RSU Research Journal Vol. 1 No. 1 June 2014 ISSN: 2350-8183 pp. 2-12

Assessment of Human Resource Management Practises Among State Universities and Colleges in MIMAROPA Region[1]

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Abstract *- Human resources management is one of the most important areas in the educational system which is directly concerned about the development, capability enhancement of, innovateness and potentials of people in the community in particular and in the country in general.*

This paper assessed the extent of the practice of SUCs in MIMAROPA Region on the Civil Service Commission's rules and regulations on recruitment, selection and appointment, promotion and faculty and staff development. The study was anchored on the motivation-hygiene theory which distinguishes job satisfaction and dissatisfaction at work called "motivators" and "hygiene" needs respectively.

This study employed descriptive-developmental research method using Input- Throughput-and-Output (ITO) process in determining the extent of practice on CSC's merit system policies. The process of data gathering employed distribution of questionnaires to administrators, support staff and faculty of members of six state universities and colleges in Region IV-B coupled with guided informal interviews with selected respondents to generate qualitative data that support quantitative figures.

Result of the study revealed that SUCs in MIMAROPA region practice the Civil Service Commission's (CSC) merit system to a moderate extent.

Key Words - faculty and staff development, management practices, merit system

[1]Dissertation submitted to the Philippine Normal University in 2010; with the result of the dissertation, the author is reviewing the existing institutional policies and procedures on faculty recruitment, selection and appointment, promotion and development.

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INTRODUCTION

Management of human resources (HR) constitutes one of the most important areas in the educational system. It is directly concerned about how people in the institution are taken care of, develop their potentials and are recognized for their significant contributions to the overall success of the organization.

HR offices' functions are primarily concerned with promoting and enhancing the development of work effectiveness and the advancement of human resources in the organization through proper planning, organizing, directing, coordinating and control of activities related to selection, development, motivation and compensation to achieve the goals and objectives of the organization (Flippo, 1984; Sison, 2003).

This study is anchored on the motivation-hygiene theory advanced by Frederick Herzberg in 1959 (Chapman, 2001). It distinguishes job satisfaction and dissatisfaction at work called "motivators" and "hygiene" needs, respectively. This theory is essentially concerned with people's well-being and attempts to bring more humanity to the organization and explains how to properly manage people at work.

Accordingly, job satisfaction is temporary. People strive to achieve their 'hygiene' needs as reflected in working environment as follows: working condition, policies, supervision, co-workers, salary, and job security, among others. In Herzberg's research, without these, workers/employees are unhappy but once their hygiene needs are satisfied, the effect soon wears off (Chapman, 2001). It is important to understand that people are not only motivated by addressing the 'hygiene' needs. True motivation of employees is done by enabling them to reach for real motivators, such as achievement, advancement, development, etc. which satisfy a far deeper level of meaning and fulfillment.

Satisfaction in hygiene needs eliminate work restrictions but it does little to motivate superior performance or increased capacity while the enhancement of the motivators permits an individual to grow and to develop often increasing ability (Hersey & Blanchard, 1993). Thus, "hygiene needs" affect an individual's willingness while motivators affect an individual's ability.

Studies showed that the productivity of organization lies on the HR management (Knootz & Weihrich, 1993) while the retention of employees depends on the recruiting process, matching of work assignment and skills, developing staff program and achieving opportunity for the de-

velopment of their full potential and the compensation package (Wright & Noe, 1996). It is also important to understand the significance of culture, structure and personnel composition of the organization to obtain competitive advantage through strategic deployment of highly committed and skilled individuals (Armstrong, 1999).

Arndt and Bernstein (2000) affirmed that the commitment to work involves not only the fulfillment of basic needs, such as hygiene needs but also having the sense of belongingness, recognition, development of self-esteem, advancement and self-actualization. Employees are not a commodity subjected to be bought or exchanged (Arndt & Bernstein, 2000). They should not be treated arbitrarily; they need to be supervised and managed very closely but as a collection of human resources and valued investment (Mellow, 2002). They are also the organization's distinctive source of competitive advantage (Corpuz, 2006).

In the world of business and academic institutions, effective HR management ensures continuous provision of appropriately skilled workforce to meet the organizations' challenging requirements (Burach, 1983). In support, the development of a philosophy-based guidelines is a critical tool on how members of the organization should be treated and managed (Armstrong, 1999).

This paper assessed the extent of practice and implementation of the Civil Service Commission's rules and regulations and the SUCs Region IV-B merit system for recruitment, selection and appointment, promotion and faculty and staff development. It also tackled identified strengths and weaknesses of HR management based on the perceptions of administrators, faculty and support staff. A discussion on preliminary concepts to contextualize the analysis is discussed below.

