DEVELOPMENT AND EFFECTIVENESS OF GUIMARAS STATE COLLEGE (GSC) ELECTRONIC CLASS RECORD (E-CLASS RECORD)

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ABSTRACT This study aimed to design, develop and evaluate an Electronic Class Record (E-Class Record). Specifically, it seeks to attain the (1) design and develop the electronic class record following the prescribed grading system of Guimaras State College, (2) evaluate the GSC E-Class Record in terms of functionality, reliability, usability, efficiency, maintainability, and portability. The E-Class Record automatically computes the students' grades following the prescribed grading system of Guimaras State College. The input data were the semester of the academic year, course number, descriptive title, name of professor, course, year and section, adviser, credit units, student number, student name, long exams, quizzes, project/s, output/s, participation, attendance, and performance of the students. The developmental process and prototyping methods were utilized to design, develop, test, and evaluate the e-class record. The researchers conducted a survey, testing, and evaluation from the faculty members of GSC as end-users. Testing has been initiated and evaluated using the standard criteria of ISO IEC 25010:2015 to determine its acceptability. It was evaluated according to its effectiveness as to security, performance, efficiency, compatibility, reliability, maintainability, and portability. Results revealed that the developed E-class record was acceptable and evaluated as very effective for teacher's use.

Keywords: development, effectiveness, E-Class Record, Guimaras State College

INTRODUCTION

Teachers are preparing their stuff during the start of the semester, and one of these is the class record. The class record is a document that contains the record of the performance of the students, such as quizzes, projects, class participation, and major examinations (Prelim, Midterm, Prefinal, and Final). Some students need their grades for scholarships before the start of the semester in their respective benefactors. Tentative grades are given to meet the requirements. At present, GSC faculty are computing the grades manually that take weeks to pass the grading sheets to be signed by the department chair, dean, and then submitted to the registrar's office. There are penalties to faculty who didn't submit the grade sheets on time.

In several institutions, the class record is distributed. The teachers will use it by transferring the students' grades from a source in any form to the class record. Human error is always present in the computation of grades. The time it takes to transfer the record from the source to the template is also of great concern and time consuming (Dellosa, 2014). An electronic class record was designed and developed to help the teachers in their class records concerns. This study aimed to come up with a design of electronic class records that will be utilized by the instructors and professors of Guimaras State College on three campuses, namely Salvador, Mosqueda, and Baterna.

The study aimed to design and develop an Electronic Class Record for Guimaras State College. Specifically, it sought to attain the following: (1) design and develop the electronic class record following the prescribed grading system of Guimaras State College, and (2) evaluate the GSC EClass Record in terms of functionality, reliability, usability, efficiency, maintainability, and portability.

METHODOLOGY

The development evaluation of descriptive research was used for Gsu E-Class Record evaluation by the end-users using the ISO IEC 25010:2015 Evaluation Criteria. The researchers conducted a focus group discussion to determine the requirements and prescribed grading system of the college. Evaluation from the end-user of Guimaras State Collage was conducted to determine the functionality, reliability, usability, efficiency, maintainability, and portability of the system. The respondents of the study were the instructors professors in three campuses namely Salvador, Mosqueda, and Baterna. The evaluation was conducted employing a survey wherein the evaluators or respondents rated the developed system using a researcher-modified questionnaier based on ISO/IEC 25010:2015 which composed of two (2) parts to determine the effectiveness of the proposed system. Part I of the research instrument includes the Profile of the Evaluators in terms of age, sex, marital status, educational attainment, and area of assignment. Part II of the research instrument includes the effectiveness of the proposed system based on a standardized questionnaire for evaluating developed systems as prescribed by ISO IEC 25010:2015. The questionnaire composed of eight (8) characteristics and 31 sub-charateristics are

functionality suitainability; performance efficiency, compatibilty, usability, reliability, security, maintainability, and portability were used as the basis in determining the effectiveness of the proposed GSC E-Class Record. The conduct of this developmental evaluation research methods wherein after the concepts were implemented by means of the interactive system of the E-Class Record. There was a consultation classified as planning stage in determining the different components in grade computation used. To manage this level of complexity, SDLC or System Development Life Cycle model was used. Likewise, an Iterative system development model was used to design and develop the GSC E-Class Record.

The Proposed GSC E-Class Record was tested and evaluation by the end-users of Guimaras State College. Areas or features of the developed system that falls below the compliance mean or rate was improved to comply with the standards set. A developed GCS E-Class Record that had complied with the ISO IEC 25010:2015 Evaluation Criteria minimum set standards further undergo evaluation by respondents of this study. A five-point scale with 5 as the highest and 1 as the lowest was used in rating the effectiveness of the GSC E-Class Record in terms of fucntional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability.

To determine the result of the evaluation of the software, evaluation ratings were encoded using a Spreadsheet program. Mean was used in computing and measuring the acceptablity of the software. System Development Life Cycle model was used in developing the electronic class record. The following are the research process of the research.

Requirements and Analysis. In this phase, information were gathered to be able to determine the need of the study. This also guides the researchers on what procedures and actions to be used in the study. The type of the users, capability of the output, implementers and the environment where output used must be obtained during this phase. It also determined the currently used system by the used and introduce new idea on how to apply the output of the study that has advantages over the existing system. Functionality of the system was also defined in this stage.

Design. In this phase the system and software design is prepared from the requirement specifications which were studied in the first phase. Microsoft Excel was used in creating the class record. The system design specifications served as input for the next phase of the model.

Development. In this phase, the development of the GSC-E Class Record was developed. Several arithmetic operands and functions include like VLOOKUP, IF, COUNTIF and other arithmetic functions are also utilized.

Testing. This phase determine the output's performance in terms of functionality, reliability, usability, effeciency, maintainability, and portability. It will guide the researchers to ISO 25010:2015 software evaluation.

Maintenance and Evaluation.
This phase allows the facluty to answer the survey and evaluation form through focus group discussion to

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Below is the step-by-step procedure during the conduct of the study.

1. Plan and analyze the current system and establish objectives and solution to current need.
2. Gather neccessary data from the instructors and professors.
3. Design the electronic class record with the use of Microsoft Excel.
4. Present the electronic class record to faculty during the Genral Meeting for further improvement
5. Integrate in the revision the comments from the faculty members.
6. Deploy the output to the instructors and professors.
7. Conduct training sessions to end-users.
8. Get feedback from the faculty and revise as necessary.
9. Evaluate the electronic class record.
10. Finalize the study document.
11. Submit the end product and document to the reasearch.

RESULT AND DISCUSSION

Figure 1 shows the Data Entry worsheet tab of GSC E-Class Record. The user inputs data like semester, academic year, course number, descriptive title, name of the intructor/professor, course, year and section adviser, credits units, dean, department chair, date of submission, and the name of the students.
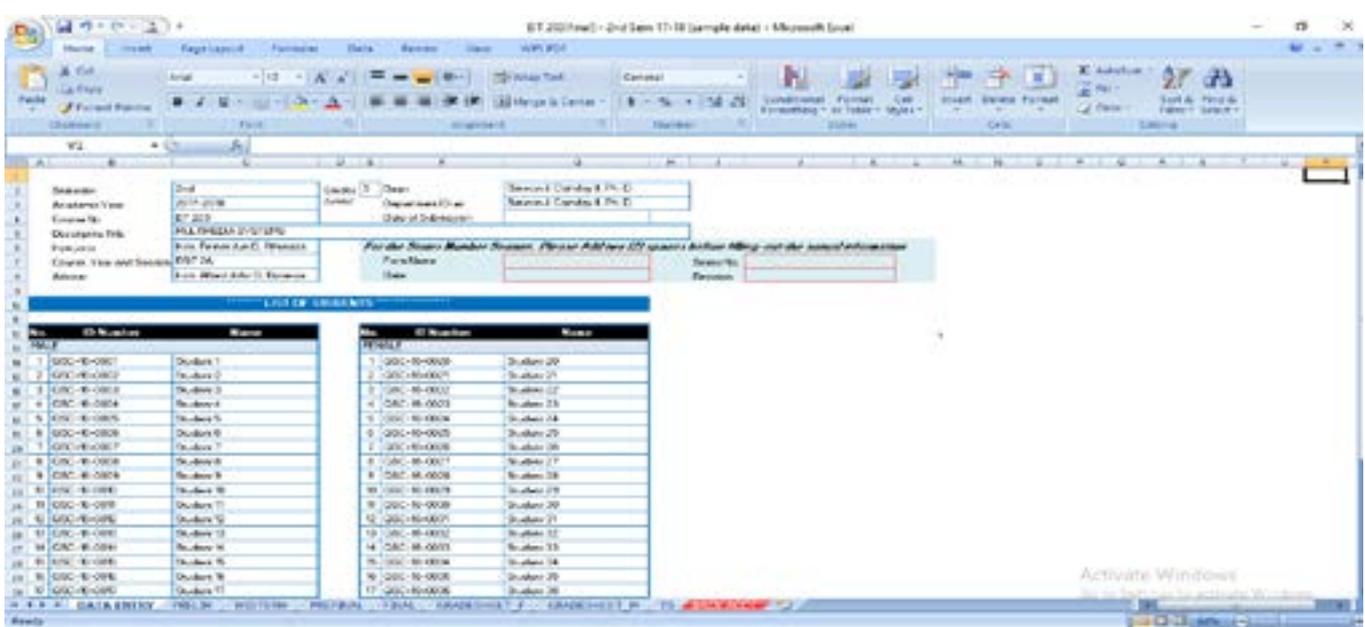
Figure 1. Data Entry Worksheet Tab

Figures 2, 3, 4, and 5 are the Prelim, Midterm, Pre-final and Final worksheet tabs are of the same functions. Its function is to accept inputs from the end-user. The inputs from the user are the quizzes/activities, date per assessment activity, class standing, project, and the major examination in each period. These worksheet tabs automatically compute and provide grades and their equivalent in the designated cells.
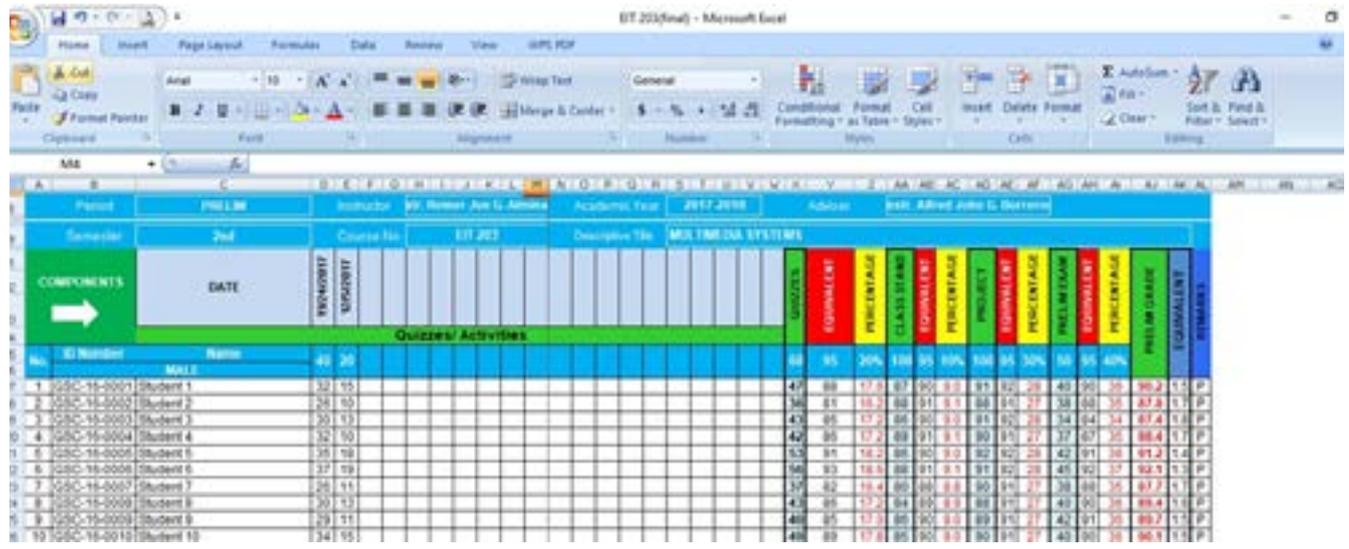
Figure 2.Prelim Worksheet Tab of GSC E-Class Record

Figure 3. Midterm Worksheet Tab of GSC E-Class Record

Figure 4.Prefinal Worksheet Tab of GSC E-Class Record

Figure 5. Final Worksheet Tab of GSC E-Class Record

Figure 6 and 7, the GRADESHEET_M and GRADESHEET_F worksheet tabs are used to display the midterm, final, tentative, and the final grade of each student. It also shows the credit units and the remarks if the student is passed, failed, incomplete, or dropped.

Figure 6.GRADESHEET_M Worksheet Tab of GSC E-Class

Figure 7. GRADESHEET_F Worksheet Tab of GSC E-Class Record

Figure 8, the TS worksheet tab, shows the transmutation table. It displays the total number of items, grades, and equivalent.

Figure 8.TS Worksheet Tab of GSC E-Class Record

Effectiveness of the Guimaras State College E-Class Record

FUNCTIONALITY
The GSC E-Class in compliance with
the functional characteristics defined as highly effective. Results revealed that in terms of functional characteristics GSC EClass Record had a mean of 4.30 very highly effective and all the five (5) functional subcharacteristics had mean results described as very highly effective. Confidentiality at 4.35, Integrity was 4.25, non-repudiation was 4.21, and accountability was 4.35. Authenticity is 4.35 all functional features and its characteristics are all described as very high.

USABILITY
In terms of usability, the mean was 4.27 very highly effective and all the subcharacteristics under the usability characteristics had a mean results described as very highly effective with appropriateness and recognizability at 4.35, learn ability was
4.25, operability 4.21, user error protection 4.35, user interface aesthetics 4.30 and accessibility 4.21.

Efficiency
Efficiency was at 4.30 described as very highly effective, as to sub-characteristics in terms of time behavior mean result was 4.20 described as highly effective, resource mobilization 4.50 very highly effective and capacity 4.21 very highly effective.

Maintainability
The mean for the effectiveness of the GSC E-Class Record in terms of functional suitability was 4.32 described as very highly effective with functional completeness 4.25, functional correctness 4.50, and functional appropriateness 4.21.

Reliability

Evaluation results revealed that in
term of reliability the mean was 4.29 very highly effective and all four sub-characteristics under reliability characteristic had mean results of very highly effective. Maturity was 4.35 MS Excel is a matured software and very highly reliable. Availability was 4.25, fault tolerance was 4.21 and recoverability was 4.35.
The GSC E-Class Record had maintainability characteristics of 4.35, described as very high. Modularity (4.35), reusability (4.25), analyzability (4.21), modifiability (4.35), and stability (4.35) were all described as very highly effective. This implies that the developed system could be run operationally.

Portability

Results in the effectiveness of the GSC E-Class Record in terms of portability characteristics had a mean of 4.30 described as very highly effective and all three subcharacteristics adaptability mean 4.20 highly effective, installability mean 4.50 very highly effective and replaceability mean 4.21 very highly effective. The software could be easily transferred.
According to Dellosa (2014), E-class record follows the grasing system of the institution, easy to use and computations of grades are convenient. Moreover, e-class record was acceptable in terms of accuracy, efficiency, reliability, security, userfriendliness, flexibility and validity.

Table 1. Effectiveness of Guimaras State College E-class Record

Characteristics	Mean	Interpretation
Functionality		
Confidentiality	4.35	Very High
Integrity	4.25	Very High
Non-Repudiation	4.21	Very High
Accountability	4.35	Very High
Authenticity	4.35	Very High
Realiability Maturity		
Availability	4.35	Very High
Fault tolerance	4.25	Very High
Recoverability	4.21	Very High
Usability		

Appropriateness	4.35	Very High
Recognizability	4.35	Very High
Learn Ability	4.25	Very High
Operability	4.21	Very High
User Error Protection	4.35	Very High
User Interface Aesthetic	4.30	Very High
Accessibility	4.21	Very High
Efficiency		
Time Behaivor	4.20	Very High
Resource Mobilization	4.50	Very High
Capacity	4.21	Very High
Maintainability	4.35	Very High
Modularity		
Reusability	4.25	Very High
Analyzability	4.21	Very High
Modifiability	4.35	Very High
Stability	4.35	Very High
Portability		
Adaptability	4.20	High
Installability	4.50	Very High
Replaceability	4.21	Very High

Scale: 4.21-5.00 (Very High), 3.41-4.20 (HIgh), 2.613.40 (Moderate), 1.81-2.60 (Low), 1.00-1.80 (Very Low)

CONCLUSIONS

The GSC E-Class Record was effective in attaining the objectives of this developmental evaluation research design and is very highly effective in terms of the eight characteristics and 31 sub-characteristics of the ISO IEC 25010:2015 evaluation criteria. The developed GSC E-Class Record was every higlhy effective in terms of functional suitability, performance efficiency, capability, usability, reliability, security maintainability and portability. Also, it can effectively record the input data like semester, academic year, course number, descriptive title, name of the instructor/professor, course year and section, adviser, credits units, dean, department chair, date of submission and the name of the students. The Prelim, Midterm, Pre-final and Final worksheet tabs are of the same functions. Its fuctions is to accept inputs from the end user. The inputs from the user are the quizzer/activities, date per assessment activity, class standing, project and the major examination.

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SUSTAINABLE ARTS AND CRAFTS IN THE PROVINCE OF GUIMARAS, PHILIPPINES

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ABSTRACT Traditional crarftsmanship is perhaps the most tangiable manifestation of intangible cultural heritage. The works of arts and the crafts produced has become a significant challenge to the survival of traditional practices in the local community. This study aimed at determining surviving traditional knowledge systems and cultural practices on arts and crafts in Guimaras. Data were obtained through key informant interviews and focus group discussion with selected local arts and craft makers from the five municipalities in the province of Guimaras. There are expressions of indigenous practices that have become an industry to the local people such as: salt-making; banig and nipa making; galleon making; bagoong making; maruyog charm making; nito, barrios, pandan and buri weaving; among others. There are other simple ways of producing products out of locally grown plants and collected solid wastes, making use of local plants and chewing them for health purposes and the use of sliced stones to produce corn kernels and rice powder/granules. However, these knowledge systems are slowly disappearing due to the changing needs and interests of the young generation. Hence, government, non-government organizations, and other stakeholders need to continuously support programs to protect the aesthetic and traditional value of Guimaras arts and crafts as these make part of the traditional knowledge that will tell about what is in Guimaras, and in order to allow the creative industry to thrive, a strong policy on protecting intellectual property for creative works is
necessary.

Keywords: arts, crafts, sustainable, traditional, knowledge, Guimaras, Philippines.

INTRODUCTION:

The word culture, generally refers to patterns of human activity and the symbolic structures that give such activity significance. It has been called "the way of life for an entire society" (New World Encyclopedia). Recognizing the importance and diversity of culture, intangible cultural heritage is being preserved (National Economic and Development Authority [NEDA], 2017). Cultural heritage refers to the physical artifacts and intangible attributes of a group or civilization that are passed down through the generations, preserved in the present, and endowed for future generations. Traditional craftsmanship is likely the most tangible embodiment of intangible cultural heritage on the Culture Sector (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017). Instead of preserving craft objects, safeguarding attempts should be made to encourage craftsmen to continue producing craft and pass on their skills and knowledge to others, particularly, within their own communities. The creation of works of arts and crafts has posed substantial threat to the local community's traditional practices. The term 'Traditional Knowledge' (TK), used reciprocally with indigenous knowledge, is used to describe any indigenous knowledge, innovation, or custom, tradition of local communities that is important in protection, conservation and sustainable use of biodiversity and various traditions (Jasmine, et al., 2016). While Ryser (2011) broadly defined indigenous knowledge as the knowledge that an indigenous (local) community accumulated over generations of living in a particular environment.

Digitization projects are underway to facilitate the documentation and preservation of important information and materials for the benefit of present and future generations such as documenting of indigenous knowledge systems and practices, language revitalization, and film restoration (NEDA, 2017). This strategy aimed at incorporating culture into all development policies, be they related to education, science, communication, health, environment or cultural tourism and supporting the development of the cultural sector through creative industries (UNESCO, 2017).

