rhymes they are taught in their mother tongue help them to read faster and more fluently. Furthermore, they had the ability to think and comprehend lessons well, as well as ask critical questions. The use of mother tongue is effective and useful for instruction in lower grades (10).

### Problems that Affect the Effective Use of Mother Tongue in the Classroom

Table 2 presents the problems that affect the effective use of mother tongue in the classroom. These factors are classified as teachers factors and pupil and teaching material factors.

The teacher factor problems that affect mother tongue effectiveness in the classroom revealed that the problem was “very serious” when it came to the need to cope with national tests given in English and Filipino. Following are the factors that respondents found were “serious” in affecting the use of the mother tongue among teachers. Among these were “lack of training workshops,” “limited teacher references,” “experiences difficulties in teaching strategies considering MTB-MLE,” and “lacks mother tongue vocabulary when translating highly technical terms especially in math and science. Inability to speak the dialect of their students was described as “less serious.” The grand mean was described as “serious

**Table 2. Problems that Affect the Effective Use of Mother Tongue in the Classroom**

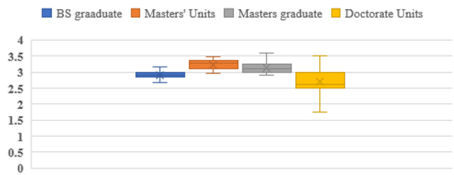
Factor	Mean	Description
<i>Teacher Factors</i>		
Lack of trainings and workshops	2.86	Serious
Scarcity of teachers’ references	3.07	Serious
Teachers do not know how to speak the dialect of their pupils	2.42	Less Serious
Experiences difficulties in teaching strategies considering the MTB-MLE	2.66	Serious



Lacks mother tongue vocabularies in translating highly technical terms especially in Math and science	3.04	Serious
Need to cope with national tests since these are given in English and Filipino (NAT, MTAP and the like)	3.32	Very Serious
<b>Overall Mean</b>	<b>2.89</b>	<b>Serious</b>
<b><i>Pupil and Teaching Materials Factors</i></b>		
The pupils have different dialects and/or languages	2.87	Serious
The pupils experience language interference when they learn second language. Example, they pronounce English terms as affected by their mother tongue pronunciation.	3.24	Serious
Lack of mother tongue vocabularies	3.00	Serious
No available IM's to be used by the teacher and pupils	2.88	Serious
Difficulties in preparing learning materials like big books, story books and the like	3.07	Serious
No dialect dictionary available	3.24	Serious
<b>Overall Mean</b>	<b>3.05</b>	<b>Serious</b>

Pupil and teaching materials factors that affect the effective use of the mother tongue showed that all of the problem statements were 'serious.' This implied that pupil problems and teaching materials affect the effective use of the mother tongue of pupils in the classroom.

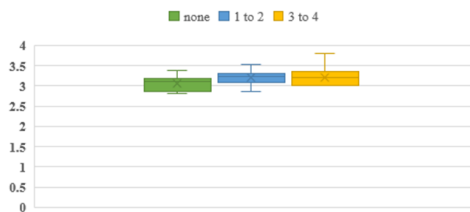
**Test of Significant Differences on the Behavior Manifestation of Pupils Using Mother Tongue in the Classroom by Profile Manifested Behavior on Cognitive Domain**



**Figure 3. Comparison of mean behavioral manifestations in cognitive domain when respondents are grouped by educational attainment**

When respondents were grouped based on highest educational attainment, Figure 3 illustrated how pupils consistently showed reasoning skills when using the mother tongue in the classroom, but this was more often the case for pupils as perceived by respondents with bachelor's degrees and doctorate degrees. Observations indicate that children can easily comprehend what they have heard or read "always" manifests by those with master's units, "often" manifests by those with BS and master's degrees, and "rarely" manifests as observed by those with doctorate units. The grand mean observations were all described as "often." This suggests that the highest educational attainment groupings did not induce variation in mean descriptions.

Based on the analysis of variance, it was determined that there were no significant differences in the observations of the respondents when they were grouped by educational level. In other words, the highest educational attainment indicated that the observed results of the respondents on the significant statements was influenced by their educational attainment, but not on the insignificant statements.

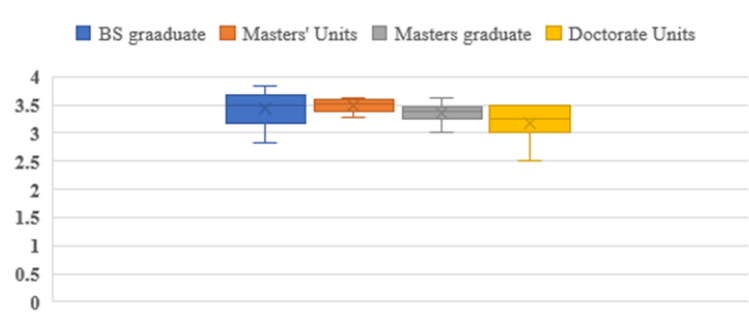


**Figure 4. Comparison of mean behavioral manifestations in cognitive domain when respondents are grouped by number of trainings**

The pupils were perceived by all groups as always interacting meaningfully with the material; both teacher and peers often met the other criteria according to respondents; across all groups. The grand means were all described as "often." This meant that the number of trainings attended did not affect grand mean descriptions.