State of Academic System

> The State ensures the protection and promotion of "the right of all citizens to affordable quality education at all levels and takes appropriate steps to ensure that education is accessible to all…. The State-supported institutions of higher learning shall gear their programs to national, regional or local development plans and exemplify through their physical and natural surroundings their dignity and beauty, as well as their pride, the intellectual and scholarly life" (Sec. 2, RA 7722).

The SUCs, like any organization need to work together for the achievement of common goals and objectives which facilitate the learning process that will develop a generation of competitive professionals to face the challenges of the modern time. Human resources in academic institutions supersede all other resources because they particularly deal with people (Morphet, 1982) who are indispensable in producing quality graduates and in directing academic programs.

The academic system is composed of three closely knit groups: administrators, faculty and support staff. Though they have distinct roles, their functions and expectations compliment each one for the common goals. They are regarded as the composite agents in effectively achieving the purpose of the educational system.

The SUCs in the Philippines are operating under their respective charters and are mandated to focus on quadratic functions: instruction, research and extension, and development. They are tasked by the Constitution to develop human potentials for productivity and self-actualization in order to contribute to social development. They are further mandated to develop the morale of its constituents particularly the students and the employees.

SUCs are governed by the Board of Regents/Trustees (BOR/T), the highest decision making body, composed of the following: Chairman of the Commission on Higher Education; President of the University or College; Chairman of the Congressional Committees on Education and Sports; Regional Director of the National Economic and Development Authority (NEDA); Regional Director of the Department of Science and Technology (DOST); Regional Director of the Department of Agriculture (DA); President of the Faculty Association; President of the Supreme Student Council; President of the Alumni Association and two (2) prominent citizens who have distinguished themselves in their professions or field of specialization (CMO No. 03, series of 2001).

Role of Administrators

Administrators in academic institutions are traditionally incharge of supervising activities, such as planning, coordinating and guiding employees in formulating achievable goals or purposes (Miranda, 2004) and providing leadership to the teaching and support staff (Hemphil, et al., 1962). But in time, leaders appropriately improve their management strategies from mere transactional to transformative process by "learning together" and "developing learning communities" schemes that provide avenues for sharing of expertise and best practices which

becomes inevitable for 21st century educational system.

In the same manner, highly-motivated faculty members should also establish direct contact with students to propel them to diligently perform varied tasks in the teaching-learning process with the end view of creating competitive professionals who are aggressive to share meaningful contributions to nation building.

Role of Faculty Members

It is the role of the faculty members to be guides and facilitators, to create a climate favourable to the learning process and to provide resources that stimulate students to explore, investigate and seek answer/s to an inquiry (Aquino, 2003). Assurance of quality graduates primarily depends on the ability of faculty members who honed them over time. Thus, it is a prerequisite of the institution to maintain faculty at their competitive advantages in keeping abreast of the fast changing world.

Thus, the administrators need to sustain the faculty's energy and commitment by developing agreed upon standards, policies and programs that would help them grow and enhance knowledge, awareness and practice (Nieto, 2009). In the same manner, the support staff though not equally important as faculty members, is valuable for their contributions to the accomplishment of the academic goals and objectives.

METHODOLOGY

This study employed descriptive-developmental research method using Input-Throughput-and-Output (ITO) process in determining the extent of the practice and implementation of policies stipulated in the merit system of the Civil Service Commission. The data were gathered from two sources: first, a set of validated questionnaire separately distributed to administrators and support staff and faculty respondents, respectively; second, guided informal interviews with selected respondents to generate qualitative data that could provide human face to quantitative figures.

For the survey questionnaire, respondents were asked to rate four areas of personnel management using the following scales: 4 - Practiced to a Great Extent; 3 - Practiced to a Moderate Extent; 2 - Practiced to a Little Extent; 1 - Practiced to Very Little Extent.

There were six (6) State Universities and Colleges (SUCs) in MIMAROPA/Region IV-B that participated in this study, namely: Marin-

duque State College (MSC), Mindoro State College of Agriculture and Technology (MinSCAT), Occidental Mindoro State College (OMSC), Romblon State University (RSU), Palawan State University (PSU), and Western Philippines University (WPU).

Respondents were selected per SUC using non-random and purposive sampling techniques. The total of 298 individuals drawn from six SUCs was as follows: 78 administrators; 140 faculty members and 80 support staff.

Table 1. Descriptive interpretation of mean rating scales.