The roles of art community are enabling people to develop a relationship with the environment and understanding of identity, locatedness, economy, culture and well-being (Ramsden, et al., 2011). The creative sector has a number of other attractive qualities from a local development perspective: it makes use of a range of skills at a series of different levels, it tends to be socially responsible and inclusive and it usually involves "clean," environmentally- friendly processes (Working Group of EU Member States Experts (Open Method Of Coordination) On Cultural And Creative Industries, 2012). Community arts, on the other hand, are considered to be shared, socially and self-expressive creative in the fields of visual arts, dance, storytelling, music,

theater, craft, film-making and new technology.

Traditional Knowledge System (TKS), therefore, is the know-how of the people, gathered through day-to-day walk of life, to overcome the hurdles and tap the potentialities from their immediate neighborhood. As it represents information, knowledge, skills and technology along with standard management practices, which are defined through the cultural systems (Assam Science Technology and Environmental Council, 2019).

However, environmental and climatic pressures impact on traditional craftsmanship too, with deforestation and land clearing reducing the availability of key natural resources. Even in cases where traditional artisanshipdevelops into a cottage industry, the increased scale of prduction may result in damage to the environment (UNESCO, 2017). With these, there is a need to give emphasis on TKs for searching alternative solutions or ways to face the challenges and design a sustainable lifestyle.

All over the coumtry many traditional knowledge based practices are followed by different communities (Assam Science Technology and Environmental Council, 2019). In fact, in 2016, Loren Legarda, former Filipino Senator, sponsored an allocation of PHP10 million from the national budget for the book project, entitled "From the Seas to the Mountains", a compilation of the knowlegde practices of the people of the islands of Panay and Guimaras. The book is a project of the Department of Environment and Natural Resources (DENR), spearheaded by the University of the Philippines-Visayas and in collaboration with the various state colleges and universities (SUCs) in Panay, with Guimaras State College for Guimaras Island. Legarda noted the importance of the traditional knowledge system as it covers thematic areas, such as arts and crafts, literature, health care, agriculture, forestry, and biodiversity (Guimaras State College Report, 2018).

The Guimaras Island is a province strategically located between southwest of Panay Island and northwest of Negros Island in Western Visayas having a total land area of 60,465 hectares or 604.65 square kilometers and composed of the five municipalities, namely: Buenavista, Jordan, Nueva Valencia, San Lorenzo and Sibunag. In 2017, Guimaras ranks 4th, getting 11 percent of the total visitor arrivals. In addition, Guimaras has an advantage and potential for growth due to its relatively varied tourism attractions and potentials like beaches, resorts, islets, festivals (mostly community- based), religious sites/activities, nature, historical and agri/farm sites (Province of Guimaras, 2018). Hence, this study aimed at determining the surviving traditional knowledge systems and cultural practices on arts and crafts in Guimaras Island with emphasis on the general description, its significance, present status, and history/evolution.

Hence, this study aimed at determining the surviving traditional knowledge systems and cultural practices on arts and crafts in Guimaras Island with emphasis on the general description, its significance, present status, and history/evolution.

METHODOLOGY

This study used a qualitative research design to determine the surviving traditional arts and crafts. The data were obtained through key informant interviews and focus group discussion with selected local arts and craft makers existing from the five municipalities in the province of Guimaras. A purposive sampling technique was used in this study. A researcher-made interview guide questionnaire undergone validity and reliability test and was used to gather the needed data. The interview process was done on a conversational manner by the researchers, with one acted as lead interviewer and the other as documenter and vice versa. Strict compliance on ethical consideration was observed throughout the process. Permission was secured from National Comission in Indigenous People (NCIP) for indigenous informants. Focus group discussion was also done in some instances where there were other members of the group present to get more details and commonalities of experiences on tradional practices. Actual obsevation and photo documentation were made on the processes involved in producing certain products. Narrative analysis was utilized to analyze collected data taking into account the context of each case by constructing knowlegde and organizing new experiences and making it more learnable.

RESULTS AND ANALYSIS

There were expressions of indigenous practices that have become an industry to the local people such as: salt-making; banig (mat) and nipa (palm) making; galleon (large sailing ship) making; bagoong (shrimp pasta) making; maruyog charm (tradional amulets) Making; nito,barrios, pandan (screwpine) and buri (palm) weaving; among others. There are other simple ways of producing products out of locally grown plants and collected solid wastes, making use of local plants ang chewing them for health purposes and the use of sliced stones to produce corn kernels and rice powder/granules.

Salt Making.
Rock salt is widely used in the food industry. Salt bases are used to treat meat and fish to ensure conversation and proper consumption over time. It is used in water treatment, animal and chemical industries. Rock salt is also used for aesthetic purposes. It is one of the main ingredients in making organic scrubs as it is a good exfoliating agent which wipes out dead skin cells.

In Brgy. Sebaste, Sibunag, airings (wind turbines) are utilized in making salt. These arirings are made out of PVC sheets, wood, and timber. They are used to pull the water from the saltwater river towards where a community produces salt. The saltwater is then gathered in makeshift ponds called hay- angan, which are then connected to tubes leading to shallow bubons (wells) called **tuba-an.**

Kahons (boxes) are dug in the ground and lined with cellophane to allow saltwater to dry. Each kahon can contain a balde (pail) or 5 liters of saltwater, approximately an inch high. All kahons are left to dry for 24 hours and are scraped with a non-toothed flat-ended rake called kagot. Each kahon makes 1/3 pail of salt, estimated to be half a ganta. The scraped soft salt crytals are then stacked in a heap at an elevated papag (pallet) lined with screen where they are left to dry for another 12 hours. the salt is then stored in a kamalig (barn) built of sawall (woven split-bamboo mats) and screen for further drying. It will be stored until the salt is sold or bought. The salt is sold from 180 to 200 PHP per sack. There are (3) types of salt depending on its color. There's primera for when the salt is reddish, segunda if it's a tad bit brown due to residue, and ikatlo for white.

The salt-makers of Sebaste attributed their skill in making salt to residents of Negros who stayed in the island 20 years ago. They taught it to their children and their relatives. At present, salt making has now been an industry to the local folks of Brgy. Sebaste, Sibunag, Guimaras. But, they still have this belief that one should not open and use umbrella during activities at the salt farms because you are inviting rain, *Indi puede makapamayong sa tiempo nga nagapa susod sang asin, kay nagapati sila nga ang pagpamayong nagapanghagad sang ulan",*

Fig.1 The Salt Making

Banig and Pawod Making.

Banig (mat) and Pawod (thatched) making has been a part of our everyday life for such a long time. Growing up in the countryside, it's not new to us to see these mats made out of native materials such as buri and pandan, along with roof/roofing materials made of buri twigs, bamboo, and nipa leaves.

Nanay Editha, a being maker for more or less 45 years, is the only one from among her family's lineage who was able to relive and continue on the family business. Nanay Editha's mother used to lala banig (Mat weaving) and she was able to learn such method form her. She's been making banig ever since she was in her elementary years.

The source of the raw materials used in making her products was taken from the katunggan (wetlands). She cuts the pandan and nipa leaves, then plants the roots again to ensure the sustainablility of her sources. After planting the roots, she waits almost a year for the palm tree to grow and be ready for harvest. The sustainability isn't an issue because the weavers plant their own pandans within their community.

Prices of banig ranges from 200 PHP to 400 PHP depending on size. A single-sized banig is made in a span of 2 days and is sold at 200 PHP; a double-sized banig can be done in 4 days and is sold at 250 PHP; and a family-sized banig takes 4-5 days to make and sold at 400 PHP. Per pawod of nipa, on the other hand, takes 30 minutes to make. Each pawod is a dupa or arms-length long. In a day, Nanay Editha can make 30 pawods. However, because the product isn't as widely used and as commercialized as it used to be before, the demand is also decreasing as time passes by.

Fig. 2. The pandan and nipa leaves used in making banig.

Galingan sa Bato. These rocks are parts of a tool/simple machine called galingan sa bato. Each rock is about a third of a feet thick and is almost a feet in diameter. It is made of two big chunks of rocks, one's center pierced with a solid piece of wood/branch, called the corazon (Heart) and the other's center hollow. The rocks are placed on the top of each other, with the pierced center the one at the botton and the hollow-centered one on top.

After the rock has been placed, there's a barren hole on top where the corn kernels are palced to be gorund. To grind the corn kernels, the top rock is turned clockwise. However, to grind them into finer parts, the top rock must be turned counter clockwise . Only when it is turned counter clockwise can the kernels be expelled through the catching sack. Both sides of the rocks touching each other have shallow ducts where the ground and/or smaller kernels are then fed to poultry animals, specially, chickens,ducks,greese, birds, and others.

This corn grinder is made of solid stone, which ensures its durability. It has been tested by time and whether, but it is still fully functional. Though the production of this grinder is not yet known to still be continued, a few of these are still around and are still utilized. Using this manual machine in grinding corn reduces the energy consumption used by fuel-powered machineries. It's also an advantage to have this kind of simple machine in far-flung areas, especially those which cannot be reached by electricity.

When we asked Nanay Visitacion where she got, or from whom she has inherited the galingan, she said that her late father brought it from Mambusao, Capiz and later on left it to her care. The galingan was estimated to be more than a hundred years old already and is considered a famillial treasure.

Fig. 3. The galingan sa bato which was estimated to be more than hundred years old.

Galingan sa Bugas. A stone grinder used in processing soaked rice, which is then a main ingredient in making of "puto" and "bingka" (traditional types of rice cakes). Using this manual machine in grinding rice reduces the energy consumption used by electricity-ran machineries. Morever, the advantage of this equipment is that one can carry and bring it anytime and anywhere, as needed.

According to Nanay Consolacion, the "galingan sa bugas" was estimated to be 110 years old. She bought it from Arsenia Galuno, her grandmother in her father's side, who believes that it was made in Antique. She added that the stone came from one of the rivers of Antique.

Pakaw – the wooden handle of the stone grinder holds to rotate. The handle is rotated is clockwise direction.

Kurason (heart)– a small wooden structure on the center base part of the grinder wherein the upper part of the stone grinder is connected.

Ba-ba (mouth) – a hole with a concave structure where the soaked rice is poured.

Tarog/iligan – a circular with exit passage part structure where the grinded material drained gathered and collected during the process.

Ginaligis/ginapudpud-to grind, to pulverize.

Fig.4. The galingan sa bugas that is made of stone and wooded handle.

Galleon Making. Galleon making is a signature product of Guimaras. We often see miniature boats in beach resorts and tourist attractions, as well as souvenir shops and pasalubong (souvenir) centers all over the country, especially in places such as Boracay, Palawan, Cebu, Bohol, Surigao, Davao, and Leyte. Miniature boat-making includes the making of galleons, yachts, frigates, paraws (saliboat), etc.

Tatay Rudy, a galleon maker, got his knowledge on creating crafts such as galleons, yachts, frigates, and paraws from his father whose sources of living were mainly the making of these products. Boat-making has been the family's business for more than a hundred years. He was able to recall that the formal business and trading started in 1940, though.

Moreover, he explains the step-by-step procedures in making miniature boats to be laborious. Before starting the procedure proper, the materials should all be procured and prepared. The main material for the boat's body is the tree. Tatay Rudy says that he usually uses duldol (silk-cotton tree) because it's abundant and is easy to carva due to its softer texture and compactness. If the duldol tree is not available, he also uses kapok, beta, or ilang-ilang (Cananga odorata) tree. For the boat's decorations and other parts, these are the materials used: catcha, cotton, and geena cloths, vanish, paint, smooth nails, sungkao, common nails, black twine, plywood, sandpaper, thread, bamboo,alambre (wire). Tools used are as follows: binangon (bolo), tigib (wood chisel), lagari (saw), martilyo (hammer), barena (drill),pliers, kisi-kisi, needle, and etc. It these materials and tools are ready, then the procedure proper starts.

The first step step is **basbas**. This step includes forming the wood into the shape that the carpenter wants it to be. This is where the body and the housing of the boat is formed with the use of a **tigib**. Then comes the carving of the design on the boat's body to which **Tatay Rudy** refers to as kutkot, liston, and guilla. The body's intricate designs, especially in the uppermost parts of the boat's body, are carved with the use of a smaller tigib. This is one of the procedures where utmost detail is given attention. After these first two steps, the timber shall then be dried. According to Tatay Rudy, the duration of drying the timbers depend on the weather. During the dry season, they should be left to dry for 15-20 days. On the other hand, during the rainy season, it extends until a whole month. This is to ensure that the wood is all dried up, thus ensuring its quality as well. While the timber for the boat's main body are drying, other spare and additional parts should be done so they should also be ready for assembling.

After the timbers and other boat parts are dried, they are cleaned up. The body of the galleon/ frigate is then covered with a piece of plywood where the main foundations are attached. It then is ready to be decorated. The boat, along with its already attached decorations, is smoothed with the use of the sandpaper. This ensures that the surface is even and leveled. Dyeing and application of almagre and Cellac then follows, as is the application of varnish. The sail, sewn and designed as desired, is then attached to the boat. The boat is then ready for display and, eventually, sale. The business does not only cater for local and foreign tourists. It also is a main source of wedding and birthday souvenirs. Being that, Guimaras is the only province to have been recognized by the Department of Trade and Industry to produce galleons and miniature boats, it is significant to include such products in the list of the province's local products. The trees used in creating these miniature boats answers to the regulations of the Department of Environment and Natural Resources. The boat-makers see to it that they abide to the DENR's provisions in selecting raw materials.

Fig.5. The locally made galleon of Guimaras

Ginamos Making. Ginamos making is a way of preserving the shrimp caught and harvested from sea. It is usually sold locally but is also produced for international market, expecially for Overseas Filipino Workers who cave it.

Since Barangay Morobuan, Jordan is a coastal area, sources of living include kalkag (tiny dried shrimp) and dried fish making, and fish processing. Bagoong or shrimp paste is one of the main products and source of income of the barangay which allow them to send their kids to school and provide for their households' needs.
The practice of making bagoong has been with the residents for as long as they could remember since their ancestors have been making such product since they were young. The elders pass on this practice
from generation to generation, sharing it to everyone in their family. As a result, every family member knows how to make shrimp paste.

In making bagoong, a bularan (screen), salt, shrimp, bayuhan or baruto (grinder/crusher) are needed. Use of food coloring is optional. The process starts with drying the shrimp for 3 hours under the heat of the sun. **Bayô/**linas is the next step. **Bayô** is used for small orders (one to three trays of shrimp) and linas for bigger ones

(three trays up). During linas or **bayô,** food color (optional) and salt are added to the shrimp. Fourteen trays of shrimp (order placed during our visit) take 3 hours of linas and a sack of salt is used. Fourteen trays of shrimp is equivalent to 3 ½ sacks or 260 kilograms.

The third step is the storage. The ready-for-sale ground/crushed shrimp is then stored in big plastic bags then put inside another plastic sack to ensure that the salt doesn't seep out of the first palstic bag. This allows the saltiness of the product to last longer and for the product to have a longer shelf time. If the bagoong is stored properly, it will be preserved for the next 5 months.However, it will be at its peak quality after two or three months of shelf-time.
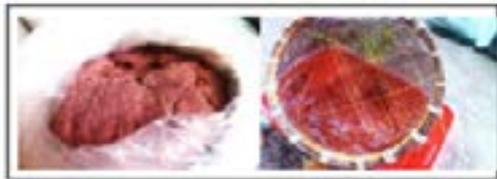
Fig.6. The Bagoong Product.

Mamâ/Mastication. Mamâ is a form of traditional food consumption where people practicing such activity of eating apog (powdered lime), tobacco, buyo (betel) leaves, and beetle seed together. Elders say that the starch produced through mamâ is beneficial for those with bloated tummies, and that the act itself is good in making teeth stronger.

One of those who practice this activity is nanay Visitacion which she learned from her mother-in-law for around 50 years ago. The sustainability and sources of the materials for Mamâ, were taken on the buyo leaves from the surrounding lands of their neighborhood; the apog is made out of burnt shells of pakinhasorr, tobacco can be bought from Iloilo City, and the beetle seeds are planted in their backyard.

Fig.7. Photo of apog, tobacco, buyo leaves, and beetle seed.

Maruyog Charm Making. Maruyog Charms, a name given to the bracelets, are recognized by both the National Council for Indigenous People and the Department of Trade and Industry. Each bracelet contains lana (virgin coconut oil), shards of santoara (limestone), herbs (salindugok, tagahumok, amigos), diamante negra, punta diamante, textiles, and mata-mata (black and red seed).

The lana is made on Good Friday, a day believed to hold the strongest elemental pull on the primitive world. Santoara, limestone crushed into tiny pieces, are added to the bracelet to make people more accommodating to the bearer. The herbs, on the other hand, are gathered all-year-round and each herb has its own function. **Salindugok** is a black-colored shrub infused as charms, especially made for entrepreneurs, to drive people closer to their businesses. **Tagahumok** is a green-colored shrub included in the talisman to make the hearts of those around the bearer softer and easier to please. **Amigos** is an herb incorporated to the bracelet to make people friendlier to and more approachable for the bearer. The diamante negra and punta diamante act as panaming to ward off dark and negative energies. Both the textiles and the mata-mata are added to the charms for decorative purposes only.

Sinukuan is another product made by the **Ati** community. Its main feature is a slice of branch with a corss shape found in the pith or medulla, the middle most part of the wood. It is believed to be a type of amulet as it fends off mischievous and evil forces. The sinakuan, along with the Maruyog charms, are believed to heighten one's dungan (mindpower), protects one form bamboo, hex, and misfortune.

Creating Maruyog charms are a vital part of the Ati tribe's culture. The Ati tribes are considered to be one of the first ethnic groups to inhabit the country. Along with their primacy in civilization comes their supremacy in supernatural beliefs, cultural and traditional practice. Among their beliefs include the use of herbs and certain plants to protect people, especially children, from evil entities and harmful spirits. Continues production of these charms ensures the preservation of practices, and traditions of the indigenous peoples. Maruyog charms are usually sold at Iloilo Central Market and the stalls near the area. Materials needed to create these products are taken from Santo Domingo, Igang, and around their community. Nanay Perla and the members of their tribe hunt for and gather these

materials in the jungle. She says that they cannot plant and reproduce these because these are of wild origin.

These charms, as far as Nanay Perla can remembe, were used back to when she was still a kid but the commerial trade started in 1997. Nanay Perla herself spearheaded the production. She taught the process of making these charms to the younger women in their community. It has since then been passed on from generation to generation.

Fig.8. Maruyog Charms made by the Ati tribes.

Nitô Weaving. The practice of nitô-weaving started with the Jinisan family in the late 1980s, long before the Department of Trade and Industry facilitated a workshop with other local weavers. According to the elder Jinisan, Exequel, they started experimenting on weaving nitô leaves, which were very abuntant in their surroundings, as a hobby. It was something they would do on their free time as kids. however, as time passed, many have noticed and have placed orders for their hobby's output. The primary weavers then extended the process of making nitô products to their family members.

Nitô is a climbing fern with glossy, wiry stems used in weaving baskets, vases, food covers, plates, wall decors, etc. Nitô weaving and processing has been a source of community livelihood in Barangay Concordia, Sibunag for more than 30 years. The use of nitô products help reduce waste related to use of disposable plates, Styrofoam food containers, feeble decors, and breakable vases. These nitô products are usually found on sale at Iloilo Central Market or on display at souvenir shops in Guimaras. Orders are usually found on sale at Iloilo Central Market or on display at souvenir shops in Guimaras. Orders are usually at peak during December when gatherings and Christmas parties need plates and other decorations.

There are three kinds of vines that weavers usually use in weaving: (1) nitô, which is more durable; (2) balagon (vine), which is bigger; and (3) bulaw-bulaw, which bulaw, which is usually coated with varnish. Though these kinds of vines used to be found everywhere in the community thus, making the raw materials readily available to the weavers, the case nowadays is different. Due to the rampant cutting down of trees for coal-making, vines easily die and dry off. These vines love the shade that the trees provide; hence they grow abundantly in forested areas. However, the constant deforestation drives the growth of vines farther away from where they used to grow near the neighborhood of the Jinisans. These days, they have to go to far-flung barangays such as Salvacion in the town of Buenavista, Alaguisoc and Buluangan in the town of Jordan, and Lanipe and La Paz in Nueva Valencia. If not, they have to order these vines from haulers and manugpamalagons from
the mentioned towns and have the vines delivered to their doorsteps for 200 PHP per hakop (handful).