The analysis of variance on the cognitive behavioral manifestations of pupils on the use of the mother tongue in the classroom, when respondents were grouped by the number of trainings, revealed a significant result for the statement that children are reflective. In view of the significant results, this means that the null hypothesis was rejected regarding the behavioral manifestations of pupils when they were grouped by the number of trainings they attended. Consequently, their training attendance influenced their observations on the statements with significant results, but not their observations on the statements with insignificant results.

**Manifested Behavior on Affective Domain**



**Figure 5. Comparison of mean behavioral manifestations in affective domain when respondents are grouped by educational attainment**

Based on the figure, the respondents with doctoral units observed the pupils to “often” show the following: “children express their ideas, opinions and feelings more freely,” “children understand more the feelings, needs and interest of their classmates,” “they find learning as informal, natural and interesting,” and “they feel that the school is just like an extension of their home. The grand mean of the respondents with doctoral units is described as “often” while “always” by the other groups.

According to the analysis of variance on the differences in perceptions of respondents on the behavioral manifestation along with the affective domain when grouped by highest educational attainment, "children express more enjoyment and appreciation for their folk literature in all the statements." This implies that respondents' highest educational attainment did not affect their perception of the statement.

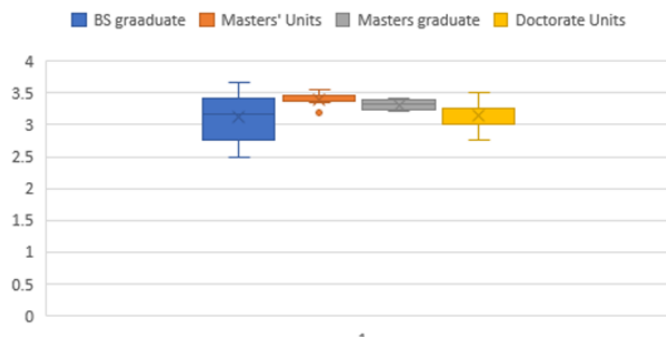


**Figure 6. Comparison of mean behavioral manifestations in affective domain when respondents are grouped by number of training**

In all groups, respondents "often" observe pupils showing longer spans of attention, while they "always" observe pupils displaying the rest of the statements. Grand mean descriptions were described as "always" in all the groups. This suggests that there was no variation in the grand mean descriptions due to groupings as to how many trainings had been attended.

As compared to the perceptions of the respondents on the behavioral manifestation along the affective domain when they were grouped by number of trainings attended, there were significant differences on the statement “children are highly motivated to attend school”. This implies that the number of trainings attended on the use of the mother tongue by the respondents affected their perception on the statement, but not on their perception of it.

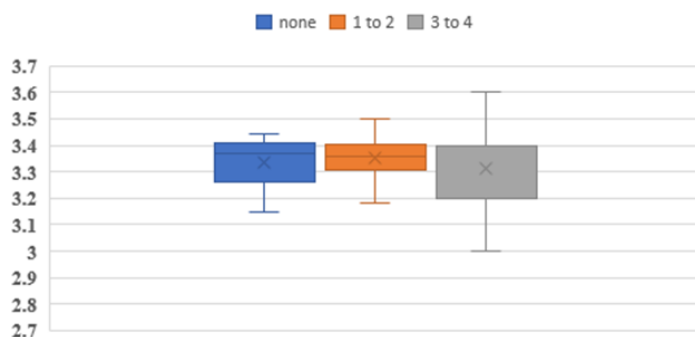
### Manifested Behavior on Psychomotor Domain



**Figure 7. Comparison of mean behavioral manifestations in psychomotor domain when respondents are grouped by educational attainment**

Responses from respondents with master's units and master's graduates were described as "always" whereas responses from other groups were described as "often". Consequently, the grand mean descriptions differed due to the highest educational attainment of respondents.

The analysis of variance for the perceptions of the respondents on psychological behavior when grouped by highest educational attainment revealed significant results on the statement that pupils spoke with fluency in their mother tongue. According to this result, the null hypothesis stating that there were no significant differences in perceptions among respondents based on highest educational attainment was rejected. It is clear from these that respondents' highest educational attainment influenced their perceptions of the statements with significant results, although it had no impact on their perceptions of the statements with insignificant results.



**Figure 8. Comparison of mean behavioral manifestations in psychomotor domain when respondents are grouped by number of training**

All the respondents "often" observed their students being creative in their classes. The grand means were all described as "always." This implies that the number of trainings attended did not cause the grand mean description of the respondents to differ.

When the respondents were grouped by the number of trainings they had attended, an analysis of variance showed no significant differences in their perception of psychological behavior. Accordingly, the number of trainings attended by respondents has no effect on their perceptions.