Rating Scales	Criteria/Standards in %	Verbal Interpretations
3.26-4.00	75-100 of the time	Practiced to a great extent
2.50-3.25	50-74 of the time	Practiced to a moderate extent
1.74-2.49	25-49 of the time	Practiced to a little extent
1.00 - 1.73	1 - 24 of the time	Practiced to a very little extent

RESULTS AND DISCUSSIONS

The overall result of the study on the practice of Civil Service Commission's (CSC) merit system among SUCs in MIMAROPA region on recruitment, selection and appointment, promotion, and faculty and staff development revealed the "practice to a moderate extent." Details on specific areas of personnel management are discussed below.

On Recruitment

In principle, the SUCs' recruitment policies and procedures are based on the CSC merit and fitness system coupled with their respective charters. However, results of the study showed that a number of personnel were not satisfied with the selection procedure, interpretation of fairness and consistency in which vacant positions were reserved to privileged few. This culture permits dissatisfaction, frustration and disillusionment and subsequently employees lose the enthusiasm, excitement and creativity to perform beyond the minimum requirement.

The three groups of respondents perceived the practice of CSC's merit system to a moderate extent. Data showed that there was a gap between the implementation of mandated procedures and practices which justified the recommendation to enhance the recruitment process by developing strategic interventions towards hiring and retention of quality human resources that had the competitive advantage (Payos & Zorilla, 2003).

However, it should be noted that updates of records were regularly conducted to determine current human resource holding, qualified (degree holder) and previous applicants. An HRMO officer explained that "it is imperative to continuously and consistently conduct an inventory of the available labor force and possible sources of applicants to meet the discriminating needs of academic institution."

There are several practices found useful more than in sourcing applicants. These include the use of recruitment agency, internet, referrals and walk-in. Among the different practices, referrals and walk-in were the successful practices in which the applicants personally applied due to their interest in the job while the use of internet was marked the least.

The publication of vacant positions in circulations as a CSC requirement (RA 7041) provides equal access and opportunities to prospective applicants. In contrast, interviews revealed the *hocus pocus* selection of applicants that were "close to power" was practised as posted vacant positions were already reserved prior to publication.

On Selection and Appointment

In selecting faculty, applicants with excellent scholastic standing are the ideal priority, but interviews with deans, revealed their difficulties in hiring faculty for technical courses that require licenses like engineering and technology due to the inability of the State-owned universities and colleges to provide good salary and opportunities which private companies could offer.

In addition, there were instances shared that the practices of discretionary powers among SUC Presidents who favour their "pets" without Master's Degree erode the practice of merit and fitness system. Justification of the selection is given as "enrolled in the graduate program" or with "on-going status." Data also show that sometimes the newly hired "pet" was given a supervisory position which demoralized deserving employees.

The sentiment expressed on the use of discretionary power of appointing authorities had brought discomfort and dissatisfaction among the personnel. This practice prevented the nurturing of healthy competitive culture among aspiring applicants.

On Promotion

Descriptive interpretation of data showed that the practice of promotion based on CSC merit system was conducted to a moderate extent. It was found out that seniority and closeness to power were the dominant practices for promotion.

The interview with different respondents revealed that despite the existence of CSC criteria, the filling of vacant positions for promotion was still made through the discretionary power of the president .Disappointed employees shared that promotion of faculty who were not among his friends or "*ka-horoscope*" was difficult.

In contrast, justification on the use of discretionary power by staff close to the authority was made citing the Omnibus Rules of Executive Order No. 292 stating that "the appointing authority may promote an employee who is not next-in-rank but who possesses superior qualification and competence compared to the next-in-rank employee who merely meets the minimum requirement for the position."

However, the definition of "superior qualification and competence" has no clear basis for measuring such and it becomes a grey area to employees who are not "in the same boat" or "*kabagang*" of the appointing authority. To non-politically allied employees, "promotion is impossible if they wish not to do it but if they like their favoured one, it is easy to find ways."

On Faculty and Staff Development

The Civil Service Commission promotes development of faculty and staff and puts premium on employees as important assets of government in the delivery of basic services to the public. It also promotes opportunities to maintain the competence, efficiency and professional workforce in public service (Sec. 1, Rule VIII, CSC).But data in this study show that the practice of SUCs in Region IV-B was perceived to be implemented to a moderate extent.

Among three groups of respondents, the support staff claimed that they are not considered as priority in staff development while faculty members, being the backbone of educational institution, are given several opportunities to pursue higher education through consortia and scholarship programs. That strategy was emphasized by the Accreditation Agency for Chartered Colleges and Universities in the Philippines (AACCUP) to ensure the quality of program offerings with Master's degree as a minimum requirement among faculty handling tertiary courses. In the interview, respondents revealed that middle managers were minimally exposed to executive training that was specifically designed to enhance their analytical and human resource management skills.