Upon the delivery of the vines, they are boiled in a drum full of boiling water for 3 to 4 hours. The skin is then peeled off and left to dry under the heat of the sun and exposure to open air. The dried vines are then ready for weaving. In weaving, the balayan or the center foundation is the first step. The smaller vines are the first ones to be used because they are easier to manipulate and are ideal for close-knit foundations. When the base with the smaller vines is done, the medium, then large-sized vines may be used. When bending the vines for upward weaving, it is believed to be best to wait for evening or dawn to come because it is easier. The weavers believed that the moisture present in the air during evening and dawn, after being absorbed by the vines, makes the vines softer to bend and mold into shape. The vines - woven into wall decors, plates, food covers, trays, laundry baskets, vases, fruit baskets, or lampshades – are then again left to dry through air exposure. Application of varnish is optional, depending on the preference of the customers. The products are then ready for sale. For those who want colors in the nitô products, a natural way of dyeing is used by the weavers. White, reddish brown, violet, and black are the maincolors produced through this organic dyeing method. If the customers prefer white, the vines are simply peeled with the use of a small knife. However, they have to be boiled if the consumers want a reddish brown finish. For those who want violet, the vines should be steeped onto the residues of the water used in boiling. When black is opted, the vines have to be immersed with mud. After each dyeing process, the vines have to be dried off to lose all moisture, especially those used in coloring.

The Philippines' creative crafts not only gratify our senses, but each piece reflects the artists' passion and active engagement in visualizing, connecting, and enjoying the culture and creative manipulation of the items around them (Agcaoili, 2019).

Fig.9. Woven Vases

Barrios, Pandan, and Burl Weaving. Weaving pandan, barrios, and buri has been one of the main sources of the main sources of living for women in Barangay Sapal, San Lorenzo for more than a 150 years. Though the Sapal Weavers Association was just established in 2006, women have been weaving for as long as they could remember. The tradition of weaving has been passed on from one generation to another, tracing the origins from the village's great- and grandmothers.

The weaving project and livelihood program has been supported by the local government units, municipal and provincial, as well as other national government agencies, like the Department Trade and Industry, because it does not only provide a source of income to the families and to the women of the community but because it also promotes green, reusable, and eco-friendly products for sustainable economic development and which also promotes tourism as one of the identified Guimaras tourism circuits.

Since it is an established weaving community, the Department of Environment and Natural Resources, under the United Nations Development Program, encouraged the villagers to plant their own pandan,barrios, and buri plants their backyards and around their neighborhood. This is to ensure the sustainability of the product and the raw materials needed. However, when their own grown plants aren't enough, they buy from other local growers who don't weave. They are sold at 30 PHP per 100 leaves. The weaving process starts once the leaves are available to the weavers or upon harvest. The first step is to cut the thorn from both sides of the leaves, and at the center underneath it. The leaves are then left to dry for 4 days under the heat of the sun or 4 hours in the drier and a few hours after exposure to open air. The leaves are then rolled into a balalang, or into a film of dry leaves. The balalangs can be stored until the time the weavers will use them. However, if they are to use the balalangs immediately, they have to deras (strip) the leaves with a cutter using a sipit, made out of plastic or uway, for measurement of the width that the weaver prefers. They are then ready to lala or weave.

The primary weaving pattern used is that of the banig or a mat. From the woven banig, the weavers may opt what products to make from it. They may make bags, laptop holders, and placemats out of it. However, if they want to make slippers, wine bags, hats, and envelopes, they have to use molders and shapers for precise measurements and desired sizes.

in making handbags, the weavers add straps, cloths/linens, zippers, sewing materials, and inner linings, to the primary materials *pandan, barrios, and buri.* Their
products are used for commercial purposes. The finished products, which are ready for sale are displayed at souvenir shops and trade centers, and orders are placed via personal transctions, referrals, and/or via the Department of Trade and Industry.

Fig.10. Weaved Handbags and Mats.

Tultul Making. Tultul is a solid rock salt tablet only produced and manufactured by the padohinog family residing in Hoskyn. It is one of attractions in Guimaras Island and one of the bestselling products not just of the Municipality of Jordan, but of the entire province.

Tultul-making is a form of eliminating marooned wastes along the seashores. Through the gathering of dagsa, tultul producers help segregate the trash from Passi and Iloilo City which were caught adrift by the waves and water current.

Upon gathering the dagsa, they start a fire in a rock-and-sand pit then later on pile the dagsa on top of the fire. They pile a dagsa batch over another dagsa batch for five consecutive days until the lowermost portion is pure and fine ash. On the sixth day, the ash shall be poured with saltwater while being exposed to open air for cooling down. When the ash is already cool, they collect it and put it inside plastic sacks. If the ash is deemed

to be enough, it is gathered in two large kaings or bamboo containers, which are then placed on an elevated platform. Seawater is then poured over the first kaing to wash down the salt from the ashes. A pail then catches the strained saltwater. The second bamboo container will be poured over by the earlier strained saltwater from the first container. This process is repeated over and over again until the saltiness is deemed to be enough by a secret mixture/chemical. The next step involves a hurnohan or a molder made out of large cooking oil tin containers. The strained saltwater from the second kaing is poured into these hurnohans, which have live fire below them. While the cooking goes on, small amounts of this strained saltwater is continuously added to the container. This goes on until the moisture from the solidified salt has completely evaporated. The finished product, called a bareta, is then left in the pan.

Tultul is produced in a made-to-order manner. Orders are placed via direct contact with the Padohinog family and through transactions with the barangay, the Department of Trade and Industry. Each bar salt costs 500-600 PHP and they can make 6- 7 bars of salt per day (if the process is done continuously and they have no pressing matters and/or appointments to attend to).Moreover, they can earn around 35,000 PHP in an average order from restaurants and food chains in Manila. Making tultul is about preserving a familial tradition and means of living that's been with the Padohinog family for more than a hundred year. Tultul making is now being supported by the barangay council as one attraction and means of livelihood of the local people.

CONCLUSIONS

Guimaras Island is endowed with its natural beauty and rich cultural heritage aside from being known to have the sweetest mango in the world. The annual celebration of "Manggahan Festival" is just one of the tangible manifestations of the works of arts and crafts of the Guimarasnons which are commonly community-based. There are expressions of indigenous practices that have become an industry to the local people, such as: the salt-making with the use of locally made ariring; mat "banig" and "pawod" making; the muruyog charm making by the aeta community; the nito, barrios, pandan and buri weaving, galleon making, tultul making, and bagoong or "ginamos making that serves as major food ingredient/seasoning. There are other simple ways of producing products out of locally grown plants and collected solid wastes, making use of local plants and chewing them for health purposes, and the use of sliced stones to produce corn kernels and rice powder/granules. However, some of these traditional knowledge has the tendency to disappear due to the changing needs and interests of the young generation and distractions in the cultural environment. These traditional knowledge and cultural practices only need to be preserved and sustained to the present and future generations with the growing Tourism industry. Government, NGOs, and other stakeholders need to continuously support programs to protect the aesthetic and traditional value of Guimaras arts and crafts as these make part of the traditional knowlegde that will tell about what is in Guimaras, and in order to allow the creative industry to thrive, a strong policy on protecting intellectual property for creative works is necessary.

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EMPLOYERS' FEEDBACK OF MASTERS IN PUBLIC ADMINISTRATION GRADUATES

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ABSTRACT There has been recent interest in how graduate education might improve the performance and competencies of its graduate, although there is little feedback from employers about the value of graduate school experiences to their working life. This study aimed to investigate the views of the employers of the public and private agencies regarding the extent to which work skills and competencies had been developed in the Masters in Public Administration (MPA) program. A survey of twenty-five direct supervisors and office/agency heads of MPA graduates. Results revealed that majority of the employers of the MPA graduates were from Iloilo City, with ages 40 to 59, female, and married. The employers' feedback as to the performance and competencies of MPA graduates were very favorable, when classified according to agency/office location, age level, sex, and civil status were all very favorable feedback. There were no significant differences in the employers' feedback as to the performance and competencies of MPA graduates classified according to agency/office location, age level, sex, and civil status.

Keywords: employers, feedback, graduates, Master, Public Administration

INTRODUCTION

Public administration is formed by two different terms, public and administration. The term public means a government that is mainly focused on government activities and actions. Whereas, the term administration is derived from the Latin word "Administer", which means to serve, to direct, to control, to care for, or to look after people. Public Administration is the implementation of government policy and is also an academic discipline that studies this implementation and prepares civil servants for working in the public service (Thapa, 2019).

Finishing a degree is still a highly sought- after qualification for finding a job. Employability is not the same as gaining a graduate job, rather it is about the capacity to function successfully in a role and be able to move between occupations. The National Committee of Enquiry into Higher Education (1997) encouraged all higher education institutions to help students become more acquainted with the employment environment and reflect on such experiences. This stemmed from the drive for greater economic competitiveness and the idea that by focusing on human capital theories national wealth can be increased (Blackwell, et al., 2001). However, it is hardly surprising that employers take this stance since they inevitably want to provide the minimum training and induction for their employees. Indeed, Teichler (2000) has remarked that employer statements are generally accepted as factual when they are very often anecdotal and rarely based on the extensive evaluation.

Employers' feedback provides significant information to higher educational institutions on how to continuously enhance their academic services (Aquino, Del Mundo, & Quizon, 2015). It can generate evidence on the quality of graduates, their competencies, and performance and is usually reported as the level of satisfaction of the employers to the graduates (Butler, 2003; Singh & Choo, 2012). The vision and mission of Guimaras State College-Graduate Education are committed to provide access to relevant and quality education and advocate sustainable development and students who make an effort to fully participate in the total student experience (academic, co- curricular, extra-curricular, including work experience) benefit from a well-rounded education, contribute fully to the life of the college and community and hopefully have fun in the process.

The need to make employers feedback on the MPA graduates of Guimaras State College will not only locate them but more importantly find out how adequate are the skills and competencies provided by the GSC in the overall performance of their public career advancement. This employer's feedback study was anchored on the Program Theory of Impact Pathway developed by Daniel Stuffle beam (2003) cited by Fitzpatrick, Sanders & Worthen, (2011) of Context, Input, Process and Product (CIPP) Model. The CIPP model is a popular evaluation approach in the training program and educational settings. This approach seeks to improve and achieved accountability in the educational program through an Outcome Based Education (OBE) Approach (Zhang et al., 2011). The core concepts are the Context (C) which provides information for the development of an evaluation of the institution's vision, mission, goals, and objectives. the Input (I) provides information for the program designs through evaluation of data as bases for development, and the internal and external stakeholders' views and interests. The Process (P) determined the development and the ongoing evaluation of the implementation of major programs to accept, revise or correct the curricular program offerings; and the Product (P) refers to the evaluation of the outcome of the educational program and decision to accept, amend or terminate the curricular program, using criteria directly related to the goals and objectives of the institution.

The objective of the GSC in terms of Context (C), is to see how these would be changed or modified based on the data. According to Stufflebeam (2003), the idea of concepts in the CIPP had the intention of not to prove, but rather to improve, the program itself. The data obtained from employers' feedback can be used to determine whether their curricular offerings meet the needs of industry and public administration. On the institutional level, the findings of these employers' feedback will provide essential information not only concerning the relevance of the subjects in the different curricular offerings but also the adequacy of skills and competencies acquired by the MPA graduates produced by the institution. The researchers hoped that the results of this study will be used to document outcomes related to becoming a leader in public administration programs in the region, and to address the needs of the graduates to be able to meet the demands of public administration and governance, to continually improve program quality, and to serve as baseline data for planning activities.

The study aimed to determine the employers' feedback of Masters in Public Administration (MPA) graduates of the Guimaras State College–Graduate School in Region VI Western Visayas from the Academic Year 2005- 2015. Specifically, this study sought to answer the following questions: (1) what is the profile of employers of MPA graduates in terms of agency/office location, age, sex, and civil status?; (2) what is the employers' feedback of MPA graduates as a whole and when they were classified according to agency/office location, age, sex, and civil status?; and (3) are there significant differences in the employers' feedback of MPA graduates as a whole and when they were classified according to agency/office location, age, sex, civil status?

METHODOLOGY

The researchers utilized the descriptive method of research to determine personal and professional profile of MPA Employers, status of the employment of graduates, and competencies learned in MPA program. The Graduates of MPA of the Guimaras State College from Academic Year 2005-2015 comprised the research population. The researcher made use of the purposive sampling technique to examine the entire population of MPA graduates of Guimaras State College and their employers. The total population was done by getting the list of MPA graduates of Guimaras State College. The major instrument used in gathering the data was the survey questionnaire. The instrument was formulated based on the on-the-job training and employers' feedback questionnaire. The questionnaire was designed to capture the relevant data and information that can provide answers to the questions stated in the study. The questionnaire comprised of three (3) parts such as Part I, the personal profile of the employer. Part II was the feedback on the MPA graduates' performance and competencies. The instrument for the research study was validated through expert suggestions. Validators were MPA professors and practitioners, statistician, and research professors for corrections, comments, and suggestions. The researchers personally contacted those respondents from their respective workplaces/ offices. In cases where respondents were unavailable, social media such as Facebook, e-mail, and Twitter were used. The researchers ensured that the personal data of the respondents were treated with utmost confidentiality and anonymity. The data gathered were encoded, tallied, analyzed, and interpreted using Statistical Package for the Social Sciences (SPSS) software. The statistical tools used were frequency count, percentage, mean, t-test, and analysis of variance (ANOVA).

RESULTS AND DISCUSSION

The distribution of employers when classified according to agency or office location, four (16%) were agencies from Guimaras, 8 (32%) were agencies from Iloilo Province, and 13 (52%) were agencies from Iloilo City. Majority of the employers were located in Iloilo City. Moreover, when classified according to age, majority of the respondents were aged 40 to 59 years old. Most of the employer's supervisors and heads of offices were females with 18 (72%) and married with 22 (88%).

Table 1. Distribution of Respondents according to Agency Location, Age, Sex, and Civil Status

Profile Variables	Frequency	Percent
Agency/office Location		
Guimaras	4	16.0
Iloilo Province	8	32.0
Iloilo City	13	52.0
Total	25	100.0
Age		
30-39 years old	1	4.0
40-49 years old	10	40.0
50-59 years old	10	40.0
60 years old and above	4	16.0
Total	25	100.0
Sex		
Male	7	28.0
Female	18	72.0
Total	25	100.0
Civil Status		
Single	2	8.0
Widow	1	4.0
Married	22	88.0
Total	25	100.0

Level of Employers' Feedback as a whole

Employers' feedback on graduate performance is deemed an important input to academic institutions. It is a useful tool for measuring the responsiveness and relevance of any program's curriculum, as well as information on how graduates perform their duties and meet the organization's goals (Omar, et al., 2008 cited in Dotong, et al., 2017).

Table 2 shows that the level of employers' feedback when taken as a whole was 4.47 described as very favorable feedback. Moreover, the item that got the highest mean of 4.80 was "has the expertise in the present task assigned to him/her," described as very favorable feedback. The items that got the second highest mean were "regularly reports to work on time," "work to develop a variety of skills," and "informs superior when late or absent or when unable to finish her/his task" all described as very favorable feedback. However, the items that got the lowest mean were "willingly accepts responsibility beyond regular task" and "fair judgment and good sense of decision" still all described as very favorable feedback. This implies that the employees acquired enough knowledge and skills to perform their job.

Plantilla (2017) stressed that employers considered graduates' abilities to set goals and time management as very significant skills. In addition, employers were looking for employees who were not just technically skilled, but also have character attributes like flexibility and a willingness to learn.

Table 2. Level of Employers' Feedback

Items	Mean	Description
Regulary report to work on time	4.64	Very Favorable Feedback
Courteous and considerate with colleagues	4.36	Very Favorable Feedback
Express his/her ideas very well	4.36	Very Favorable Feedback
Work to the best of his/her ability	4.40	Very Favorable Feedback
Accepts other tasks and responsibilities	4.52	Very Favorable Feedback
Cooperate well with others	4.36	Very Favorable Feedback
Good working initiatives	4.48	Very Favorable Feedback
Work to develop a variety of skills	4.64	Very Favorable Feedback
Ability to plan activities	4.40	Very Favorable Feedback
Submits reports punctually	4.60	Very Favorable Feedback
Fair judgement and a good sense of decision	4.32	Very Favorable Feedback
Volunteer to work on other assignments	4.36	Very Favorable Feedback
Willingly accepts responsibility beyond the regular task	4.20	Very Favorable Feedback
Has the expertise in the present task assigned to him/her	4.80	Very Favorable Feedback
Informs superior when late or absent or when unable to finish her/his task.	4.64	Very Favorable Feedback
Employer's feedback as a whole	4.47	Very Favorable Feedback

Scale of means: 4.21-5.00 (Very Favorable Feedback),
3.41-4.20 (Very Favorable Feedback),
2.61-3.40 (Moraderately Favorable Feedback)
1.81-2.60 (Unfavorable Feedback), and
1.00-1.80 (Very Unfavorable Feedback

Level of Employers' Feedback when Classified According to Agency/Office Location, Age Level, Sex, and Gender

To determine the level of employers' feedback when classified according to agency or office location the researchers used the mean. The employers' feedback on the agencies in Guimaras (M=4.50), Iloilo Province (M=4.51), and Iloilo City (M=4.44) were all very favorable.

When classified according to age, employers aging from 30 years old to 60 years old and above showed very favorable feedback with a mean of 4.27, 4.47, and 4.53, respectively. When classified according to sex, both male (M=4.43) and female (M = 4.49) employers was very favorable feedback. When classified according to civil status, the single employer (M=4.47, widow (M = 4.53), and married (M=4.47) were very favorable. This implies that regardless of the variables the employers were satisfied with their employees' job performances.

Table 3. Level of Employer's Feedback to profile variables

Variables	Mean	Description
Office Location		
Guimaras	4.50	Very Favorable Feedback
Iloilo Province	4.51	Very Favorable Feedback
Iloilo City	4.44	Very Favorable Feedback
Total	4.47	Very Favorable Feedback
Age		
30-39 years old	4.27	Very Favorable Feedback
40-49 years old	4.47	Very Favorable Feedback
50-59 years old	4.47	Very Favorable Feedback
60 years old and above	4.53	Very Favorable Feedback
Total	4.47	Very Favorable Feedback
Sex		
Male	4.43	Very Favorable Feedback
Female	4.49	Very Favorable Feedback
Total	4.47	Very Favorable Feedback
Civil Status		
Single	4.47	Very Favorable Feedback
Widow	4.53	Very Favorable Feedback
Married	4.47	Very Favorable Feedback
Total	4.47	Very Favorable Feedback

Scale of means: 4.21-5.00 (Very Favorable Feedback),
3.41-4.20 (Favorable Feedback),
2.61-3.40 (Moderately Favorable Feedback),
1.81-2.60 (Unfavorable Feedback), and
1.00-1.80 (Very Unfavorable Feedback)

Difference in the Level of Employers' Feedback Classified According to Sex

To determine the difference in the level of employers' feedback when classified according to sex the researchers used the t-test. There was no significant difference in the employers' feedback when classified according to sex, the t- ratio was 0.739 at 23 degrees of freedom and the p-value was 0.467. The p-value was greater than 0.05 meant that the feedback of employers as to the performance and competencies of MPA graduates do not vary between the males and the females, their performances and competencies were the same.

Table 4. Difference Level of Employers Feedback Classified According to Sex

Sex	df	t-ratio	p-value	Remarks
Male Female Total	23	0.739	0.467	Not significant

Differences in the Level of Employers' Feedback Classified According to Agency/Office Location, Age Level and Civil Status

To determine the differences in the level of employers' feedback when classified according to agency/office location the researchers used the ANOVA. There was no significant difference in the employers' feedback when classified according to agency/office location, the F-ratio was 0.377 at (2, 22) degrees of freedom and the p-value was 0.290. The p-value was greater than 0.05 meant that the feedback of employers as to the performance and competencies of MPA graduates do not vary among the offices in Guimaras, Iloilo City and Province, there performance and competencies were almost the same.

There was no significant differences in the employer's feedback when classified according to age, the F-ratio was 0.549 at (3,21) degrees of freedom and the p-value was 0.654. The p-value was greater than 0.05 meant that the feedback of employers as to the performance and competencies of MPA graduates do not vary among the different ages of employers, their performance and competencies rated were almost the same.

There was no significant difference in the employer's feedback when classified according to civil status, the F-ratio was 0.055 at (2, 22) degrees of freedom and the p-value was 0.947. The p-value was greater than 0.05 meant that the feedback of employers as to the performance and competencies of MPA graduates do not vary among the civil status of employers, their performance and competencies rated were almost the same.