## CONCLUSIONS

In this study, teachers "often" observed pupils demonstrating behavior on cognitive domains; however, they "always" noticed pupils demonstrating behaviors on affective and psychomotor domains. Among the teachers' top concerns was the need to cope with national tests since they were given in English and Filipino while they were using the mother tongue in the classroom. In terms of the pupils and teaching materials, all the problem statements were "often" experienced by the teachers.

## RECOMMENDATIONS

Children should be encouraged to use their mother tongues because it will enhance learning and participation in class. The Department of Education should assign teachers who speak the language of the pupils. For a classroom with pupils speaking different dialects, team teaching was encouraged. Department of Education should strive to produce instruction materials in the mother tongue for use by pupils and teachers. Workshops should be organized for instructional materials production, and experts should be invited. Policy makers of DepEd should pay attention to the primary concern of teachers on how to deal with national tests since these are given in English while they use the mother tongue in the classroom.

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# UTILIZATION OF DIFFERENT LOCALLY ABUNDANT MATERIALS AS SUBSTRATES FOR OYSTER MUSHROOM (*Pleurotus ostreatus*) PRODUCTION UNDER CAPSU-TAPAZ CONDITIONS

**Mary Jane C. Floro**  
Professor VI

**Ma. Socorro Irmina F. Onapan**  
Professor V

**Merlito F. Flagne, Jr.**  
Instructor I

**Rocel Z. Delfin**  
Job Order Employee

Capiz State University, Tapaz Satellite College

## ABSTRACT

*These studies were conducted at the Tissue Culture Laboratory of Capiz State University, Tapaz Satellite College to determine the effects of using different locally abundant materials as substrates on the production of oyster mushrooms under CAPSU Tapaz conditions. The experimental design used in the study was Completely Randomized Design (CRD) with four treatments each replicated four times. In study 1, almost all the parameters for oyster mushrooms grown in different substrates did not significantly vary except for the number of fruit bodies. Oyster mushroom grew in sawdust, rice bran, sugar, and lime (SRSL) as substrates gave the most number of fruit bodies with a mean of 10.77. However, the highest ROI of 1.85 was obtained from mushrooms grown in corn cob, sawdust, rice bran, sugar, and lime (CSRSL). For Study 2, the number of fruit bodies, length of the stalk, the weight of fruit bodies, total yield of mushroom, time taken (in days) for harvest stage, and the interval between flushes of mushroom (days) differ with mushroom grown in rice straw as the main substrate. Mushroom has grown in a substrate with 50% rice straw and 50% sawdust produced the most number of fruit bodies (13.62), gave the longest stalk (6.62 cm), gave the heaviest fruit bodies (58.58g), and heaviest total yield (0.586kg). Similarly, this gave the longest time taken from opening (13.43days) to harvest stage and the longest interval between flushes of mushroom (14.50 days). The highest ROI of 6.80 was obtained from mushrooms grown in rice straw and sawdust (RS).*

**Keywords:** *oyster mushroom, substrates, rice straw*

## INTRODUCTION

Currently, the Philippine population had reached over 100 million. This is a big number that poses a challenge to our government and to every Filipino family alike. The big challenge lies in how to sustainably feed them with a nutritious and balanced diet. According to the report from the World Food Program (2019), the nutrition situation in the Philippines is alarming. Thirty-three percent of children under the age of 5 years (4 million children) are stunted and unlikely to reach their full mental and physical potential. Overweight and obesity rates of adults have nearly doubled over the last two decades (up to 31 percent) contributing significantly to public health problems.

Mushrooms with high nutritional value have been identified as an excellent food source to reduce nutrition deficiency (Eswaran and Ramabadrana, 2000). Mushrooms have the ability to convert cellulosic

plant waste materials into highly nutritious fruit bodies (Quimio, 1998). Oyster mushroom (*Pleurotus* spp.) is an edible mushroom having a cap, which resembles an oyster shell. Considered as a vegetable, mushrooms presently rank above all vegetables and legumes (except soybean) in protein content and have significant levels of B and C vitamins, minerals, and are low in fat (<https://www.agriculture.com.ph/2019>).

Mushroom production has long been an industry in the Philippines and abroad. This technology gained popularity among farmers and food enthusiasts due to its social, economic, and environmental impact (<https://www.agriculture.com.ph/2018>). According to Buckanan and Barnes (2003), the average estimated yield of mushrooms from one square meter area is about 20 – 35 kg after a cultivation period of 4 – 7 weeks. It is a low-calorie food and its nutritional value is 27 calories per 100 g of mushroom (USDA, 2010).

The growing of oyster mushrooms is quite interesting since they grow and fruit on a variety of agricultural wastes. The growers can have a choice of the type of substrate to be used and the ease of growing. According to Marimutu (1995), the cultivation of oyster mushrooms on different agro wastes like cotton stalks, waste paper, maize cobs, cotton waste, wheat, and paddy straw is utilized for achieving higher bio efficiency. Shahid et al. (2006) determined the suitability of sawdust for the maximum yield (646.9 g) and the number of primordia formations (2:1). Ngezimana et al. (2008), studied various crop residues which can be used in producing oyster mushrooms either as main substrates or in combinations with supplements.