Table 5. Difference Level of Employers' Feedback Classified According to Agency/Office Location

Particulars	Sum of Squares	df	Mean Square	F	Sig.	Remarks
Location						
Between Groups	.026	2	.013	0.377	0.690	Not Significant
Within Groups	.764	22	.035			
Total	.790	24				
Age level						
Between Groups	0.058	3	0.019	0.549	0.654	Not Significant
Within Groups	0.733	21	0.035			
Total	0.790	24				
Civil Status						
Between Group	0.004	2	0.002	0.055	0.947	Not Significant
Within Groups	0.786	22	0.036			
Total	0.790	24				

CONCLUSIONS

Majority of the employers of the MPA graduates were from Iloilo City, with ages 40 to 59, female, and married. The level of employers' feedback of MPA graduates as a whole and when grouped according to agency/office location, age, sex, and civil status were very favorable. There were no significant differences in the employers' feedback as to the performance and competencies of MPA graduates classified according to agency/office location, age, sex, and civil status. The feedback of employers do not vary regardless of location, age, sex, and civil status. It is recommended that additional studies on employers' feedback on the master degree performance and competencies be conducted so as to strengthen or repudiate the results of the study.

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A TRACER STUDY OF MASTER IN PUBLIC ADMINISTRATION GRADUATES

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ABSTRACT Public administration prepares the human race to organize society and direct it by laws and regulations and is envisioned to those who want to devote their lives to public service. This study determined the status of the graduates of Master in Public Administration (MPA) program of Guimaras State College-Graduate School for Academic Year 2005-2015. The descriptive research design was used specifically the survey method in this study. The forty-one (41) MPA graduates were the respondents of the study. The researcher made questionnaire was the data gathering instrument. The data and other information obtained were analyzed and interpreted using the descriptive statistics such as the frequency count, percentage, mean, rank, and chi-square. The level of significance was tested at 0.05 alpha. The results of the study showed that majority of the MPA graduates were female, married, with permanent position, 5–15 years of service, earned 9 units and below in the doctoral program, in administrative position for more than 3 years, had increased in their salary after finishing their MPAs, and most of them were from Iloilo City with ages 40–49 years old. As to the promotion status, after they graduated, majority of them were promoted to administrative position with three years of service and availed salary increase. The top three highest competencies developed in the MPA Program were human relation skills, leadership skills, and problem solving skills. It is recommended that Graduate School shall continue to provide a curriculum that meets the various needs of the learners either those who are connected in the government or those in the private or non-government agencies through the MPA Program.

Keywords: Master ni Public Administration graduates, tracer study

INTRODUCTION

Finishing a Master of Public Administration degree is still a highly sought-after qualification for government employment. The National Government Agencies (NGAs) and Local Government Units (LGUs) in recent years have a shortage of qualified professional leaders and executives. This shortage is set to have a significant unfavorable impact on the supply of skilled and experienced executives that are needed to run significant government offices. In government offices of the province of Guimaras, there are only a few graduates of the Master of Public Administration. One of the greatest challenges facing the province is to increase the supply of qualified and highly competent executives in government service. This can be achieved through strong support with the vision and mission of Guimaras State College (GSC)- Graduate School. The Commission on Higher Education (CHED) being the national government agency is tasked to oversee higher education in the country and as initiated by the CHED. Graduate Tracer Study in the coordination of universities and colleges as partners were made possible. Tracer study also determined the extent by which the competency skills developed in the MPA program as well as the graduate's achievements in the field.

The researcher, as Dean of the GSC- Graduate School aims to help meet the growing need for advanced education in producing qualified leaders and executives in the Province of Guimaras. For more than a decade, GSC has been an active partner of the LGU in the promotion of quality education in Western Visayas. The researcher hopes that the results of this study will be used to document outcomes related in becoming a center of development in Graduate Education program in the region. Likewise, to address the needs of the graduates to be able to meet the demands of teaching, to continually improve program quality, and to serve as baseline data for planning activities.

Moreover, the study aimed to trace the graduates of the Master in Public Administration Program of the Guimaras State College–Graduate School in Region VI Western Visayas from the Academic Year 2005-2015. Specifically, this study sought answers to the following questions: (1) what is the profile of MPA graduates in terms of station/office assignment, age, sex, civil status, educational attainment, monthly salary, number of trainings/seminars attended, present position, employment status, number of units in the master program, and length of service?; (2) what is the employment status of the Guimaras State College MPA graduates in terms of promotion status after graduated from MPA, duration of administrative position, and salary upgrade?; and (3) what competencies are developed in the MPA programs that are useful in the public governance?

METHODOLOGY

The researcher utilized the descriptive method of research. According to Gregorio (2015), descriptive studies are purposive processes of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships then, making an adequate and accurate interpretation of such data with or without the aid of the statistical tool. The Graduates of MPA of the Guimaras State College from Academic Year 2005-2015 comprised the research population. The researcher made used of the purposive sampling technique to examine the entire population of MPA graduates. The total population was done by getting the list of MPA graduates of GSC. The researcher personally contacted those respondents from their respective offices. In cases when the respondents were unavailable, social media such as facebook, e-mail and twitter were used. The major instrument used in gathering the data was the survey questionnaire. The questionnaire comprised of three (3) parts. Part I contained the personal profile of respondents, such as the name, station/office assignment, age, sex, civil status, educational attainment, monthly salary, number of trainings/ seminars attended, present position, employment status, number of units in the master program, and length of service. Part II was the respondents' employment status in terms of their promotion status after graduated from MPA, duration of administrative position, and salary upgrade. Part III was the competencies learned in the master's degree program that find very useful in public governance. The instrument used in this study was validated through the experts' corrections, comments, and suggestions. This was administered by the researcher after corresponding permissions were granted by concerned authorities with strict observance on ethical consideration. The data gathered were sorted, tallied, analyzed and interpreted. The statistical tools used were frequency count, mean, percentage, rank, and chi-square.

RESULTS AND DISCUSSION

Profile of Master of Public Administration Graduates

Table 1 shows the demographic profile of the MPA Graduates. In terms of station or office assignment, results revealed that most of the Master in Public Administration graduates were from Iloilo City with 18 (43.90%) and followed by those stationed in Iloilo Province with 11 (26.80%). As to age, majority of the graduates were aging from 40-49 years old with (31.70%), followed by those aging from 50-59 years old with 11 (26.80%). In terms of sex, 10 (24.4%) were males, and 31 or (75.6%) were females. As to civil status, majority were married with 29 (70.70%). As to educational attainment, there were 37 (90.20%) had master's degree, and 4 (9.80%) had doctorate degree. As to the monthly salary, 21 (51.20%) of the graduates had PHP 15,000-PHP 20,000 monthly salaries. This means that the graduates of MPA were females, aging 40-49 years old, married, PHP 15,000-PHP 20,000 monthly salaries, and mostly were stationed in Iloilo City.

Higher education institutions' role must include not only imparting knowledge, but also contribute to maintain a competitive economy, and ensuring graduates' dreams of getting jobs and becoming socially recognized and successful in their chosen fields (Meñez, 2014).

The table 1. Profile of the respondents in terms of Office Assignment, Age, Sex, Civil Status and Educational Attainment, and Monthly Salary

Particulars	Frequency	Percent
Station/ Office Assignment		
Buenavista	5	12.20
Jordan	3	7.30
San Lorenzo	2	4.90
Iloilo City	18	43.90
Iloilo Province	11	26.80
Others Province	2	4.90
Total	41	100.00
Age		
20-29	5	12.20
30-39	10	24.40
40-49	13	31.70
50-59	11	26.80
60 and above	2	4.90
Total	41	100.00
Sex		
Male	10	24.40
Female	31	75.60
Total	41	100.00
Civil Status		
Single	9	22.00
Married	29	70.70
Widowed	3	7.30
Total	41	100.00
Educational Attainment		
Master's Degree	37	90.20
Doctorate Degree	4	9.80
Total	41	100.00
Montly Salary		
PHP 35,001 and above	9	22.00
PHP 30,001-PHP 35,000	2	4.90
PHP 25,001-PHP 30,000	5	12.20
PHP 20,001-PHP 25,000	4	9.80
PHP 15,000-PHP 20,000	21	51.20
Total	41	100.00

Table 2 shows the distribution of MPA Graduates according to number of trainings attended, present position, employment status, number of units in the master's program and length of service. As to the number of trainings and advance studies attended after the master's degree course, 34 (82.90%) had 5 trainings and below, and 7 (17.10%) had 6 trainings and above. As to the present position, majority of the graduates were technical staff with 14 (34.10%), followed by supervisor with 11 (26.80%), and clerical staff with 7 (17.10). As to the employment status, 39 (95.10%) had permanent status and 2 (4.90%) had contractual status. As to the number of units in the master program, 35 (95.10%) earned 9 units and below, while 6 (4.90%) earned 12 to 36 units. As to the length of service, at least halfway of the graduates had 5 to 15 years length of service. This means that majority of the respondents were technical staff, had 5 and below trainings, earned 9 units and below, and had 5 to 15 years length of service. The role of higher education institutions should not only be limited to impart knowledge but also to contribute to upkeep of a competitive economy and secure the dreams of graduates to get better jobs and gain social recognition in their respective field of endeavors.

Table 2. Distribution of MPA Graduates According to Number of Trainings Attended, Present Position, Employment Status, Number of Units in Master Program, and Length of Service

Particulars	Frequency	Percent
Number of training/seminars attended		
5 and below	34	82.90
6 and above	7	17.10
Total	41	100.00
Present Position		
Clerical staff	7	17.10
Technical staff	14	34.10
Supervisor	11	26.80
Department/Division Chiefs	6	14.60
Head of Office	3	7.30
Total	41	100.00
Employment Status		
Permanent	39	95.10
Contractual	2	4.90
Total	41	100.00
Number of Units in the master program		
9 units and below	35	95.10
12 to 36 units	6	4.90
Total	41	100.00
Length of service (in years)		
27-36	6	14.60
16-26	13	31.70
5-15	22	53.70
Total	41	100.00

Table 3 shows the distributions of MPA Graduates according to promotion status, duration of administrative position, and salary upgrade after MPA. As to the promotion status after graduated from MPA, 32 (78.00%) had administrative position, and 9 (22.00%) had technical position. As to the duration of administrative position, 28 (68.30%) for more than 3 years, and 13 (31.70%) for 3 years and below. As to salary upgrade after MPA, 26 (63.40%) received an increase in the salary, and 15 (36.60%) did not have the salary increase. The results imply that the graduates had administrative position for more than 3 years and had salary increase after graduated in MPA program.

This conforms to the study of Blace (2015) that MPA graduates are handling administrative positions either lower or middle administrative positions. Moreover, majority of them got a permanent position after obtaining MPA degree. However, this results contradicts to finding of Meñez (2014) that Master degree is not a guarantee for promotion but the commitment and dedication to work.

A master's degree is one of the necessary requirements for career advancement opportunities or rank promotion for those employed in public sector. Moreover, master degree in public administration is primarily designed to prepare the general public administrators for them to be equipped with appropriate knowledge and skills (Career Overview, 2015).

Table 3. Distribution of MPA Graduates According to Promotion Status, Duration of Administrative Position, and Salary Upgrade after MPA

Particulars	Frequency	Percent
Promotion status after graduated from MPA		
Administrative position	32	78.00
Technical Position	9	22.00
Total	41	100.00
Duration of Administrative Position		
More than 3 Years	28	68.30
3 years and below	13	31.70
Total	41	100.00
Salary upgrade after MPA		
Increase in the salary	26	63.40
No salary increase	15	36.60
Total	41	100.00

The competencies developed in the MPA Program, the following results were Human relation skills with 36 (87.80) which rank first; Leadership skills with 33 (80.50%), rank 2; Problem solving skills with 29 (70.70%), rank 3; Communication skills with 28 (68.30%), rank 4; Critical thinking skills with 27 (65.90%), rank 5; and Independent thinking skills with 18 (43.90%), rank 6. This implies that majority of the respondents developed human relation skills.

Table 4. Competencies Develop in the MPA Graduates

Particular	Frequency	Percent	Rank
Human relation skills	36	87.80	1st
Leadership skills	33	80.50	2nd
Problem solving skills	29	70.70	3rd
Communication skills	28	68.30	4th
Critical thinking skills	27	65.90	5th
Independent thinking skills	18	43.90	6th

The promotion status of MPA graduates after they graduated from MPA when they were classified according to station or office assignment, all of the respondents from Buenavista and Iloilo Province had administrative position while respondents from San Lorenzo and Jordan had technical position. Moreover, almost all of the respondents (15 or 83.33%) from Iloilo City had administrative position.

In the promotion status after graduated from MPA when classified according to age, all of the respondents aging 30-39 years old and 20-29 years old had administrative position while 50-59 years old respondents had technical position. Moreover, the two respondents that belongs to age brackets 60 years old and above each belonged either to administrative or technical position.

In the promotion status after graduated from MPA when classified according to sex, majority of the males and females had administrative positions. Moreover, when classified according to the civil status, majority of the single and married respondents had administrative position while most of the widowed had technical positions. In the promotion status after graduated from MPA when classified according to educational attainments, most of the respondents that with master's and doctor's degree had administrative position.

In the promotion status after graduated from MPA when the respondents were classified according to monthly income/salaries, the following results were: PHP 35,001 and above with 6 administrative positions and 3 with technical positions, PHP 30,001 to PHP 35,000 with 1 administrative position and 1 technical position, PHP 25,001 to PHP 30,000 with 5 administrative positions and none technical position, PHP 20,001 to PHP 25,000 with 3 administrative positions and 1 technical position, and PHP 15,000 to PHP 20,000 with 17 administrative positions and 4 technical positions.

Table 5. Promotion Status Classified According to Station or Office Assignment, Age, Sex, Civil Status, Educational Attainment and Monthly Salary

Station/Office Assignment	Promotion after Graduated MPA	Administrative Position	Technical	Total
Buenavista	5	0		5
San Lorenzo	0	2		2
Iloilo Province	11	0		11
Jordan	0	3		3
Iloilo City	15	3		18
Other Province	1	1		2
Total	32	9		41
Age				
20-29 years old	5	0		5
30-39 years old	10	0		10
40-49 years old	11	2		13
50-59 years old	5	6		11
60 years old above	1	1		2
Total	33	8		41
Sex				
Male	8	2		10
Female	24	7		31
Total	32	9		41
Civil Status				
Single	8	1		9
Widowed	1	2		3
Married	23	6		29
Total	32	9		41
Educational Attainment				
Master's Degree	29	8		37
Doctorate Degree	3	1		4
Total	32	9		41
Monthly Income				
PHP 35,001 & above	6	3		9
PHP 30, 001 to PHP 35,000	1	1		2
PHP 25,001 to PHP 30,000	5	0		5
PHP 20,001 to PHP 25,000	3	1		4
PHP 15,000 to PHP 20,000	17	4		21
Total	32	9		41

In the promotion status after graduated from MPA when they were classified according to number of training and advanced study attended after master's degree course, the following results were: 5 for those who attended trainings and below with 27 administrative positions and 7 technical positions, and 6 and above with 5 administrative positions and 2 with technical positions.

In the promotion status after graduated from MPA when classified according to the present positions, the following results were: clerical staff with 5 administrative positions and 2 with technical positions, technical staff with 11 administrative positions and 3 technical positions, supervisor with 8 administrative positions and 3 technical positions, department/division chief with 6 administrative positions and none technical position, and head of office with 2 administrative positions and 1 technical position.

In the promotion status after graduated from MPA when classified according to employment statuses, the following results were: permanent with 30 administrative positions and 9 technical positions and contractual with 2 administrative positions and none technical position.

In the promotion status after graduated from MPA when classified according to number of units, the following results were: 9 units and below with 28 administrative positions and 7 technical positions, and 12 to 36 units with 4 administrative positions and 2 technical positions.

In the promotion status after graduated from MPA when classified according to the lengths of services, the following results were: 27 to 36 years with 2 administrative positions and 4 technical positions, 16 to 26 years with 10 administrative positions and 3 technical positions, 5 to 15 years with 20 administrative positions and 2

technical positions.

Professionals are taking advanced studies to enhance their knowledge and skills that can be great help to effectively and efficiently perform their assignments (Encio, et al, 2018).

Table 6. Promotion Status Classified According to Number of Training, Present Position, Employment Status, Number of Units in MPA Program, and Length of Service

Promotion after Graduated MPA Administrative Position Technical Total		
Number of Training & advanced study attended		
5 training & below	27	5	32
6 training and above	7	2	9
Total	34	7	41
Present Position		
Clerical staff	5	2	7
Technical staff	11	3	14
Supervisor	8	3	11
Department/Division Chiefs	6	0	6
Head of Office	2	1	3
Total	32	9	41
Employment Status		
Permanent	30	9	39
Contractual	2	0	2
Total	32	9	41
Number of Units in MPA		
9 units & below	28	4	35
12 to 36 units	7	2	9
Total	35	6	41
Length of Service		
27 to 36 years	2	4	6
16 to 26 years	10	3	13
5 to 15 years	20	2	22
Total	32	9	41

CONCLUSIONS

Majority of the MPA graduates were female, married, with permanent position, with five to fifteen years of service, earned 9 units and below in the doctoral program, in the administrative position for more than 3 years, received increase in salary after finishing their MPA and most of them were from Iloilo City, with ages 40 to 49 years old. The competencies developed in the MPA Program were human relation skills, leadership skills, problem solving skills, communication skills, critical thinking skills, and independent thinking skills.

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TEACHING STYLE OF GRADUATE SCHOOL PROFESSORS AND THEIR STUDENTS' ACADEMIC PERFORMANCE

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ABSTRACT

Teachers have their philosophy determining how they teach. This teaching philosophy serves as a foundation for one's teaching style. This study aimed to determine the teaching styles of the forty five (45) graduate school professors and the academic performance of their students at Guimaras State College, Guimaras, Philippines for the Academic Year 2016-2017. They were classified according to categories of variables such as nature of employment, age, sex, civil status, length of teaching experience, educational attainment, and subjects taught. The descriptive method was utilized in this study. The questionnaire on the teaching style was patterned from Grasha and Riechman (1996) which was used to gather data from the respondents. The final grades of the students were used to determine their academic performance. The majority of the graduate school professors were old, dominated by males, most were married, have short teaching experienced, attained a doctoral degree, and taught professional subjects. Most of the graduate school students employed an expert teaching style. The academic performance of graduate school students was described as exceptionally good. Furthermore, no significant relationship existed between the teaching style of graduate school professors and their student's academic performance. It is recommended that the graduate school professors must know the different teaching styles to make proper adjustments as to what teaching strategies they can apply in the classroom.

Keywords: academic performance, graduate school, teaching style

INTRODUCTION

Education has evolved in leaps and bounds in recent years. Traditional teaching styles were based mainly on professors explaining a topic and students taking notes. However, education today revolves more around encouraging the student to awaken their curiosity and desire to teach (Patrick, 2013).

Finding effective teaching tactics and methodologies that can enhance learning activities and improve students' academic performance is one of the problems for teachers. A competent teacher must change his or her attitude in order to build skills and character that will help them achieve their goals for themselves and the community (Rocelie, 2011 cited in Ridwan, Sutresna, & Haryeti, 2019).

The theoretical framework of this research investigation on the teaching styles of graduate school professors and the students' academic performance was anchored on the theory of Constructivism on Social Development of Lev Vygotsky (1896-1934). Vygotsky's theory is one of the foundations of constructivism. Social Development Theory argues that social interaction precedes development; consciousness and cognition result from socialization and social behaviour. It asserts three major themes: First, social interaction plays a fundamental role in cognitive development. The second is the More Knowledgeable Other (MKO). The MKO refers to anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The MKO is normally thought of as the professor, a coach, a mentor, or an older adult, but the MKO could also be peers, a younger person, or even computers. The Zone of Proximal Development (ZPD) is the distance between a student's ability to perform a task under experts' guidance and/or with peer collaboration and the student's ability to solve the problem independently. According to Vygotsky, learning occurred in this zone. Humans use tools that develop from a culture, such as speech and writing, and to mediate their social environments. Initially, students develop these tools to serve as social functions and ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher order thinking skills.