The cultivation of oyster mushrooms is environment-friendly or the environment may be less harmed due to utilization and recycling of waste materials (Hayes, 1978). According to Naeem et al. (2014), the cultivation of mushrooms on lignocellulosic wastes represents one of the most economic organic recycling processes. In addition, Dundar et al. (2008) mentioned that mushroom production can generate and enhance employment opportunities tremendously and offers vast export opportunities. Hence, the utilization of different locally abundant materials as substrates for oyster mushroom production under CAPSU-Tapaz conditions was conducted.

## OBJECTIVES

This study generally aimed to determine the effects of using different locally abundant materials as substrates on the production of oyster mushrooms under CAPSU Tapaz conditions. Specifically, the studies aimed to attain the following objectives:

### **Study 1. Growth, Yield, and Economics of Production of Oyster Mushroom Using Different Substrates**

1. find out the growth of oyster mushrooms on different locally abundant substrates.
2. determine which of the substrates gave the best yield on the oyster mushroom.
3. evaluate the economics of production using different substrates in oyster mushroom production.

### **Study 2. Growth, Yield, and Economics of Production of Oyster Mushroom Using Rice Straw as Main Substrate**

1. determine the growth of oyster mushrooms using rice straw as the main substrate.
2. find out which substrate combinations gave the best yield on the oyster mushroom.
3. assess the economics of using rice straw as the main substrate in oyster mushroom production.

## MATERIALS AND METHODS

The materials and tools used in the studies were: locally abundant materials as substrates (rice straw, sawdust, rice hull, corn cob, rice bran) brown sugar, agricultural lime, water, pail/basin, 6"x12" polypropylene bags, metal drum/steamer, 5 cm in diameter PVC pipe, cotton/fiberfill, shelves, cloth, knife, bolo,

rubber band, grain spawn/inoculants, weighing scale, measuring device, record book, ballpen, labeling materials.

Study 1 and 2 were conducted using Completely Randomized Design with four treatments each replicated four times. Study 1 was composed of four treatments as follows: A – 50% sawdust + 25% rice hull + 23% rice bran + 1% sugar + 1% lime (control), B – 78% sawdust + 20% rice bran + 1% sugar + 1% lime, C – 50% corn cob + 30% sawdust + 18% rice bran + 1% sugar + 1% lime, D – 50% rice hull + 28% sawdust + 20% rice bran + 1% sugar + 1% lime. The treatments for Study 2 consisted as follows: A – 50 % rice straw + 50 % sawdust (control); B – 78% rice straw + 20% rice bran + 1% brown sugar + 1% lime; C – 50% rice straw + 29% sawdust + 20% rice bran + 1% lime; and D – 90% rice straw + 10% rice bran.

Collection of rice straw, sawdust, rice hull, corn cob, rice bran, and other materials was done at least two weeks before the conduct of the study. Rice straw was soaked in clean water inside the plastic drum overnight. It was taken out of the drum early in the morning and was drained for an hour to remove excess water. Rice straw and corn cob were shredded separately. Since sawdust and rice hull were fresh, these were decomposed first by thoroughly mixing about 1% of agricultural lime, a week before the conduct of the study. Substrates were packed in heat-resistant plastic bags or 6"x12" polypropylene bags. The PVC pipe (cut to about 2 cm thick) was inserted into the mouth of the plastic and was folded to provide an opening. Then, the openings were plugged with synthetic cotton. Fifteen bags were packed per treatment replicated four times with a total of 240 bags per study.

The fruiting bags were placed inside the metal drum and were sterilized for a period of 8 hours. Banana stems were cut and placed at the bottom and sides of the drum to prevent the contact of plastic bags with the metal drum during sterilization. The level of water at the bottom of the drum was about 20 cm. After sterilization, fruiting bags were allowed to cool. Inoculation or adding of grain spawn in each bag was done in a clean and sanitized room. A 10 % zonrox solution was sprinkled and was used in cleaning to disinfect the surrounding area. Washing of hands with clean water and finally with alcohol was done to prevent contamination during inoculation. The shelves for fruiting bags were placed in a cool, darkroom. Fruiting bags were arranged on the shelves according to treatments and replication. Incubation had lasted for 11/2 months or until the mycelium had fully penetrated the substrates. After 11/2 months of incubation, the cotton was plugged and the PVC pipe was removed. Then, the plastic bags were rolled down to the mouth of the bags. Fruiting bags were laid, and slits using a knife were made at the bottom portion of the bag to enhance more fruiting at a time.

The opened fruiting bags were placed in the growing area. The growing area was kept humid and cool by spraying with clean water (not directly on the opened portion of the bag) every day except during cool or rainy days. The mushrooms were harvested when it has fully opened, by handpicking. After picking from both sides of the bags, 2 slots on the sides of the bags were made to enhance mushroom growth. Finally, the bags were rolled over and maximum slits were made until the fruiting bags were fully exhausted. At about 50 days after opening. The fruiting bags were disposed of.

The data gathered from the studies were as follows: a number of fruit bodies, the diameter of the cap (cm), length of the stalk (cm), the weight of fruit bodies (g), the total yield of mushroom (kg), time taken (in days) for the emergence of primordia, time taken (in days) for harvest stage, the interval between flushes of mushroom (days), and the number of flushes.

### **Determination of the Economics of Production**

The economics of production was determined by dividing Mushroom Cost with Substrate Cost.

### **Statistical Tools and Analysis**

The data was analyzed using the Analysis of Variance and F-test for Completely Randomized Design

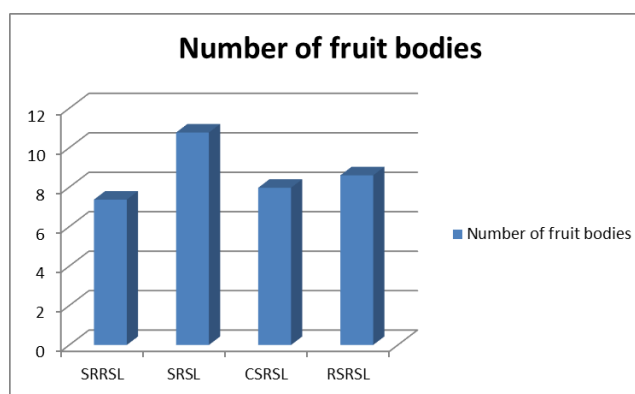
(CRD). Differences among treatment means were determined using the Least Significant Difference (LSD) test, interpreted at 5% and 1% levels of significance.

## RESULTS AND DISCUSSION

Table 1.0 presents the parameters of oyster mushrooms as influenced by different organic materials as substrates. Analysis of Variance reveals that the number of fruit bodies significantly differed with different materials used as substrates. This implies that oyster mushrooms are grown using different materials as substrates performed differently in terms of the number of fruit bodies. The Least Significant Difference (LSD) test further revealed that oyster mushrooms are grown in sawdust, rice bran, sugar, and lime or SRSL as substrates gave the most number of fruit bodies with a mean of 10.77. This was significantly higher than oyster mushroom grown in rice hull, sawdust, rice bran, sugar, and lime or RSRSL and corn cob, sawdust, rice bran, sugar, and lime or CSRSL as substrates with a mean of 8.60 and 7.97, respectively. However, oyster mushroom grown in corn cob, sawdust, rice bran, sugar, and lime (CSRSL) gave a statistically similar number of fruit bodies with mushroom grown in sawdust, rice hull, rice bran, sugar, and lime or SRRSL with a mean of 7.97 (Figure 1.0).

**Table 1.0. Parameters of oyster mushroom as influenced by different materials as substrates**

PARAMETER	STUDY 1	
	F-test	CV
1.0 Number of fruit bodies	**	5.99
2.0 Diameter of the cap	ns	14.17
3.0 Length of the stalk	ns	12.02
4.0 Weight of fruit bodies (g)	ns	14.67
5.0 Total yield of mushroom (kg)	ns	14.51
6.0 Time taken (in days) for the emergence of primordia	ns	5.06
7.0 Time taken (in days) for harvest stage	ns	3.9
8.0 Interval between flushes of mushroom	ns	5.16
9.0 Number of flushes	ns	17.1



**Legend:** SRRSL = sawdust, rice hull, rice bran, sugar, and lime (control); SRSL = sawdust, rice bran, sugar, and lime; CSRSL = corn cob sawdust, rice bran, sugar and lime; RSRSL = rice hull, sawdust, rice bran, sugar, and lime.

**Figure 1.0 A graph showing the mean number of fruit bodies produced by the oyster mushroom has grown using different organic materials as substrates.**

On the other hand, the diameter of the cap, length of the stalk, the weight of fruit bodies, total yield of mushroom, time taken (in days) for the emergence of primordia, time taken (in days) for harvest stage, the interval between flushes of mushroom and number of flushes were not significantly influenced by the different organic materials used as substrates. The diameter of the cap ranged from 8.18 to 9.65 centimeters, the length of the stalk ranged from 5.90 – 7.18 centimeters, the weight of fruiting bodies ranged



from 45.45 to 59.10 grams, the total yield of mushroom ranged from 0.454 to 0.591 kilograms, time taken from opening (in days) to the emergence of primordia ranged from 10.12 to 11.05 days, time taken from opening (in days) to harvest stage ranged from 13.22 to 14.00 days, the interval between flushes of mushroom ranged from 13.45 to 14.75 days, and a number of flushes ranged from 2.25 to 2.62.