There are varieties of teaching styles employed by the professors in different institutions, each with their unique methods and idiosyncrasies. Based on their level of knowledge and experience, professors develop methods they find most effective for students regularly (Talented, 2014). Moreover, professors teaching styles are affected by student learning ability in the educational system. The way professors teach should match the way students learn. The concern of instructors should be the students' style of learning. They can adapt their teaching styles to suit the students' learning styles (Teng Fatt, 2000).

Hence, this study was conducted to determine the teaching styles of graduate school professors and the academic performance of their students at Guimaras State College, Guimaras, Philippines for the Academic Year 2016-2017. Specifically, this study sought to answer the following questions: (1) What is the profile of the graduate school professors in terms of nature of employment, age, sex, civil status, length of teaching experience, educational attainment, and subject taught?; (2) What are the teaching styles of graduate school professors when taken as a whole and when classified according to nature of employment, age, sex, civil

status, length of teaching experience, educational qualification, and subjects taught?; (3) What is the academic performance of their students when taken as a whole and when classified according to nature of employment, age, sex, civil status, length of teaching experience, educational qualification, and subjects taught?; (3) What is the academic performance of their students when taken as a whole and when professors are classified according to nature of employment, age, sex, civil status, length of teaching experience, educational qualification, and subjects taught; and (4) Are there significant relationships in the teaching style of the graduate school professors and the academic performance of their students?

METHODOLOGY

The descriptive-correlational method of research was used in this study. The respondents of the study were the forty-five (45) graduate school professors at Guimaras State College, Guimaras, Philippines for the Academic Year 2016-2017. The instrument used in this study was patterned to Grasha-Reichmann (1996) teaching Scales to determine the teaching preference or style of the professors. The final grades of the students were used to determine their academic performance. By using this scale, a professor can optimize the teaching and learning environment for all students, develop sensitivity to a learner's needs, and design courses based on their teaching styles. There are five teaching styles, and most teachers possess all of these learning styles to a greater or lesser extent.

Expert: Similar to a coach, experts share knowledge, demonstrate their expertise, advise students and provide feedback to improve understanding and promote learning.

Formal authority: Authoritative teachers incorporate the traditional lecture format and share many of the same characteristics as experts, but with less student interaction.

Personal model: Incorporates blended teaching styles that match the best techniques with the appropriate learning scenarios and students in an adaptive format.

Facilitator: Designs participatory learning activities and manages classroom projects while providing information and offering feedback to facilitate critical thinking.

Delegator: Organizes group learning, observes students, provides consultation, and promotes interaction between groups and among individuals to achieve learning objectives. When the instrument were found valid and reliable, permissions were requested to the concerned authorities. When the permits were granted, the researchers distributed the questionnaire with the observance on ethical consideration that their identity and the data gathered will be treated with anonymity and confidentiality. The statistical tools used were the frequency count, percentage, and Chi-square with the aid of computers' Statistical Package for Social Sciences (SPSS) software. The level of significance was all set at 0.05 alpha.

RESULTS AND DISCUSSION

Profile of the Graduate School Professor

The profile of the graduate school professors when classified according to nature of employment, age, sex, civil status, length of teaching in the graduate school, educational attainment, and subjects taught the researchers used the frequency count and percentages. The result showed that in terms of the nature of employment, 30 (66.67%) were contractual faculty and 15 (33.33%) were permanent. In terms of age, the majority of the respondents (29 or 64.44%) were old and 16 (35.56%) were young. In terms of sex, 24 (53.33%) were males and almost the same frequency of 21 (46.67%) were females. In terms of civil status, 30 (66.67%) In terms of length of teaching, most of the faculty members (25 or 55.56%) have short teaching and 20 or 44.44% of faculty have long teaching experience. Out of 45 respondents, 33 (73.3%) have Doctoral Degree and 12 (26.75%) had a Masteral Degree. Further, almost half of them (24 or 53.33%) taught professional subject, 15 (33.33%) taught elective, and 6 (13.33%) taught foundation or core subjects.

Table 1. Profile of the Graduate School Professor

Particulars	Frequency	Percent
Nature of Employment		
Regular	15	33..33
Contractual	30	66.67
Total	45	100.00
Age		
Young (48 years old & below)	24	35.56
Old (49 years old & above)	21	64.44
Total	45	100.0
Sex		
Male	24	35.56
Female	21	64.44
Total	45	100.0
Civil Status		
Single	15	33.33
Married	30	66.67
Total	45	100.0
Length of teaching experience		
Short	25	55.56
Long	20	44.44
Total	45	100.0
Educational Attainment		
MA/MS degree	12	26.67
PhD/EdD degree	33	73.33
Total	45	100.0
Subject Taught		
Foundation/Core Subjects	6	13.33
Professional Subjects	24	53.33
Elective Subjects	15	33.33
Total	45	100.0

Teaching Styles of Graduate School Professor as a Whole Group

Table 2 shows the teaching styles of graduate school professors as a whole group. Results revealed that the prevalent teaching style of the graduate school professors was expert (16 or 35.55%), which ranks first. The delegator was rank second with 15 or 33.33%, the personal model was third with 8 or 17.79%, and the facilitator was rank fourth with 6 or 13.33%. This means that the teaching style of the graduate school professor is an expert. In these teaching styles, professors are similar to a coach who share knowledge, demonstrate their expertise, advise students and provide feedback to improve understanding and promote learning. The finding has supported the study of Razeghinejad, et al., (2010), in their study conducted on 100 faculty members they found that expert and delegator were most preferred teaching style of the professors.

Table 2. The teaching Styles of Graduate School Professors

Teaching Styles	Frequency	Percent	Rank
Expert	16	35.55	1
Delegator	15	33.33	2
Personal Model	8	17.79	3
Facilitator	6	13.33	4
Formal Authority	0	0	5
Total	45	100.0	

Teaching Styles of Graduate School Professors when Classified According to Variables

Table 3 presents the teaching styles of graduate school professors when classified according to nature of employment, age, sex, civil status, length of teaching in the graduate school, educational attainment, and subjects taught. As to nature of employment, contractual professors preferred facilitator and personal model teaching styles. As to Age, professors who were old mostly used delegator, facilitator, and expert teaching style while young professors used personal model. As to sex, male faculty members preferred the application of facilitator and expert whereas their female counterparts preferred delegator and personal model. As to civil status, majority of the married ones used delegator, facilitator, and expert teaching styles while singles used personal model. As to length of service, those who have long teaching experience preferred expert and personal model while those who have short teaching experience preferred delegator and facilitator. Further, as to educational attainment, professor with Ph.D./Ed.D. were interested in all four teaching style while professors with MA/MS degree were interested in facilitator teaching style. As to subject taught, those who taught foundation subjects only used expert teaching style, professors who taught electives subject preferred facilitator, and professional subjects were interested in delegator, personal model, and expert.

Professors adopt different approach to improve the quality of their teaching and increase student's learning ability (Amini, et al., 2012). However, the use of teaching style depends on the situation and the ability of the students (Ibrahim & Ahmad, 2016).

Table 3. Teaching Styles of Graduate School Professors when Classified According to Variables

	Delegator	%	Facilitator	%	Personal Model	%	Expert	%	Total	%
					Teaching Style					
Nature of Employment										
Regular	7	46.67	0	0	0	0	8	50	15	33.33
Contractual	8	53.33	6	100	8	100	8	50	30	66.67
Total	15	100	6	100	8	100	16	100	45	100
Age										
Young	4	26.67	2	33.33	5	62.5	5	31.25	16	35.56
Old	11	73.33	4	66.67	3	37.5	11	68.75	29	64.44
Total	15	100	6	100	8	100	16	100	45	100
Sex										
Male	2	13.33	6	100	2	25	14	87.5	24	53.33
Female	13	86.67	0	0	6	75	2	12.5	21	46.67
Total	15	100	6	100	8	100	16	100	45	100
Civil Status										
Single	7	46.67	0	0	6	75	2	12.5	15	33.33
Married	8	53.33	6	100	2	25	14	87.5	30	66.67
Total	15	100	100	100	8	100	16	100	45	100
Length of Teaching in Graduate School										
Short	11	73.33	4	66.67	3	37.5	7	43.75	25	55.56
Long	4	26.67	2	33.33	5	62.5	9	56.25	20	44.44
Total	15	100	6	100	8	100	16	100	45	100
Educational Attainment										
MA/MS Degree	3	20	3	50	0	0	6	37.5	12	26.67
Ph.D?Ed.D Degree	12	80	3	50	8	100	10	62.5	33	73.33
Total	15	100	6	100	8	100	16	100	45	100
Subjects Taught										
Foundation/core subjects	0	0	0	0	0	0	6	37.5	6	13.33
Professional Subjects	9	60	0	0	8	100	7	43.75	24	53.3
Electives Sujects	6	40	6	100	0	0	3	18.75	15	33.33
Total	15	100	6	100	8	100	16	100	45	100

Academic Performance of Students as a Whole Group

The academic performance of graduate school students as a whole group showed that majority of them were described as exceptionally good (18 or 40%). Followed by, 16 (35.56%) graduates that possessed very good academic performance. Moreover, 7 (15.55%) were described as superior and 4 (8.89%) have good academic performance.

Table 4. The Academic Performance of Graduate School Students

Learning Styles	Frequency	Percent	Rank
Exceptionally good	18	40.00	1
Very Good	16	35.56	2
Superior	7	15.55	3
Good	4	8.89	4
Total	45	100.0	

Academic Performance of Students when Professors Classified According to Variables

To determine the academic performance of students when their professors are classified according to nature of employment age level, sex, civil status, length of teaching in the graduate school, educational attainment, and subjects taught the researchers used the mean of their responses to the items in the questionnaire and the ranking.

The students' academic performance when their professors were classified according to nature of employment for contractual was very good while for regular was exceptionally good. As to age level, the young were very good and exceptionally good, while the old were exceptionally good. As to sex, the male was exceptionally good while the female was very good. As to civil status, the single was very good while the married was exceptionally good. As to length of teaching in the graduate school, the short was exceptionally good and the long was also exceptionally good. As to educational attainment, the MA/MS degree holders were exceptionally good and very good while the PhD/EdD degree holder was exceptionally good. As to the subjects taught the foundation subjects was exceptionally good, professional subjects was very good and the elective subjects was exceptionally good. The data are shown in Table 5.

Table 5. Academic Performance of Graduate School students when their Professors Classified According to Variables

Profile Variables	Academic Performance				
	Superior	Exceptionally Good	Very Good	Good	Total
Nature of Employment					
Regular	1	6	7	1	15
Contractual	6	12	9	3	30
Total	7	18	16	4	45
Age					
Young	2	7	7	0	16
Old	5	11	9	4	29
Total	7	18	16	4	45
Sex					
Male	4	11	7	2	24
Female	3	7	9	2	21
Total	7	18	16	4	45
Civil Status					
Single	3	4	6	2	15
Married	4	14	10	2	30
Total	7	18	16	4	45
Length of Teaching in Graduate School					
Short	3	10	9	3	25
Long	4	8	7	1	20
Total	7	18	16	4	45
Educational Attainment					
MA/MS degree	2	5	0	0	12
Ph.D Degree	5	13	4	4	33
Total	7	18	4	4	45
Subject Taught	1	3	1	1	6
Foundation/ Core Subjects	4	7	2	2	24
Electives Subjects	2	8	1	1	15
Total	7	18	4	4	45

Relationships between the Professor Teaching Styles and the Academic Performance of their Students

Table 6 shows the relationship between the teaching style and the academic performance of their students with the used of chi-square. The computed chi-square value was 5,106 at 9 degrees of freedom with a probability value of 0.825 meant that there was no significant relationship between the graduate school professor teaching styles and their students' academic performance. Most the graduate school professors have expert teaching styles and their students had exceptionally good academic performance. The data are shown in Table 6.

Table 6. The Relationships between the Professor Teaching Styles and the Academic Performance of their Students

Academic Performance		Teaching Styles				
		Delegator	Facilitator	Personal Model	Expert	Total
Superior	f	2	1	1	3	7
	%	13.33	6.67	12.5	18.75	15.56
Exceptionally good	f	4	3	3	8	18
	%	26.67	50	37.5	50	40
Very goos	f	7	1	4	4	16
	%	46.67	6.657	50	25	35.5
Good	f	2	1	0	1	4
	%	13.33	6.67	0	6.25	8.89
	f	15	6	8	16	45
Total	%	100	100	100	100	100

Chi-square value = 6.106   p-value =0.825 df = 9   Not Significant

CONCLUSION

The appropriate use of teaching style which corresponds to the student's needs improves their learning ability and academic performance. Thus, the exceptionally good academic performance implies that professors utilized applicable teaching style for the students. However, effective teaching style not only increases the students learning ability but also provides interest and enthusiasm to learners.

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CITIZEN SATISFACTION INDEX SYSTEM (CSIS) ON THE ECONOMIC AND INVESTMENT PROMOTION

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ABSTRACT Citizen Satisfaction Index System is a tool used by the Department of Interior and Local Government (DILG) in gauging citizen satisfaction in different service areas, which can then be used for agenda-setting. The citizens, as the intended end-users of public services, are considered to be in a better position to determine whether or not these services are delivered accordingly to address their needs. This study aimed to determine the awareness, availment, and satisfaction of the Buenavistahanon on the Economic and Investment Promotion Program which was implemented in the Municipality of Buenavista, Guimaras from Fiscal Year 2015 to 2016. It used the mix qualitative and quantitative research method. The twenty three (23) selected barangays of Buenavista, Guimaras served as the areas of the survey. A standardized structured interview instrument developed by DILG was used to collect data. Results showed that the level of awareness of the citizens in the Municipality of Buenavista for the services offered by the local government on economic and investment promotion was low. Likewise, the level of availment is low. However, from those who availed of such services, the level of satisfaction is high. Despite a high satisfaction level, the citizens still recommended for a higher need of action. They felt that there still is something that needed to be done and improved on the services/programs being provided. Results also implied that the local government unit in Buenavista should focus on the information dissemination and improvement of services on the area. The results are good bases in devising tools for planning and development in the municipality.

Keywords: Citizen Satisfaction Index System (CSIS), Economic and Investment Promotions, Municipality of Buenavista, Guimaras

INTRODUCTION

The Department of the Interior and Local Government (DILG) envision Local Government Units (LGUs) to be self-reliant, development- oriented safe, peaceful, socially-protective, business-friendly, environmentally, protective, as well as transparent, accountable and participate (CSIS Manual for Pilot Testing in Municipalities, 2016).

The new challenges inspire the DILG and the local government sector to keep up with the trends in governance and public management by setting higher standards in performance management that target fulfilment of actual needs of the citizens. If citizens are able to avail and maximize services that promote basic human development conditions, they are more likely to participate in economic and civil life (CSIS Manual for Pilot Testing in Municipalities, 2016).

The Department of Interior and Local Government (DILG) has been utilizing performance measurement tools for LGUs as early as the 1980s. As local government is a vast domain in terms of conceptual breadth, programs were focused on building the internal capacity of LGUs and on developing outcome indicators on some thematic performance areas. These tools like the Local Governance Performance Management System (LGPMS), Seal of Good Local Governance (SGLG), Transcending Accountable and Responsive Governance through Empowerment and Teamwork (TARGET) have been and are excellent diagnostic tools for LGUs to assess their readiness of local government units to provide service to their people. However, given the high mandate to LGUs in ensuring the people's general welfare, it is only reasonable that the clients' or the citizens' perspective should also be part of the equation in so far as local government performance is concerned (CSIS Manual for Pilot Testing in Municipalities, 2016). As in intended recipients and end-users of public services, the citizens are deemed in a better position to determine whether or not these services are delivered according to their needs and to the extent that they fulfil their everyday and long-term human development requirements. Thus, getting their sentiments, opinions and insights based on their own perception and evaluation as consumers of local public services is a logical method of shaping what local governments need to do to ensure welfare of the citizens, without neglect of statutory requirements expected from them (CSIS Manual for Pilot Testing in Municipalities, 2016).

This context provides the reason for the interest of this Department to develop and implement the Citizen Satisfaction Index System to serve as a tool for drawing in applicable information for gauging citizen satisfaction that can be used for agenda-setting of economic and human development plans and goals of LGUs. The revival of the CSIS was in the context of the DILG's renewed and expanded commitment towards widening the spaces for participation in local governance to ultimately pave ways to the development of more transparent,

accountable and highly performing governments (CSIS Manual for Pilot Testing in In recent decades organizational politics (OP) has become a growing field of interest in managerial studies. To date, the major scholarly effort has been dedicated to the exploration of Intra-organizational politics based on employees' perceptions. However, one of the important aspects of this phenomenon is the way in which it is viewed by the external organizational environment—by customers, clients, and as far as government agencies are concerned, by the general public as well (Gadot, E., 2007).

Weitz-Shapiro, Hiskey, and Seligson (as cited in Motalvo, 2009) stated that due to their proximity, citizens could also discern more effectively whether or not their local governments are fulfilling their expectations. If individuals are satisfied with their local officials' performance, they may express greater support for the system. However, if local institutions are unable to satisfy their demands, citizens will not only express their discontent with local governments, but they can also be increasingly dissatisfied with the way democracy works in the entire nation.

This study aimed to undertake the following objectives: (1) determine the socio- economic profile of the respondents; (2) determine awareness, availment, satisfaction, and overall satisfaction of the respondents with services under the economic and investment promotion; and (3) determine the level of overall satisfaction with these services.

METHODOLOGY

The CSIS made used of quantitative and qualitative research methods through face-to- face interviews with actual residents, randomly sampled from the barangays of the target LGU. This study utilized multi-stage probability sampling to select one hundred fifty (150) respondents. Sample size has a margin of error of ±8% at 95% confidence level. This sampling ensures that a cross-section of citizens in the Municipality of Buenavista were included in the sample. In other words, this set of measures virtually allows each citizen, 18 years old and above, to have an equal chance with everyone to be selected as respondent for the survey. This means that group of different political affiliations, levels of geographic of social proximity to government presence, occupations, and income strata would have relatively equal opportunity to participate in the survey. There are a total of 36 barangays in the Municipality of Buenavista. Using the spot allocation with 30 or more barangays as stipulated in the CSIS manual, 23 barangays were covered. Out of the selected barangays, 30 sample spots were determined using the sampling by probability proportional to size (PPS) in proportion to the 2015 Census of Population of the Municipality of Buenavista (CSIS Manual, 2016). The instruments used in this study was a questionnaire utilized by the Department of the Interior and Local Government (DILG). The questionnaire was distributed with strict observance on ethical consideration. The data gathered were encoded, tallied, analyzed and interpreted using Statistical Package for the Social Sciences (SPSS). The statistical tools used were frequency and percentage.

RESULTS AND DISCUSSION

Socio-demographic profile

The socio-demographic profile of the respondents includes such as sex, age, civil status, educational profile and employment profile. In these results, the equal distribution of the interviewees based on sex (whether male or female) is tantamount to giving equal opportunities to both genders to answer the survey questionnaire. The Kish Grid/ Probability Selection of the respondents are established in this study: (1) who are of voting age or at least 18 years of age, and (2) an equal number of respondents for male and female.

Demographic Characteristics of the Respondents

The demographic characteristics of the respondents are highlighted in terms of sex, age group, and civil status. In this study, it shows that the 150 respondents were evenly divided between male and female (75 or 50.0% each), respectively. From among the age groupings of the respondents, those aging between 45-54 years of age got the highest number (29 or 19.3%), followed by those aging between 18-24 years old (17 or 11.3%) and those aging between 30-34 and 55-64 (16 or 10.7%), respectively. It simply shows that the manner of choosing respondents followed the procedure as instructed by the CSIS team as shown by more or less even distribution in the age categories. As to the civil status, majority of them are married (106 or 70.7%), followed by those who are single (29 or 19.3%), while only a few were widows/ers (8 or 5.3%), having common law or live in partners (6 or 4.0%) and are separated or annulled (1 or 0.7%).

Educational Profile

The educational profile in this study is highlighted by the educational attainment of the respondents. Regarding educational attainment of the 150 respondents, all of them had undergone formal schooling. Thirty-eight (25.3%) of these respondents were college graduates, followed by high school graduates (21 or 14.0%) while the vocational/ TVET (7 or 4.7%), and with master's education and others (1 or 0.7%) got the lowest numbers, respectively. Accordingly, most of them (136 or 90.7%) are no longer studying in school.

Economic Profile

The economic data of respondents which provided information about their employment status as to whether employed, not employed, students, retirees, and if working; their places of work and occupation category. Results showed that half (75 or 51.1%) of the respondents were not employed. Those who were looking for a job and have worked in the past (18 or 12.2%), those having no job, not looking for a job and have not worked in the past (17 or 11.6%), the not employed, not looking for a job and have not worked in the past (17 or 11.6%), and those who are not employed, looking for a job but have not worked in the past (6 or 4.1%), the retirees (15 or 10.2) and students (2 or 1.4). Almost half (70 or 47.6%) are employed or working. They are those working at least 40 hours per week (44 or 29.9 %), and those working less than 40 hours per week (26 or 17.7%). For those who are working and have worked in the past, near half (40 or 45.5%) of them are employed within the barangay, followed by those within the municipality (15 or 17%), and within the region (14 or 15.9%), while those who have been employed within the province and the country constitute only to 11 (12.5%) and 8 (9.1%), respectively. Also, data revealed that those working and those who have experienced working in the past are laborers/unskilled workers (30 or 34.1%), being the primary occupation of these respondents. The rest are those having other professions (15 or 17.5%), as government officials or corporate managers (11 or 12.5%), professionals (9 or 10.2%), and service, shops, market workers (8 or 9.1%), among others. Moreover, other were managing proprietors and supervisors (2 or 2.3%), clerks (2 or 2.3%), and technicians and associated professionals (1 or 1.1%).

Housing and Other Information about the Respondents

Information on the housing profile is indicated concerning whether the respondents are beneficiaries of Pantawid Pamilyang Pilipino Program (4Ps), housing occupancy, basic utilities, and household's monthly income. The majority (135 or 90%) of the respondents in are not beneficiaries of the government on Pantawid Pamilyang Pilipino Program. Only 15 or 10% of these respondents are recipients of the program.

Housing Occupancy

Information on housing occupancy is indicated in the house and lot ownership. Results revealed that majority (106 or 70.7%) of the respondents are owners or owner-like possession of the house. Some of them (33 or 22%) dwell in own house or rent-free lot with owner's consent. While only very few (8 or 5.3%) are living in a rent-free house and lot with the owner's consent and other types (1 or 0.7%).

Basic Utilities

Toilet. Data on basic utilities included in the housing profile of the respondents include kind of toilet facility, a source of drinking water, the source of electricity and sources of information on the services, programs, projects or activities of the municipal government. Most of the respondents owned flush/water-sealed toilet (137 or 91.3%). Only a few of them have shared a toilet (10 or 6.7%) and with pit toilet/latrine (2 or 1.3%). However, one of them has no toilet or uses an open field as a toilet.

Source of Drinking Water. Respondents in this study have different sources of drinking water. Some of them use the community water system with own faucets (49 or 32.7%), bottled water (44 or 29.3%), and deep/artesian well as sources of their drinking water. Only a few (17 or 11.3%) have other sources, and the rest shared with others (7 or 4.7%), while only 2 (1.3%) sourced out from river, stream, lake and other bodies of water.

Source of Electricity, Data as to the source of electricity shows that the majority has owned electricity connection (126 or 84.0%), while only a few have shared electricity connection (20 or 13.3%). The rest of the respondents use generator and other sources of electricity (1 or 1.3%), respectively.

Primary Source of Information. Among the various sources of information on the services of the municipality of Buenavista, the majority of the respondents (95 or 63.3%) is informed through the Barangay Officials and Personnel. Other sources of information are the television (16 or 10.7%), the municipal government of Buenavista (12 or 8.0%), radio (10 or 6.7%), and family/friends (9 or 6.0%). Only 7 (4.7%) use other sources. With only less than one percent (0.6%) used the internet as a source of information.

Level of Awareness of the respondents on the Economic and Investment Promotion

Table 1 presented the awareness of the citizen of the Municipality of Buenavista to services offered by the Local Government Unit under the Economic and Investment Promotion. The results revealed that the services of which the citizens most aware of, are livelihood Programs with 80 or 53.33% responses, it is followed by regulation and supervision of businesses with 77 or 51.33% responses, then, public employment services and distribution of planting/farming/fishing materials and/or equipment with both have 71 or 47.33% responses and development and maintenance of tourist attractions and facilities (68 or 45.33%), however, these services were still rated low with a cut-off rate of 58.00%. The majority of the services have less than 65 responses, and out of 150 respondents, there is one (1) who completely incognizant of any programs or services under this service area. Among the other service areas offered by the LGU of Buenavista, it is alarming that all services under economic and investment promotion got a low level of awareness.

Table 1. Level of Awareness of the Respondents on Services under Economic and Investment Promotion

Service Indicator	Aware	Not Aware	Not Aware of any program	Total	Percantage Score	Cut-off	Adjectival Rating
Public employment services	71	78	1	150	47.33%	58.00%	Low
Regulation and supervision of businesses	77	72		150	51.33%	58.00%	Low
Promotion of Barangay Micro Business Enterprises	32	117		150	21.33%	58.00%	Low
Livelihood Programs	80	69		150	53.33%	58.00%	Low
Development and maintenance of tourist attractions and facilities	68	81		150	45.33%	58.00%	Low
Product/Brand Marketing of local goods and tourist attractions	35	114		150	23.33%	58.00%	Low
Investment promotion activites such as trade fairs, fiestas, business events and similar events	30	119		150	20.00%	58.00%	Low
Access to irrigation facilities or use of Irrigation equipment	56	93		150	37.33%	58.00%	Low
Prevention and control of plant and animal pests and diseases; fish kills and diseases	62	87		150	41.33%	58.00%	Low
Distribution of planting/farming/fishing materials and/or equipment	71	78		150	47.33%	58.00%	Low
Water and soil resource utilization and conservation projects	29	120		150	19.33%	58.00%	Low
Post-Harvest Facilites such as crop dyers, slaughter houses or fish processing facilities	44	105		150	29.33%	58.00%	Low
Accessible farm harvest buying/trading stations	45	104		150	30.00%	58.00%	Low
Enforcement of fishery laws in municipal waters to promote sustainable use of aquatic resources	51	98		150	34.00%	58.00%	Low

Level of Availment of the respondents on the Economic and Investment Promotion

Those citizens who were aware of the services or programs on the Economic and Investment Promotion were asked if they or any member of their family have availed or benefited the programs or services in the past 12 months. The data showed that the program on development and maintenance of tourist attractions and facilities (37 or 54.41%) got the most number of availment, it is followed by regulation and supervision of businesses with 35 or 45.45% responses, then, public employment services with 28 or 39.44% responses, but these 3 and all other services got a low adjectival rating. The results imply that most of the respondents were not able to avail the services or program provided by the local government of Buenavista.   Out of those who have not availed the services, mostly stated that the local government lacks proper information dissemination and that there are only selective beneficiaries. On the services concerning agricultural support, the respondents' reiterating reasons for not availing was because they have no agricultural areas for planting or farming, they were not farmers/fishermen, their house agricultural or coastal areas and programs or services only offered to selected citizens or places in the municipality.

Table 2. Level of Availment of the Respondents on Services under Economic and Investment Promotion

Services Indicator	Avail	Not Avail	Total	Percentage score	Cut-off	Adjectival Rating
Public employment services	28	43	71	39.44%	61.63%	Low
Regulation and supervision of businesses	35	42	77	45.45%	61.17%	Low
Promotion of Barangay Micro Business Enterprises	9	23	32	28.13%	67.32%	Low
Livelihood Programs	16	64	80	20.00%	60.96%	Low
Development and maintenance of tourist attractions and facilities	37	31	68	54.41%	61.88%	Low
Product/Brand Marketing of local goods and tourist attractions	18	17	35	51.43%	67.89%	Low
Investment promotion activites such as trade fairs, fiestas, business events and similar events	8	22	30	26.67%	67.89%	Low
Access to irrigation facilities or use of Irrigation equipment	10	46	56	17.86%	63.10%	Low
Prevention and control of plant and animal pests and diseases; fish kills and diseases	13	49	62	20.97%	62.45%	Low
Distribution of planting/farming/fishing materials and/or equipment	20	51	71	28.17%	61.63%	Low
Water and soil resource utilization and conservation projects	13	16	29	44.83%	68.20%	Low
Post-Harvest Facilites such as crop dyers, slaughter houses or fish processing facilities	7	37	44	15.91%	64.77%	Low
Accessible farm harvest buying/trading stations	20	25	45	44.44%	64.61%	Low
Enforcement of fishery laws in municipal waters to promote sustianable use of aquatic resources	14	37	51	27.45%	63.72%	Low

Note: If the percentage score is greater than cut of score,the adjectival rating is high, but if the percentage score is less than or equal to cut off score, the adjectival rating is low.

Level of Satisfaction of the respondents on the Economic and Investment Promotion

Table 3 shows the satisfaction rate of the programs or services on economic and investment promotion based on the perception of those respondents who have able to avail it. Development and maintenance of tourist attractions and facilities (32 or 86.49%) got the highest number of satisfaction. It is followed by regulation and supervision of businesses with 28 responses (80.00%), public employment services with 24 responses (85.71%), then, accessible farm harvest buying/trading stations with 19 responses or 95% satisfaction rate. Other services also got high satisfaction rate, and few got low satisfaction rates. However, services such as the promotion of barangay micro business enterprises, investment promotion activities such as trade fairs, fiestas, business events and similar event, and post-harvest facilities such as crop dryers, slaughter houses and fish processing facilities quoted as "small sample" due to an insufficient number of responses. Regardless of their ratings, those satisfied citizens were asked why they were satisfied with the services. They stated that these services of the local government are very beneficial to the community, regulations are strictly implemented especially concerning proper waste disposal and maintaining the cleanliness of tourist destinations, programs and services were implement, sustained and monitored, and able to receive farming and fishing equipment. Thus, the most prevalent reason of citizens for being dissatisfied with services offered was services provided only to selected citizens or areas in the municipality. Some said that they were not informed or they did not know if there are programs or services conducted, other services or programs were not implemented in their area and those programs conducted were not sustained and monitored.

Table 3. Level of Satisfaction

Services Indicator	Satisfy	Not Satisfy	Total	Percentage Score	Cut-off	Adjectival Rating
Public employment services	24	4	28	85.71%	68.52%	High
Regulation and supervision of businesses	28	7	35	80.00	66.57%	High
Promotion of Barangay Micro Business Enterprises	9		9	100.00	82.67%	Small Sample
Livelihood Programs	14	2	16	87.50	74.50%	High
Development and maintenance of tourist attractions and facilities	32	5	37	86.49	66.11%	High
Product/Brand Marketing of local goods and tourist attractions	18		18	100.00	73.10%	High
Investment promotion activities such as trade fairs, fiestas, business events and similar events	7	1	8	87.50	84.65%	Small Sample
Access to irrigation facilities or use of irrigation equipment	5	5	10	50.00	80.99%	Low
Prevention and control of plant and animal pests and diseases; fish kills and diseases	10	3	13	76.92	77.18%	Low
Distribution of planting/farming/fishing materials and/or equipment	18	2	20	90.00	71.91%	High
Water and soil resource utilization and conservation projects	10	3	13	76.92	77.18%	Low
Post-Harvest Facilities such as crop dryers, slaughter houses or fish processing facilities	7		7	100.00	87.04%	Small Sample
Accessible farm harvest buying/trading stations	19	1	20	95.00	71.91%	High
Enforcement of fishery laws in municipal waters to promote sustainable use of aquatic resources	12	2	14	85.71	76.19%	High

Note: If the percentage score is greater than cut off score, the adjectival rating is high, but if the percentage score is less than or equal to cut off score, the adjectival rating is low.

Need for Action

The majority of the services on economic and investment promotion got a high level of satisfaction, thus, the citizens suggested for an action from the local government unit. It is either for improvement, monitoring, or sustainability of the programs or services especially on the implementation of regulation and supervision of businesses (28 responses or 80.00%)and public employment services with 20 responses or 71.43%. Distribution of planting/ farming/fishing materials and/or equipment (16 responses or 80.00%) and products/brand marketing of local goods and tourist attraction (15 responses or 83.33%) also got a high adjectival rating. Only four services received as low in the need for action, and some are quoted as "small sample' due to an insufficient number of responses.

Table 4. Need for Action

Service Indicator	Yes	No	Total	Percentage score	Cut-off	Adjectival Rating
Public employment Services	20	8	28	71.43%	68.52%	High
Regulation and supervision of businesses	28	7	35	80.00%	66.57%	High
Promotion of Barangay Micro Business Enterprises	6	3	9	66.67%	82.67%	Small sample
Livelihood Programs	13	3	16	81.25%	74.50%	High
Development and maintenance of tourist attractions and facilities	26	11	37	70.27%	66.11%	High
Product/Brand Marketing of local goods and tourist attractions	15	3	18	83.33%	73.10%	High
Investment promotion activities such as trade fairs, fiestas, business events and similar events	6	2	8	75.00%	84.65%	Small sample
Access to irrigation facilities or use of irrigation equipment	9	1	10	90.00%	80.99%	HIgh
Prevention and control of plant and animal pests and diseases; fish kills and deseases	9	4	13	69.23%	77.18%	Low
Distribution of planting/farming/ fishing materials and/or equipment	16	4	20	80.00%	71.91%	High
Water and soil resource utilization and conservation projects	6	7	13	46.15%	77.18%	Low
Post-Harvest Facilities such as crop dryers, slaughter houses or fish processing facilites	3	4	20	42.86%	87.04%	Small sample
Accessible farm harvest buying/ trading stations	10	10	20	50.00%	71.91%	Low
Enforcement of fisher laws in municipal waters to promote sustainable use of aquatic resources	10	4	14	71.43%	76.19%	Low

Note: If the percentage score is greater than cut off score, the adjectival rating is high, but if the percentage score is less than or equal to cut off score, the adjectival rating is low.

Moreover, the result implied that the delivered services on economic and investment promotion were selectively availed or just a few were able to access those services. It justifies that the population of citizens who belongs to qualified beneficiaries on these services was limited. Besides, the economic and Investment category got the most number of small sample.

Action Grid
There were several services under Economic and Investment Promotion that belong to **Continued Emphasis** quadrant that was rated high in satisfaction and high in need for action. Those services were Public employment services; Regulation and supervision of businesses; Livelihood Programs; Development and maintenance of tourist attractions and facilities; Product/Brand Marketing of local goods and tourist attractions and Distribution of planning/ farming/fishing materials and/or equipment. This was implying that the quality of service delivery was good enough, but there was still need to take action on very specific facets of its delivery which was suggested reasons for those non-availment satisfaction/dissatisfaction respondents. Meanwhile, on the **Exceeded Expectations** quadrant, Economic Investment and Promotion services that belong were Accessible farm harvest buying/trading
stations and enforcement of fishery laws in municipal waters to promote sustainable use ofv aquatic resources. These were the services that were rated high in satisfaction but low in need for action. These were the services that were rated high in satisfaction but low in need for action. These services need to sustain positive aspects of service delivery that were cited by respondents. Less attention on service delivery reform may be expected and a certain priority commitments of the local government specific to the service areas but were not cited as strong points for satisfaction and may be identified as areas for savings or reallocation to other more critical services. There were also services under this program that belong to this quadrant but it contains a small sample, or a few numbers of citizens were able to avail. Those services were Promotion of Barangay Micro Business Enterprises;
Investment promotion activities such as trade fairs,fiestas, business events and similar events; and Post-Harvest Facilities such as crop dryers, slaughter houses or fish processing facilities.

Moreover, Prevention and control of plant and animal pests and diseases; fish kills and diseases; and Water and soil resource utilization and conservation projects belonged to Secondary Priority quadrant. This will be targeted as not such a critical area for improvement because it was rated relatively low in satisfaction and low in need for action. This was a reflection that the citizens viewed the services as low performing based on their expectations but relatively do not need urgent actions from the local government as much as the others. This was also implying that need for action may be minimal regarding the cost and utilization of the other resources.

Lastly, access to irrigation facilities or use of irrigation equipment was under the Opportunities for Improvement quadrant which was targeted as critical areas for improvement because it was rated relatively low in satisfaction but was deemed too highly require local government action. The system was a significant need for farmers have sustained the agricultural production of crops and concerning. This service area was really in critical points for serious quality improvements. Adverse aspects of, delivery of these services can be presumed as drivers for dissatisfaction; but if addressed, it can be a potential driver for satisfaction. Therefore, it should be given the highest priority and attention than those other quadrants. These may also suggest or reflect local issues in the community of Buenavista that demand attention of local authorities.
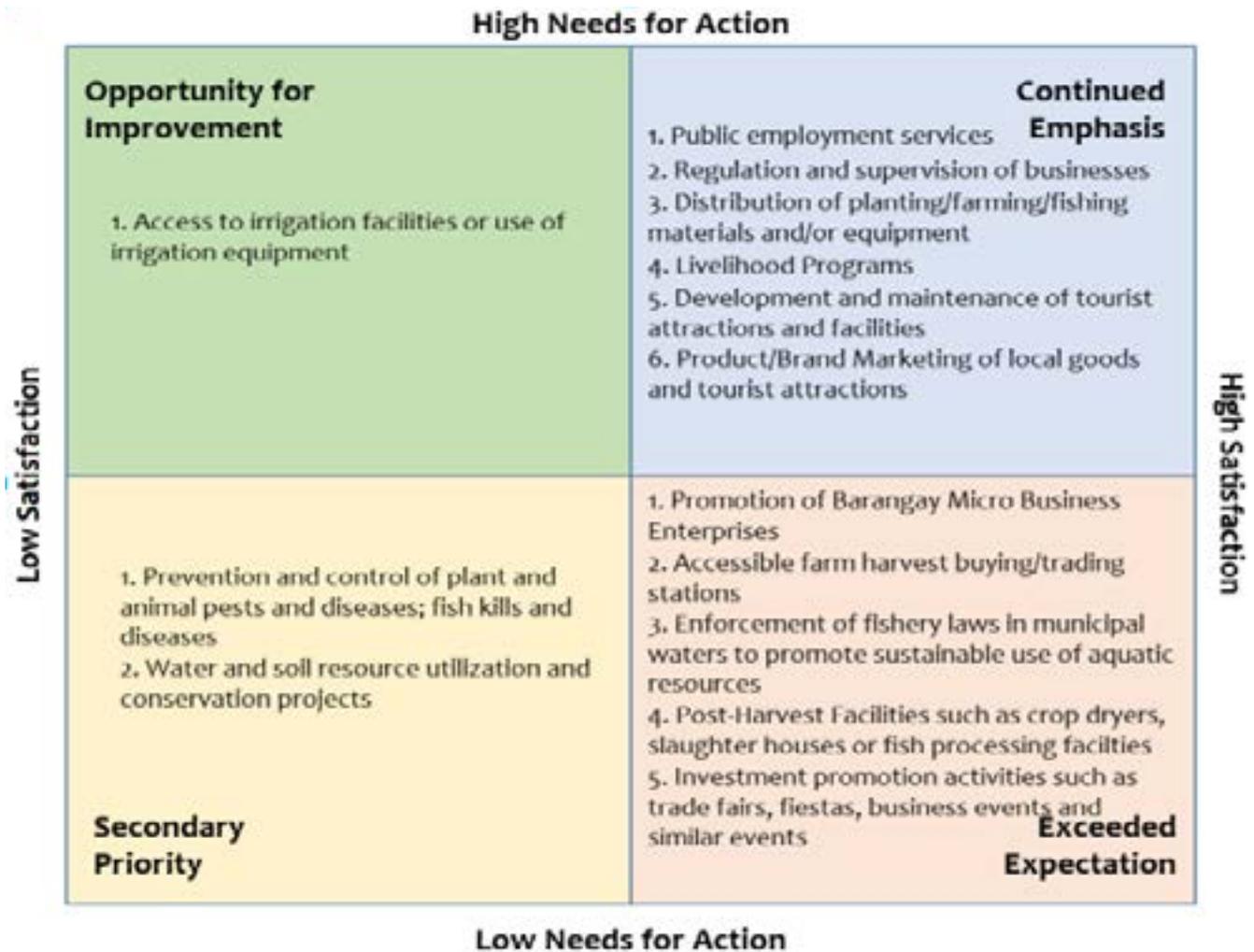

Figure 1. Action Grid on Economic and Investment Promotion

Overall Satisfaction

On the overall satisfaction, seventy eight (52.0%) were satisfied, and only 72 (48.0%) were not satisfied. It implies that majority of the citizens were satisfied with the Economic and Investment Promotion.

Overall Need for Action

On the overall need for action, majority of the citizen (126 or 84.0%) stated there was a need and only 24 (16.0%) stated none. It implies that majority of the citizen's state that there was a need for action for the services and programs under Economic and Investment Promotion.