Table 2.0 presents the parameters of oyster mushroom as influenced by rice straw as the main substrates. ANOVA results revealed that the number of fruit bodies, length of the stalk, the weight of fruit bodies, total yield of mushroom, time is taken (in days) for harvest stage, and the interval between flushes of mushroom was significantly influenced by rice straw as the main substrate in oyster mushroom production. This means that oyster mushrooms grown using rice straw as main substrates performed differently in terms of the number of fruit bodies, length of the stalk, the weight of fruit bodies, total yield of mushroom, time taken (in days) for harvest stage, and the interval between flushes of mushroom. LSD test results indicate that the most number of fruit bodies was obtained from mushrooms grown in rice straw and sawdust or RS with a mean of 13.62. This was significantly higher than mushroom grown in rice straw, sawdust, rice bran, and lime or RSRL and rice straw, rice bran, sugar, and lime or RRSL with a mean of 8.49 and 7.88, respectively. However, mushrooms grown in rice straw, rice bran, sugar, and lime (RRSL) gave a statistically similar number of fruit bodies with mushrooms grown in rice straw and rice bran or RR with a mean of 7.22 (Figure 2.0). The longest stalk was taken from mushroom grown in rice straw and sawdust (RS), rice straw, rice bran, sugar and lime (RRSL), and rice straw, sawdust, rice bran, and lime (RSRL) with a mean of 6.62, 6.48, and 5.72 centimeters, respectively. The shortest stalk was obtained from mushrooms grown in rice straw and rice bran (RR) with a mean of 5.32 centimeters (Figure 3.0). Mushrooms are grown in rice straw and sawdust (RS) produced the heaviest weight of fruit bodies with a mean of 58.58 grams. This was found similar with mushrooms grown from rice straw, sawdust, rice bran, and lime (RSRL) with a mean of 52.60 grams. Nevertheless, mushroom grown in rice straw, sawdust, rice bran, and lime (RSRL) was also found similar with mushroom grown in rice straw, rice bran, sugar, and lime (RRSL) with a mean of 48.35 grams. This was also found similar to mushrooms grown in rice straw and rice bran (RR) with a mean of 41.40 grams (Figure 4.0).

**Table 2.0 Parameters of oyster mushroom as influenced by rice straw as the main substrate**

Treatment	Number of fruit bodies	Diameter of the cap (cm)	Length of the stalk (cm)	Weight of fruit bodies (g)	total yield of mushroom (kg)	Time taken (in days) for the emergence of primordia	Time taken (in days) for harvest stage	Interval between flushes of mushroom	Number of flushes
A - RS	13.62a	7.92	6.62a	58.58a	0.586a	10.81	13.48a	14.50a	2.12
B - RRSL	7.88bc	7.80	6.48a	48.35bc	0.484b	9.82	12.58b	11.54b	2.15
C - RSRL	8.49 b	7.70	5.32b	52.60ab	0.526a	9.85	12.60b	12.55ab	2.00
D - RR	7.22c	8.20	5.72a	41.40c	0.414b	9.88	12.50b	11.81b	2.15
F-test (1%)	**	ns	**	**	**	ns	**	**	ns
CV	8.53%	5.94%	7.94%	8.66%	8.91%	5.69%	2.83%	8.47%	4.74%

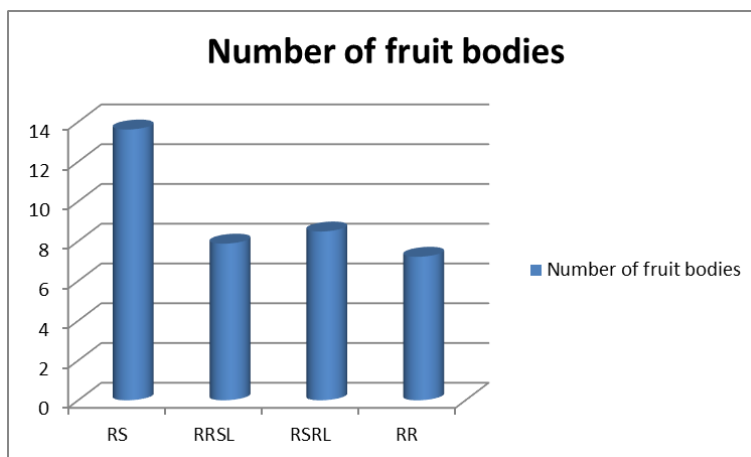
ns – not significant; \*\* - highly significant; Means having the same letter are not statistically significantly using Least Significant Difference test.

**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime; RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran

In terms of the total yield, mushroom grown in rice straw and sawdust (RS) and rice straw, sawdust, rice bran and lime (RSRL) gave the heaviest yield of 0.586 and 0.526 kilograms, respectively. These were significantly heavier than mushroom grown in rice straw, rice bran, sugar and lime (RRSL) with 0.484 and rice straw and rice bran (RR) with a mean of 0.414 kilograms (Figure 5.0). For the time taken from opening (in days) to harvest stage, the longest number of days was recorded from mushroom grown in rice straw and sawdust (RS) with a mean of 13.43. This was significantly longer than mushroom grown in rice straw, sawdust, rice bran and lime (RSRL), rice straw, rice bran, sugar and lime (RRSL), and rice straw and rice bran (RR) with a mean of 12.60, 12.58, and 12.50, respectively (Figure 6.0). In terms of