Citizens General Attitude towards Local Government Unit

When the respondents were asked if they are going to still stay in the Municipality for the next five (5) years, 149 or 99.3% have said they would stay. Their primary reasons for staying they are safe and secure, they have established their premises and form of livelihood and have lived in the municipality since birth. However, the one

who answered he/she would transfer reasoned out that he/she need to find better and prosperous municipality.

The citizen's attitude toward the government on almost all of the items asked in the interview got positive responses from them. There were 133 or 88.7% respondents who agreed that they could declare their complaints about the local government and its officials without being afraid for their safety. There were 143 or 95.3% who stated that something good would come out of presenting local problems and issues to authorities.

On the item, "I will recommend to friends from other localities to transfer their residence to our place" those who agreed were 116 or 77.3%. The item, "I believe that any problem will be solved by the authorities in our locality," 126 or 84% agreed to it.

On the attainment of the vision and mission of the municipality which says that "The LGU is moving towards the direction of a Beautiful Buenavista, center for higher education in the Province of Guimaras, a better travel link between the Islands of Panay and Negros, with peaceful and progressive Agro-Industrial community of God-loving people, governed by a transparent leadership", 124 or 82.7% have agreed to this statement.

On the attainment of the goals of the Municipality, "The LGU is doing its part in (a) To unite Buenavistahanons in town building through active social, economic and political participation; (b) to provide the necessary support to educational and learning institutions; (c) to develop a system capable of adapting to modern travel standards; (d) to encourage economic activity by creating a friendly business environment for investors and entrepreneurs and at the same time develop a highly skilled and competitive labor force, and (e) to continuously improve the system of administration", the respondents who agreed were 127 or 84.7%. There were 109 or 72.7% of the respondents who agreed that "There is a high value of tax pesos based on local services provided by the municipal government" and 142 or 94.7% agreed that they could say "I am proud to say that I am a resident of Buenavista, Guimaras."

Only on the item having fair access to services from the local government despite status in life, which got a lower agreement of 82 or 54.7%. These results imply a positive general attitude towards the Municipality of Buenavista from its constituents.

Table 5. Citizens General Attitude towards Local Government Unit

Items	Agree		Disagree	
	F	%	F	%
Declare complaints about the local government and its officials without being afraid of safety.	133	88.7	17	11.3
Rich or poor citizens in our place have fair access to services from the local government	82	54.7	68	45.3
Something good may come out of presenting local problems and issues to authorities	143	95.3	7	4.7
Recommend to friends from other localities to transfer their residence to our place.	116	77.3	34	22.7
Believe that any problem will be solved by the authorities in the locality.	126	84	24	16
The LGU is moving towards the direction of "A Beautiful Buenavista, the center for higher education in the Province of Guimaras, a better travel link between the Islands of Panay and Negros, with peaceful and progressive Agro-Industrial community of God-loving people, governed by a clear leadership.	124	82.7	26	17.3
The LGU is doing its part in (a) To unite Buenavistahanons in town building through active social, economic and political participation; (b) to provide the necessary support to educational and learning institutions; (c) to develop a system capable of adopting to modern travel standards; (d) to encourage economic activity by creating a friendly business environment for investors and entrepreneurs and at the same time develop a highly skilled and competitive labor force, and (e) to continuously improve the system of administration	127	84.7	23	15.3
There is a high value of tax pesos based on local services provided by the municipal government.	109	72.7	41	27.3
Proud to say that "Iam resident of Buenavista, Guimaras".	142	94.7	8	5.3

CONCLUSIONS

The level of awareness of the citizens in the Municipality of Buenavista for the services offered by the local government on economic and investment promotion was low. Likewise, the level of availment is low. However, from those who availed, the level of satisfaction is high.

Despite high satisfaction, yet the citizens still recommended for a high need for action. They felt that there is/ are something that need be done or improved on the services or programs being provided. It shows that the local government unit of Buenavista should focus on the information dissemination and improvement of services on the area.

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KNOWLEDGE, ATTITUDE, AND PRACTICES (KAP) OF STAKEHOLDERS IN IGANG BAY MARINE RESERVE (IBMS)

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ABSTRACT This study was conducted to determine the knowledge, attitude, and practices of stakeholders in IBMS. The descriptive utilizing survey method of data gathering was used in this study. The respondents of the study were the 49 local chief executives and local government unit key officials, students/youth, local business owners and school head and teacher. Results revealed that majority respondents identified biodiversity as trees, plants, and forests. As to the ocean marine pollution, the number sources of pollution were from plastics and human activity. As to climate change, they believed that it was anchored to global warming (36 or 73.5%). Furthermore, they have positive attitude outlook on "I feel the need to protect the various ecosystems because it affects my sources of livelihood" with 41 or 83.7%. Moreover, on the practices on the marine protected area, majority of them were contributing to the conservation and protection of biodiversity through proper waste segregation. Radio was chosen as most effective media to spread awareness regarding the status of our country's biodiversity. The study showed that stakeholders have high knowledge, positive attitude, and good practices.

Keywords: Knowledge, attitude, practices, Igang Bay Marine Reserve, Guimaras

INTRODUCTION

Coastal and marine ecosystems are one of the most prolific ecosystems. However, it is also one those that are threatened. These ecosystems include open ocean marine areas, near shore coastal areas, where freshwater and saltwater mix, and certain terrestrial ecosystems such as sand dunes. Most of the world's population lives in coastal areas that are dependent on the various ecosystem services that marine and coastal ecosystems such as coral reefs, mangroves, and seagrass beds provide (UNEP, 2015). The coastal ecosystems complete the life cycles of a wide variety of commercially and ecologically important marine life that supports the livelihood of nearly 60% of Filipinos (DENR, 2016). Given the importance of coastal and marine resources, a coastal and marine ecosystems management program (CMEMP) was developed.

The Coastal and Marine Ecosystems Management Program (CMEMP) is a national program aiming to "comprehensively manage, address and effectively reduce the drivers and threats and degradation of the coastal and marine ecosystem". This is to achieve and promote sustainability of ecosystem services, food security and climate change resiliency for the benefit of the present and future generations. Under the program, the protection and management shall be anchored on Integrated Coastal Management, Partnership Building, Ecotourism/Sustainable Tourism, Protection, Management, and Law Enforcement, Communication, Education and Public Awareness, and Valuation of Ecosystem Services (DENR, 2017). In order to effectively establish Marine Protected Areas (MPAs), this CMEMP was implemented together with the local government units and the community.

A Marine Protected Area (MPA) is any specific marine area reserved by law or other effective means and is governed by specific rules or guidelines to manage activities and protect the entire, or part of, the enclosed coastal and marine environment. These are established nationally through the National Integrated Protected Areas System (NIPAS) Act or through local (municipality or city) government planning and ordinance (Post, n.d.). MPAs include marine reserves, fully protected marine areas, no-take zones, marine sanctuaries, ocean sanctuaries, marine parks, locally managed marine areas, to name a few. Many of these have quite different levels of protection, and the range of activities allowed or prohibited within their boundaries varies considerably too (Post, n.d.; World Wildlife Fund, 2017). MPAs have three goals: natural heritage, cultural heritage and/or sustainable production (Wahle, Lyons, Barba, Bunce, & Fricke, 2003).

To address the pressing concern on the protection and preservation of coastal and marine resources, the Philippines has now millions of hectares of established MPAs. Among these MPAs found in Guimaras Island is the Igang Bay Marine Reserve. In 2010, the Igang Bay Marine Reserve was officially launched covering 18 hectares through the management of the LGU-Nueva Valencia, Guimaras, the John B. Lacson Foundation Maritime University (JBLFMU), Bureau of Fisheries and Aquatic Resources (BFAR 6) and the Department of Environment and Natural Resources (DENR 6). Baseline information is necessary as this will be the basis for evaluating the impacts of the program in the community and this can be done through Knowledge, Attitudes, and Practices (KAP) Survey. Hence, the KAP Survey was carried out in this MPA sites at Guimaras Island.

This study was conducted to determine the Knowledge, Attitude, and Practices (KAP) of the Nine (9) Coastal and Marine Eco-System Management Program (CMEMP) in Guimaras Province, particularly of Brgy.

Igang, Nueva Valencia. Specifically, it aimed to: (1) determine the knowledge of stakeholders on biodiversity, ecosystems, marine pollution, and climate change; attitudes; and practices in Igang Bay Marine Reserve (2) identify the different communication channels that are being used/accessed by the stakeholders.

METHODOLOGY

The research design of the study was descriptive utilizing survey method of data gathering. This was the most appropriate design to be used because the study aimed to determine the Knowledge, Attitude, and practices of the stakeholders relative to the implementation of MPA's in Brgy. Igang, Nva. Valencia, Guimaras. The 10% of the total population of the different stakeholders were utilized as a sample of the study composing sectors of students, religious groups, people's organization, business, Brgy. Officials, respondents, and professionals. The permission from the Mayor of the municipality was secured by the PENRO, Guimaras prior to fielding of enumerators. The enumerators were composed of the Guimaras State College (GSC) graduates coming from the College of Agriculture who have enough knowledge in data gathering. The permission from the Mayor of the municipality of Nva. Valencia was secured by the PENRO, Guimaras prior to fielding of enumerators. The enumerators were composed of the Guimaras State College (GSC) graduates coming from the College of Agriculture who have enough knowledge in data gathering. Upon reaching the barangay, a courtesy call to the Punong Barangay was done to let them know of the activity to be undertaken in the Barangay as well as to request assistance to guide the enumerators in identifying the houses of the identified respondents. After all the target respondents were interviewed, the filled in questionnaires were checked by the GSC Research Team to ensure the correctness and cohesiveness of the flow of the information provided in each filled questionnaire. After data cleansing encoding commences. The encoders identified by the Research team were likewise trained on how to code the individual responses and encode them in Microsoft Excel format and finally, the analysis was processed using SPSS. The statistical tools used were frequency, percent, and ranking.

RESULTS AND DISCUSSION

Knowledge of the Stakeholders On Biodiversity

Marine Protected Areas (MPAs) are important in the preservation of marine species and biodiversity. The level of knowledge among the respondents of Barangay Igang on biodiversity and other facts related to MPAs was determined. It was found out that of the 49 respondents, 34 or 69.4%, said yes, they know what biodiversity is while 15 or 30.6% answered no, they don't know about biodiversity. This simply shows that the educational campaigns of the different organizations especially by the Provincial Environmental Office within the Provincial Environmental Office within the Province have already paid off relative to the responses made by the respondents on their level of knowledge on biodiversity (Fig. 1).
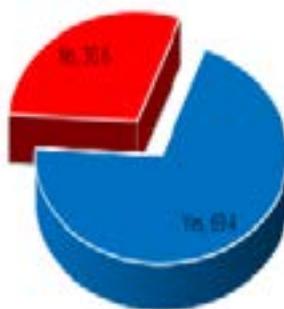

Fig. 1. Knowledge of the respondents on Biodiversity.

The 34 respondents who have knowledge about biodiversity identified what composes a bio diverse area, 66.7% answered trees/ plants/ forests, and animals/ microorganisms respectively, estuaries/coastal areas 70.4%, and rivers/lakes/streams 59.3% of the responses. Multiple responses among respondents were made (Fig. 2).
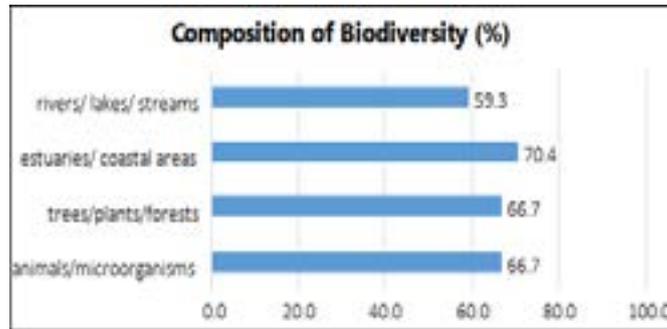
On Ecosystems On the item which queried on what are the roles of the coastal and marine and other ecosystems in the area, the respondents replied that the most important role of coastal marine and other ecosystems are as "habitat of various species" (100%), this was closely followed by a response as "source of food, livelihood and medicinal benefits to people" (96.3%), "protect us from extreme/destructive effects of storm surges, waves, and currents" (96.3%). It could also provide recreational, physical and mental benefits, tourism activities, and spiritual activities (74.1%), have economic and environmental benefits (44.4%), and coastal, marine and other ecosystems are interconnected (3.7%). What can be gleaned from these responses was that the respondents have high knowledge on the importance of these coastal and marine ecosystems which surrounds them either in their personal lives or in the protection and preservation of life. However, they less believed that the interconnection on coastal, marine and other ecosystem was among the roles of the coastal marine ecosystem (Fig. 3).
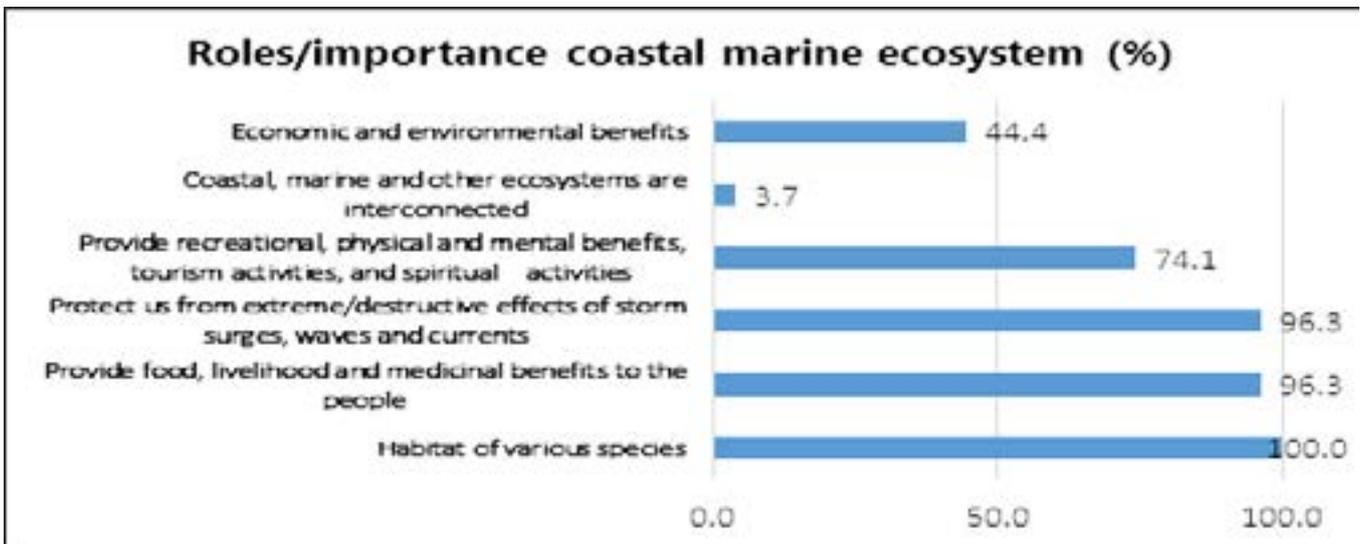
Fig. 3. Role of coastal, marine and other ecosystems in the area.

Respondents identified different ecosystems in the area, wherein all of them identified mangrove forests (49 or 100%), followed by sea grass beds and river (47 or 95.9%), coral reefs (45 or 91.8%), and mudflat areas (42 or 85.7%). Meanwhile, least of the respondents consider caves (9 or 18.4%), lakes (5 or 10.2%), and lowland forest (2 or 4.1%), being part of the marine ecosystem. It can be gathered from these answers that the respondents are only aware of the marine ecosystems which they are so familiar with and they are not familiar with other ecosystems considering that their immediate surroundings are within a marine ecosystem (Fig. 4).

Fig. 4. The different marine ecosystems

Mudflats. When the respondents were asked on the characteristics of mudflats they have varied responses. Relative to the conditions of mudflat results showed that it was found where tidal waters flow slowly (33 or 67.3%), deposited by tides/rivers (31 or 63.3%) but few characterized mudflat as flooded due to change of tide level (4 or 8.2%). Mudflat was important because it served as nursery areas fo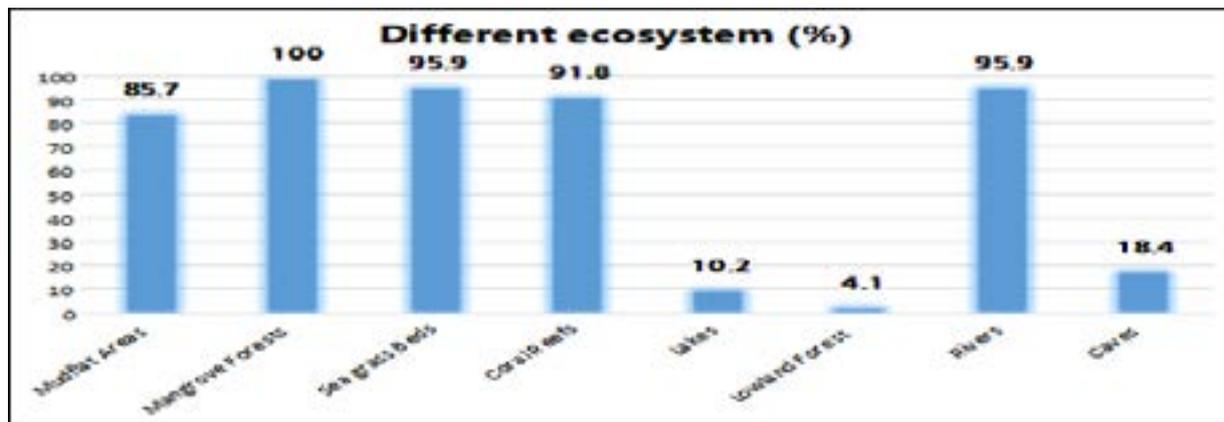r some fishes and provide feeding and resting areas for water birds (47 or 95.9%) respectively and because it has rich in nutrients supporting a diversity of species (24 or 49%). The most common factors/ activities that affect mudflats were weather (40 or 81.6%), location (18 or 36.7%), and tree planting activities (13 or 26.5%). When the respondents were asked if the conditions of mudflat directly affect the source of food of various wildlife species the majority of them answered yes with 40 or 81.6%.

Table 1. Important characteristics and factors that affect mudflat areas (n=49)

Particulars	f	%	Rank
Characteristics			
Found in areas where tidal waters flow slowly	33	67.3	1
Muds are deposited by tides or rivers	31	63.3	2
Flooded due to change of tide level	4	8.2	3
Importance			
Provide feeding and resting areas for water birds	47	95.9	1.5
Nursey areas for some fishes	47	95.9	1.5
Rich in nutrients supporting a diversity of species	24	49	3
Influencing factor			
Weather	40	81.6	1
Location of mudflats	18	36.7	2
Tree-planting	13	26.5	3

Mangrove Forests. Table 2 describes the characteristics, importance and factors/activities that affect mangrove forests. Results showed that 45 or 91.8% of the fisher folks believed that mangrove forests are composed of trees and shrubs in salty coastal areas, having a soft substrate (40 or 81.6%), and as well as it has prop roots, thick and waxy leaves (38 or 77.6%).

All of the respondents also appreciated mangrove forest as a natural breakwater (49 or 100%), source of food to many organisms (47 or 96%) and provides refugees to organisms (40 or 81.6%). Some factors/activities that affect mangroves were charcoal making with 34 or 69.4% followed by illegal logging with 27 or 55.2%. Furthermore, few have said that mangroves are affected by fishing grounds with 2 or 4.1% responses. These assessments of the respondents about mangroves showed that they have enough knowledge and understanding of the characteristics, importance and factors/activities that affect mangrove forest. Their observations speak truly of the present conditions of the mangroves in their area because they observed these situations every day.

Mangrove ecosystems are comprised of salt-tolerant, woody mangrove trees and shrubs. They are located in shallow, low-oxygen sandy or muddy areas along shorelines. There are over 80 different species of mangrove trees throughout the tropical and subtropical zones of North and South America, Africa, the Middle East, Asia, and Oceania. The U.S. only has three species: red,

black, and white mangroves. Black and white
mangroves are less salt-tolerant than the red mangrove and are found farther from the water's edge. They have special adaptations to help them obtain oxygen and release excess salt. Red mangroves are the most salt-tolerant and are found closest to the water's edge. They are often submerged in shallow water with a thick, partially exposed network of roots (prop roots) that grow
down from their branches. Their roots serve many important functions. They stabilize the shoreline by absorbing wave action and decreasing water flow. This allows sediments to accumulate. This prevents excess sediment and nutrients from reaching nearby seagrass and coral reef ecosystems. The prop roots also serve as a substrate (place of attachment) for numerous species of sponges, tunicates, algae, and shellfish. The mangrove forest provides a complex habitat for many ecologically and economically important organisms, including algae, sponges, barnacles, snails, mussels, crabs, fish, and birds. Many of these organisms use the mangrove for protection and feeding, and also as a nursery ground. They will then migrate to other marine ecosystems (coral reefs, open-ocean, sandy shores) as adults. This makes mangrove ecosystems a vital part of maintaining fisheries
within and adjacent to mangroves. Mangroves once covered vast areas of coastlines, but coastal development and pollution have destroyed significant amounts of mangrove habitat throughout the world (National Geographic).

Table 2. Characteristics, Importance and factors/activities that affect mangrove forest (n=49)

Particular	f	%	Rank
Characteristics			
Composed of trees and shrubs in salty coastal areas	45	91.8	1
Has soft substrate	40	81.6	2
Prop roots, thick and waxy leaves	38	77.6	3
Importance			
Natural breakwater	49	100	1
Food source to many organisms	47	96	2
Provide refuge to organisms	40	81.6	3
Influencing factor			
Production of charcoal	34	69.4	1
Logging	27	55.2	2
Fishing grounds	2	4.1	3

Multiple Responses
Seagrass Beds.
Almost of the respondents 45 or 91.8% agreed that seagrass beds affect fish productivity. While data in Table 5 describes the important characteristics and factors that affect seagrass beds along MPA in Barangay Igang. Results showed that in terms of the seagrass important characteristics, all of the respondents believed that the seagrass entirely immerse in seawater (49 or 100%), beds grow in marine and brackish water (38 or 77.6%)
responses, but few (4 or 8.2%) said that depth distribution is limited by availability of light. These results only showed that some of the fisher folks do not have enough knowledge and understanding of the distribution and habitat of seagrasses.
The seagrass ecosystem is defined as a unit of the biological organization comprised of interacting biotic and abiotic components. The structural components are shelter and food and feeding pathways and biodiversity. Functional components include the rate of nutrient cycling, the rate of energy flow, and biological regulation.
Healthy intact seagrass ecosystems provide services since they relate to the health, stability, and well-being of the environment in which they live, but also to that of human populations (Phillips and Milchakova, 2003).

Table 3. Importance characteristics and factors that affect seagrass beds. (n=49)

Particulars	f	%	Rank
Characteristics			
Entirely immersed in seawater	49	100	1
Grow in shallow marine and brackish waters	38	77.6	2
Depth distribution limited by the availability of light	4	8.2	3
Importance			
Nursery grounds for fish and invertebrates	45	91.8	1
Maintenace of biodiversity: provide shelter and food for marine animals	44	89.8	2
Stabilize coastlines and absorb nutrients from runoff	11	22.4	3
Influencing factor			
Accidents resulting to oil-spills	47	95.9	1
Tree-planting	22	44.9	2
Boat-docking	2	4.1	3

Multiple Responses

Coral Reefs. The 43 or 87.8% out of 49 respondents have agreed that coral reefs affect fish productivity. This implies that the knowledge of the respondents on the role of coral reefs in fish production is high. Furthermore, data in Table 6 shows the important characteristics and factors that affect coral reefs. Results revealed that 47 or 95.9% of the respondents agreed that coral reefs are made of either soft or hard organisms, it was also live, bleached or dead with algae (24 or 49%), and extensive or patchy (15 or 31%). Despite the high percentage of the respondents who had agreed on the identified characteristics of the coral reefs yet many of
them did not agree on these pre-set notion of the coral reefs characteristics. With regards to the importance of coral reefs, 49 or 100% of the respondents agreed that indeed coral reefs are habitat for fishes, that it can help in reducing strong wave action (33 or 67.3%) and can be a
source of recreation for people especially those who are fond of scuba diving (40 or 81.6%). Factors or activities affecting coral reefs were dynamite fishing (47 or 96%), global warming (27 or 55.1%) and poaching (13 or 26.5%).

Table 4. Importance characteristics and factors that affect coral reefs (n=49)

Particulars	f	%	Rank
Characteristics			
Soft or hard	47	95.9	1
Live, bleached or dead with algae	24	49	2
Extensive or patchy	15	29	3
Importance			
Habitat for fishes	49	100	1
Recreation	40	81.6	2
Reduce strong wave action	33	67.3	3
Not specified	2	4.1	4
Influencing factors			
Dynamite fishing	47	96	1
Global warming	27	55.1	2
Poaching	13	26.5	3

On Ocean and Marine Pollution The majority of the respondents answered yes, they have knowledge about the ocean and marine pollution (82.3%), and furthermore 78% gave an affirmative response that people do contribute to ocean and marine pollution. These data only showed that they were aware of this condition and that people were mainly the culprit why such conditions prevailed (Fig. 6).
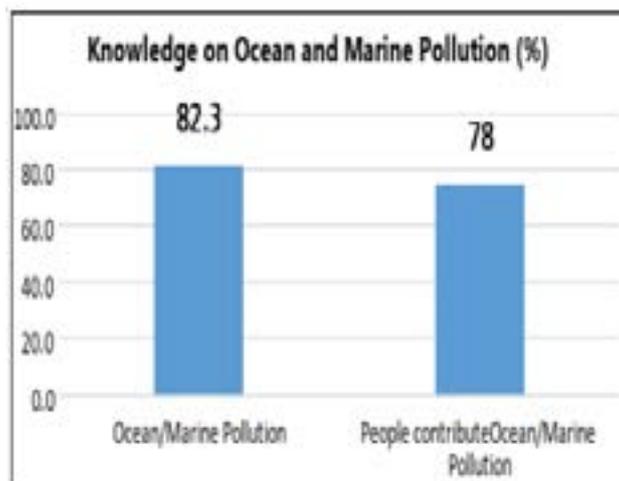

Fig. 5. Overall Knowledge on Ocean and Marine Pollution

The identified sources of ocean/marine pollution were plastics and human activity (44 or 89.8%), oil from cars, heavy machinery, and industry other land-based sources (34 or 69.4%), pathogens from sewage and livestock (27 or 55.1%), sedimentation due to erosion from mining, farming and coastal dredging (22 or 44.9%), noise produced by supertankers, other large vessels and machinery (22 or 44.9%), runoff from sewage, deforestation, farming, and other land use (18 or 36.7%), and Toxins (Heavy metals, Radioactive Substances, etc.) with 5 or 10.2% responses.

Table 5. Sources of Ocean/Marine Pollution (n=49)

Particulars	f	%
Plastics	44	89.8
Human Activity (Waste Disposal)	44	89.8
Oil from cars, heavy machinery, indusrty, other land-based sources	34	69.4
Pathogens from sewage and livestock	27	55.1
Sedimentation due to erosion from mining, farming and coastal dredging	22	44.9
Noice produced by supertankers, other large vessels and machinery	22	44.9
Runoff from sewage, deforestation, farming, and other land use	18	36.7
Toxins (Heavy metals, Radioactive Substances, etc.)	5	10.2

On Climate Change
In terms of the knowledge on climate change, out of 49 respondents, 80% have knowledge but still, there's 20% who was not aware of climate change. Climate change was anchored to shifting of weather patterns (22 or 44.9%), global warming (36 or 73.5%), and caused by humans, use of fossil fuels, which releases carbon dioxide and other greenhouse gases into the air (24 or 49%). In addition, minority of the responses identified that climate change can make coastal areas vulnerable to sea level rise, warming of the sea/oceans, intensified weather disturbances (5 or 10.2%), low lying coastal communities being highly vulnerable to sea level rise (7 or 14.3%), have extreme weather conditions such as drought and flooding can compromise terrestrial crops and pressure on coastal and marine resources (29 or 59.2%), and ocean acidification (7 or 14.3%).

Table 6. Knowlegde on Climate change (n=49)

Items	f	%
Global warming	36	73.5
Extreme weather conditions such as drought and flooding can compromise terrestrial crops and pressure on coastal and marine resources	29	59.2
Caused by humans, use of fossil fuels, which releases carbon dioxide and other greenhouse gases into the air	24	49
Shifting weather patterns	22	44.9
Low lying coastal communities being highly vulnerable to sea level rise	7	14.3
Ocean acidification	7	14.3
Coastal areas are vulnerable to sea level rise, warming of the sea/oceans, intensified weather disturbances	5	10.2

Attitude on Marine Protected Area

Table 7 presents the attitude of the respondents towards Igang Bay Marine Reserve. Results revealed that items 1-6 have positive responses ranging from strongly agree to slightly agree, whereas items from 7-10 have negative responses from agree to strongly disagree.

Out of 49 respondents, 41 or 83.7% strongly agreed, 4 or 8.2 % were slightly disagree, 2 or 4.1% agree that there's the need to protect the various ecosystems because it affects their source of livelihood.

When asked if they are always willing to help in protecting various ecosystems by promoting sustainable use of biodiversity resources, 41 or 83.7% strongly agree, 4 or 8.2% slightly agree, 2 or 4.1% agree, only 1 or 2% were slightly and strongly disagree. Furthermore, 39 or 79.6% strongly agree, 8 or 16.4% slightly agree that it is every Filipino citizen's obligation and responsibility to protect our country's biodiversity and have to find ways to do starting in their area or community though there's still 1 or 2% whom slightly and strongly disagree. Moreover, 38 or 77.6% strongly agree, 9 or 18.4% slightly agree that they want to show to their family, relatives, and friends the ways to conserve and protect our biodiversity instead for the 1 or 2% who showed negative responses. Majority of the respondents with 35 or 71.4% strongly agree, 11 or 22.4% slightly agree, 2 or 4.1% agree that they decided to be more conscious of their actions so that they could contribute to increasing resilience against the adverse impacts of climate change. In terms of their support and participation in local and national government efforts/programs in protecting our biodiversity, 42 or 85.7% strongly agree, 4 or 8.2% slightly agree though only 1 or 2% agree, slightly and strongly disagree.

When asked if they depend on people who are more knowledgeable in protecting our biodiversity, 20 or 40.8% strongly agree, 4 or 8.2% slightly agree, 7 or 14.3% agree, 7 or 14.3% slightly disagree and 11 or 22. 4% strongly disagree. Moreover, 3 or 6.1% strongly agree, 4 or 8.2% slightly agree, 10 or 20.4% agree, 15 or 30.6% slightly disagree and 17 or 34.7% strongly disagree about disregarding critical issues about our biodiversity because of lack of knowledge. The majority also of the respondents strongly disagree with 35 or 71.4% when they were asked if they don't want to contribute to the country's biodiversity conservation activities because it is not their primary concern. However, 16 or 32.7% strongly agree that they blame other people for floods and other calamities that are happening because of their irresponsible actions and negligence to the current condition of our biodiversity.

The result implies that selected respondents who participated in the survey have a positive attitude outlook towards their support on marine protected areas established in their locality or area of residency. This was a good indication of the participatory approach of the community on the establishment of MPA but proper implementation and education must be done in order to minimize negative attitude of the community people when participating and cooperating towards the success of conserving MPA's.

MPA networks, that are ecologically coherent and that protect 30 percent of each habitat in our oceans are expected to contribute significantly to the recovery of marine biodiversity and a productive ocean (Roberts & Hawkins, 2000; Gell & Roberts, 2003; Halpern, 2003). This target has been recommended by the World Parks Congress (WPC 2014). New research (Brander et al., 2015) shows there is also a strong economic case for protecting ocean assets through expanding MPAs globally. This and other analyses show MPAs can contribute to reducing poverty, building food security, creating employment and protecting coastal communities (Van Beukering et al., 2013; Ferrario et al., 2014; FAO, 2014; Brander et al., 2015). The research by Brander et al. (2015) shows expanding the coverage of MPAs to 30 percent globally is expected to generate major economic benefits that significantly outweigh the costs. This holds true under a range of scenarios for no-take MPAs to cover 10-30 percent of marine and coastal areas with varying degrees of biodiversity and human pressures. It is clear

that MPAs provide a useful pathway to investing in sustainable blue economies. We all have a responsibility to future generations to recover and protect our ocean to secure healthy and productive ecosystems in the long term. On the basis of economic benefits–in addition to ecological and ethical considerations– governments, multilateral agencies, civil society, communities, and business need to upscale MPA coverage and support financial, legal and policy mechanisms for effective implementation of MPA networks.

Table 7. Attitude of the respondents towards MPA

Items		SRA	SLA	A	SRD	SLD
I feel the need to protect the various ecosystems because it affects my source of livelihood	f	41	4	2	1	1
	%	83.7	8.2	4.1	2	2
I am always willing to help to protect the various ecosystems by promoting sustainable use of biodiversity resources	f	41	4	2	1	1
	%	83.7	8.2	4.1	2	2
It is every Filipino citizen's obligation and responsibility to protect our country's biodiversity and I have to find ways to do so starting in my area/ community	f	39	8	-	1	1
	%	79.6	16.4	-	2	2
I want to show to my family, relatives and friends the ways to conserve and protect our biodiversity	f	38	9	-	1	1
	%	77.6	18.4	-	2	2
I decided to be more conscious of my actions so that I could contribute to increase resilience against the adverse impacts of climate change	f	35	11	2	-	1
	%	71.4	22.4	4.1	-	2
I will support and participate in local and national government efforts/ programs in protecting out biodiversity	f	42	4	1	1	1
	%	85.7	8.2	2	2	2
I depend on people who are more knowledgeable in protecting our biodiversity becauce they know better	f	20	4	7	7	11
	%	40.8	8.2	14.3	14.3	22.4
I tend to disregard critical issues about our biodiversity because of lack of knowlegde	f	3	4	10	15	17
	%	6.1	8.2	20.4	30.6	34.7
I do not want to contribute to the country's biodiversity conservation activities because it is not my primary concern	f	-	1	2	11	35
	%	-	2	4.1	22.4	71.4
I blame other people for floods and other calamities that are happening because of their irresponsible actions	f	16	7	5	10	11
	%	32.7	14.3	10.2	20.4	22.4

Legend: SRA (Strongly Agree), SLA (Slightly Agree), A (Agree), SLD (Slightly Disagree, SRD (Strongly Disagree)
Involvement in DENR and LGU Led Activities For the past six months, 21 or 42.9% respondents have been involved regularly and occasionally in activities led by the LGU or DENR in their area while 7 or 14.3% were never involved in any activities. They were regularly/occasionally involved because it's their obligation (22 or 44.9%), they want to learn updates and new information's from the activities they were involved (17 or 34.7%) and few were just want to clarify or ask questions (3 or 6.1%) however 7 or 14.3% have no response.

Table 8. Involvement in LGU/DENR activities (n=49)

Particulars	f	%
Involvement in LGU/DENR activities		
Regularly (once a month)	21	42.9
Occasionally (at least once in the past six months)	21	42.9
Never	7	14.3
Reasons of regulary to occasionally attended/participated		
It is my obligation	22	44.9
To learn updates and new information	17	34.7
To clarify or ask question	3	6.1
No Response	7	14.3

Practices on Marine Protected Area

On the practices on the marine protected area, the majority of the respondents were contributing to the conservation and protection of biodiversity through proper waste segregation (41 or 83.7%) while 4 or 8.2 % do not contribute and others had no response. Furthermore, 38 or 77.6% were advocating and participating in activities involving conservation and protection of biodiversity while the 7 or 14.3% do not advocate and participate and 4 or 8.2% have no response. On the practices on the marine protected area, out of 49 respondents, 19 or 38.8% always practice and 25 or 51% sometimes practice the use of tin cans, plastic straws, plastic bottles, and other plastic materials while 5 or 10.2% never use. For throwing of garbage like tin cans, plastic straws, plastic bottles, and other plastic materials anywhere, 40 or 81.6% never practice, 9 or 18.4% sometimes practice throwing garbage anywhere. For directly harvesting fish for family sustenance, 16 or 32.7% always practice, 31 or 63.3% sometimes practice while there were 2 or 4.1% never directly harvest fish for family sustenance. Almost all (47 or 95.9%) of the respondents never practice cutting mangroves for charcoal production but 2 or 4.1% who responded that they always cut mangroves for charcoal purposes. In addition, 32 or 65.3% always join tree planting activities and cleanup drives in their community while 14 or 28.6% joined sometimes, only 1 or 2% never joined, and 2 or 4.1% does not respond. However, when asked if they took photos of beautiful natural scenic spots and if they posted it after while in the social media, the majority of them 30 or 61.2% never practiced, 16 or 32.6% sometimes practiced and only 2 or 4.1% always practiced. Furthermore, the 45 or 91.8% never report any illegal activities to local law enforcers and barangay officials but there were 3 or 6.1% sometimes report and 1 or 2% had no response.

Table 9. Practices of the Respondents in the Marine Protected Areas (n=49)

Practices on		No Response	Never	Sometimes	Always
Using tin cans, plastic straws, plastic bottles and other plastic materials.	f	---	5	25	19
	%	---	10.2	51	38.8
Throwing my garbage such as plastic straws, candy wrappers, plastic bottles, etc. anywhere especially when I cannot see garbage bins nearby.	f	---	40	9	---
	%	---	81.6	18.4	---
Directly harvest fish and other resources from the ocean for my family's daily sustenance.	f	---	2	31	16
	%	---	4.1	63.3	32.7
Cutting of mangroves for charcoal production.	f	---	47	---	2
	%	---	95.9	---	4.1
Join tree planting activities and clean-up drives in my community.	f	2	1	14	32
	%	4.1	2	28.6	65.3
Take photos of beautiful natural scenic spots and post them on social media to encourage friends and relatives to visit.	f	1	30	16	2
	%	2	61.2	32.6	4.1
Report any illegal activities	f	1	45	3	---
	%	2	91.8	6.1	---

Communication Channels

Table 10 shows the media for communication that the respondents likely to be informed concerning our country's biodiversity. Results revealed that the respondents wanted to be informed through Key persons from DENR/LGU/Barangay Officials (46 or 93.9%), followed by television (40 or 81.6%), and radio (38 or 77.6%). In addition, the minority of the total respondents trusted law enforcers (14 or 28.6%), uses newspaper (11 or 22.4%), (9 or 18.4%) rely on information from internet-social media, pamphlets, posters and brochures (4 or 8.2%).

Of all the media for communication, radio were most preferred by the respondents (44 or 89.8%) as the most effective media to spread awareness regarding the status of our country's biodiversity, while information coming from law enforcers were preferred by 42 or 85.7% of them, followed by pamphlets, posters, and brochures with 16 or 32.7% responses.

Table 10. Media for Communication (n=49)

Practices on.....		No Response	Never	Some -times	Alway -s
Using tin cans, plastics straws, plastic bottles and other plastic materials	f	---	5	25	19
	%	---	10.2	51	38.8
Throwing my garbage such as plastic straws, candy wrappers, plastic bottles, etc. anywhere especially when I cannot see garbage bins nearby.	f	---	40	9	---
	%	---	81.6	18.4	---
Directly harvest fish and other resources from the ocean for my family's daily sustenance.	f	---	2	31	16
	%	---	4.1	63.3	32.7
Cutting of mangroves for charcoal production.	f	---	47	---	2
	%	---	95.9	---	4.1
Join tree planting activities and clean-up drives in my community.	f	2	1	14	32
	%	4.1	2	28.6	65.3
Take photos of beautiful natural scenic spots and post them on social media to encourage friends and relatives to visit.	f	1	30	16	2
	%	2	61.2	32.6	4.1
Report any illegal activities	f	1	45	3	---
	%	2	91.8	6.1	---

CONCLUSIONS

Most of the respondents were knowledgeable about biodiversity, marine pollution, and climate change. It is good to note that respondents were aware that coral reefs and seagrass affect fish productivity, wherein mudflat areas and mangrove forests affect the source of food of various wildlife species. Majority of the respondents never report any illegal activities on enforcers and never practice throwing their garbage such as plastic straws, candy wrappers, plastic bottles, etc. anywhere and cutting mangroves for charcoal production. Respondents
mostly took information about MPA and biodiversity from Key persons from DENR/LGU/Barangay Officials and television. For them, the top three most effective media to spread awareness about the status of the country's biodiversity are radio; law enforcers; and pamphlets, posters, and brochures.

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