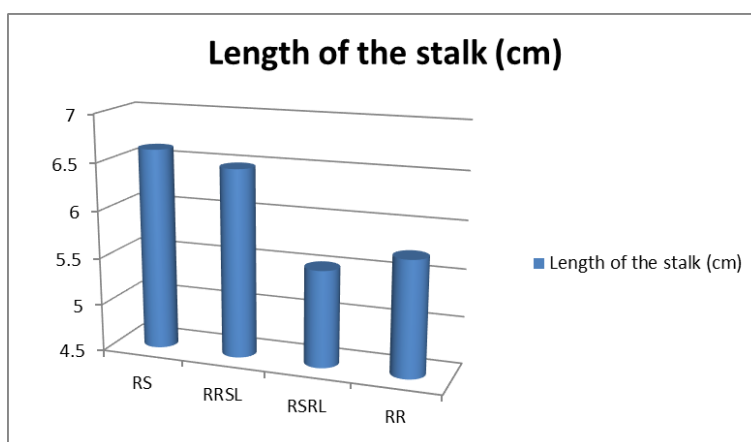
the interval between flushes of mushroom, the most number of days was obtained from mushroom grown in rice straw and sawdust or RS with a mean of 14.50. This was closely followed by mushroom grown in rice straw, sawdust, rice bran and lime or RSRL with a mean of 12.55 days. However, mushroom grown in rice straw, sawdust, rice bran and lime (RSRL) was also found statistically similar with mushroom grown in rice straw and rice bran (RR) and rice straw, rice bran, sugar and lime (RRSL) with a mean of 11.81 and 11.54, respectively (Figure 7.0).

On the other hand, diameter of the cap, time taken (in days) for the emergence of primordia, and number of flushes were not influenced by rice straw as main substrate in oyster mushroom production. The diameter of the cap ranged from 7.70 to 8.20 centimeters, time taken from opening (in days) to emergence of primordia ranged from 9.82 to 10.81 days, and the number of flushes ranged from 2.0 to 2.15.



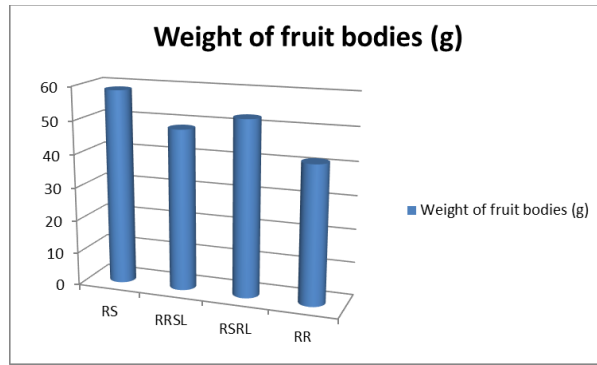
**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime; RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

**Figure 2.0** A graph showing the number of fruit bodies produced by oyster mushroom using rice straw as main substrate.



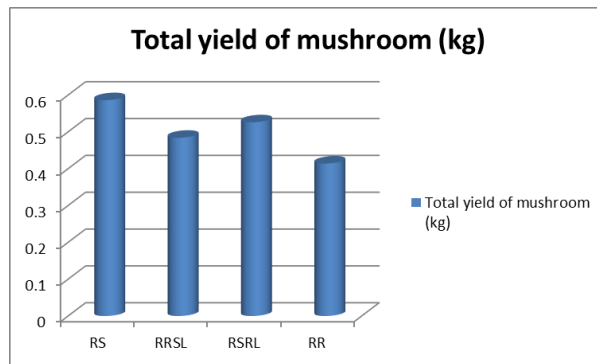
**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime; RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

**Figure 3.0** A graph showing the length of stalk of oyster mushroom grown in rice straw as main substrate.



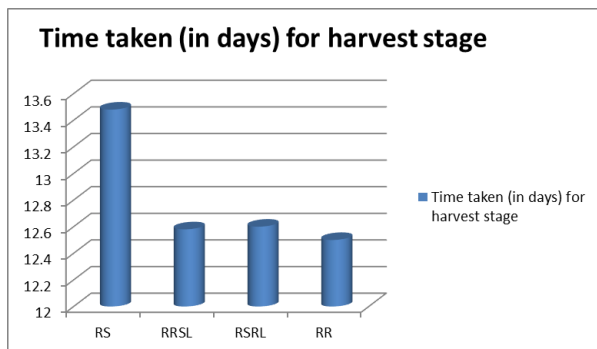
**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime;  
RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

**Figure 4.0** A graph showing the weight of fruit bodies produced by oyster mushroom grown in rice straw as main substrate.



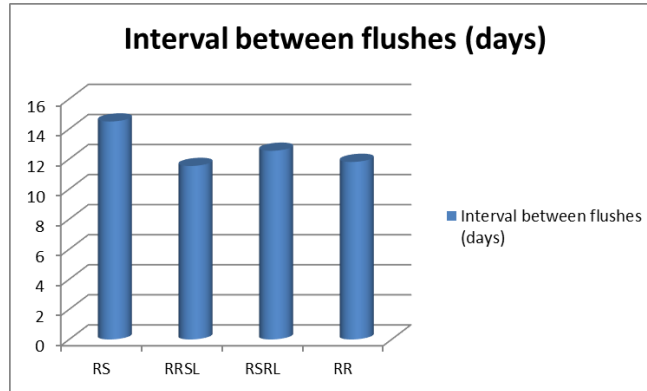
**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime;  
RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

**Figure 5.0** A graph showing the total yield of oyster mushroom grown in rice straw as main substrate.



**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime;  
RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw

**Figure 6.0** A graph showing the time taken from opening (in days) to harvest stage of oyster mushroom grown in rice straw as main substrate. and rice bran.



**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime; RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

**Figure 7.0** A graph showing the interval between flushes of oyster mushroom grown in rice straw as main substrate.

### ECONOMICS OF PRODUCTION

The economic analysis for Study 1 is shown in Table 3.0. The data shows that the highest ROI of 1.85 was observed in mushroom grown in corn cob, sawdust, rice bran, sugar and lime (CSRSL). This was followed by mushroom grown in sawdust, rice bran, sugar and lime (SRSL) which gave a value of 1.60. The lowest ROI of 1.30 was obtained from mushroom grown in sawdust, rice hull, rice bran, sugar and lime (SRRSL) and rice hull, sawdust, rice bran, sugar and lime (RSRSL).

**Table 3.0 Economic analysis for Study 1**

Treatments	Mushroom Cost	Substrate Cost	ROI
SRRSL	9.60	7.35	1.30
SRSL	11.20	6.80	1.60
CSRSL	11.80	6.35	1.85
RSRSL	9.00	6.80	1.30

**Legend:** SRRSL = sawdust, ricehull, rice bran, sugar and lime (control); SRSL = sawdust, rice bran, sugar and lime; CSRSL = corn cob sawdust, rice bran, sugar and lime; RSRSL = rice hull, sawdust, rice bran, sugar and lime.

Table 4.0 shows the economic analysis for Study 2. The data indicated that the highest ROI of 6.80 was obtained from mushroom grown in rice straw and sawdust (RS). On the other hand, mushrooms are grown in rice straw and rice bran (RR) gave an ROI of 1.95. This was closely followed by mushrooms grown in rice straw, sawdust, rice bran, and lime (RSRL) which gave an ROI of 1.55. The lowest was obtained from mushrooms grown in rice straw, rice bran, sugar, and lime (RRSL) which gave a value of 1.30.

**Table 4.0 Economic analysis for Study 2**

Treatments	Mushroom Cost	Substrate Cost	ROI
RS	11.60	1.70	6.80
RRSL	9.60	7.20	1.30
RSRL	10.40	6.70	1.55
RR	8.20	4.20	1.95

**Legend:** RS = rice straw and sawdust; RRSL= rice straw, rice bran, sugar and lime; RSRL = rice straw, sawdust, rice bran and lime; RR = rice straw and rice bran.

## CONCLUSIONS

With those relevant findings, the researchers were able to formulate the following conclusions:

1. In study 1, the number of fruit bodies significantly differed with different materials used as substrates.
2. Oyster mushroom grew in 78% sawdust, 20% rice bran, 1% sugar, and 1% lime or SRSL as substrates gave the most number of fruit bodies
3. Diameter of the cap, length of the stalk, the weight of fruit bodies, total yield of mushroom, time taken (in days) for the emergence of primordia, time taken (in days) for harvest stage, the interval between flushes of mushroom and number of flushes did not differ with different materials used as substrates.
4. In study 2, the number of fruit bodies, length of the stalk, weight of fruit bodies, the total yield of mushroom, time taken (in days) for harvest stage, and the interval between flushes of mushroom (days) differ with mushroom grown in rice straw as the main substrate.
5. Mushroom grown in the substrate with 50% rice straw and 50% sawdust produced the most number of fruit bodies, gave the longest stalk (cm), gave the heaviest fruit bodies (g), and heaviest total yield (kg). Similarly, this gave the longest time taken from opening (in days) to harvest stage and the longest interval between flushes of mushroom (days).
6. The diameter of the cap (cm), time taken from opening (in days) to emergence of primordia, and the number of flushes of mushrooms grown in rice straw as the main substrate did not vary.
7. For Study 1, the highest ROI of 1.85 was observed in mushrooms grown in corn cob, sawdust, rice bran, sugar and lime (CSRSL).
8. For Study 2, the highest ROI of 6.80 was obtained from mushroom grown in rice straw and sawdust (RS).

## RECOMMENDATIONS

The following recommendations will be advanced:

1. Oyster Mushroom Production will be grown using 78% sawdust, 20% rice bran, 1% sugar, and 1% lime for more number of fruit bodies.
2. Oyster Mushroom Production will be grown using any of the organic materials used in Study 1.
3. The combination of 50 % rice straw + 50 % sawdust will be used for more number of fruit bodies, longer stalk (cm), heaviest fruit bodies (g), and total yield (kg).
4. The combination of rice straw and sawdust as substrates will be used for oyster mushroom production to get maximum return on investment.
5. Future studies to be conducted will use other substrates or substrate combinations, in other locations and other times of the year to gather more comprehensive information.

## ACKNOWLEDGMENT

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# NOTES



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# NOTES





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