Another problems shared by respondents was the concealing of training opportunities from intended employees by officials who subsequently sent favoured employees regardless of the relevance of training design to their job descriptions. It was also noted that attendees were not required to re-echo the information and knowledge learned from the training. As a means of survival, an employee should learn how to be friendly with budget and administrative officers who know the sources and status of funds.

CONCLUSION

The findings revealed the trend in SUCs in Region IV-B that these institutions practice and implement to a moderate extent the Civil Service Commission rules and regulations and merit system on recruitment, selection and appointment, promotion and faculty and staff development. There is also a gap in the implementation of policies between legal procedure and socio-cultural practices. The exercise of discretionary power of high-ranking officials seemed unquestionable that it has influenced the interpretation and implementation of the law.

Technically, SUC Presidents have no absolute power over human resource management. However, the exercise of discretionary power over the CSC rules and regulations were loosely interpreted and practiced with middle-management officials who made legal and social justifications. This practice has prevailed as a consequence of paying back the "ka-horoscope" and "pet" which starts the cyclical relationship between the appointing authority and employees from recruitment to selection and appointment and promotion of allies. This relationship could be viewed as a local version of *utang na loob* and *compadre* syndrome among Filipinos.

Another irrefutable reality of practice is that of concealing training and other enhancement opportunities by higher officials to favour pet

employees. This further strengthens the "loyalty" system of beneficiaries to administration and thereby the give-and-take relationship governs.

RECOMMENDATIONS

In the light of the foregoing findings and conclusions, the following recommendations are suggested:

a. Review/Revisit the existing institutional policies and procedures on recruitment, selection and appointment, promotion, and faculty and staff development.

b. Analyze the current and future conditions that surround the practice of these areas and design improved programs through SWOT analysis and appropriate tools.

c. Develop effective feedback mechanisms to find out the status of any undertaking.

d. Improve recruitment strategy through linkages with other academic institutions, use of internet and print media.

e. Strengthen the implementation of institutional criteria for promotion consistent with CSC rules and merit system.

f. Increase funds for faculty and staff development.

g. Strictly implement the CSC rules and regulations and merit system in the recruitment, selection and appointment, promotion, and faculty and staff development.

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RSU Research Journal Vol. 1 No. 1 June 2014 ISSN: 2350-8183 pp. 13-43

The Karā'an Songs of Romblon: A Proposed Framework on Regional Folkloric Research[1]

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Abstract *- Philippine regional oral literature scholarship is currently navigating against the current from the periphery to the center. Romblon's oral tradition is likewise sailing across the turbulent sea. While a number of works had been anthologized and had undergone scrutiny, apparently not much exploration has been given to the proper collection, translation and subsequent analysis. This paper proposes a paradigm in collecting Romblon's oral tradition, in particular and any regional oral tradition, in general. The collection, documentation, authentication, translation and analysis used the suggested holistic approach. In this study, the methods and approaches were discussed, the steps were outlined and the scholarly implications were identified. The main research question is a descriptive-analytic documentation of the tradition: What are the surviving karā'an oral literatures of Romblon based on primary secondary and sources? The process starts from collecting the tradition from secondary sources: the province's historical data found in microfilm, internet posts, email correspondences, and personal collections tracked and documented in the field. The text's provenance, singer, context of singing, audience reaction, historical, cultural, and geographical relevance – the "metadata" and field notes – were likewise recorded with the researcher interpreting data from the informants' perspectives. The focus of investigation is proper documentation that ensures authenticity of materials that could then be*

[1]Dissertation submitted to the University of Sto. Tomas in 2010; the translation part of the paper received a Translation Grant from the National Commission for Culture and the Arts (NCCA) with the project entitled, "Karagatan sa mga Karaan ng Romblon: Isang Pagsasalin sa Oral na Tradisyon Mula Bernakular Tungong Filipino" under resolution number 2010-322 dated December 17, 2010. At present, the Provincial Government through the help of NCCA and the National Historical Commission is working on the book, *Lomyom*: Essays on Romblon Archipelago. The translated *karā'an* songs along with the analysis will be included as a chapter. The book, as the team puts it, tackles the histories, traditions and cultures of Romblon province. It aims to tell a comprehensive narrative of the islands in order to assert its unique identity interacting within and beyond its boundaries. Its intended readers are high school students and adults, especially teachers and government officials responsible for the promotion of Romblon history and culture. The book is also intended to be a primary material for the Romblon Studies, a dream cultural program that the author plans to establish at Romblon State University.

subjected to translation, and literary analysis.

Key Words *- oral literature, regional, collection, authentication, documentation, translation*

INTRODUCTION

Philippine regional oral literature scholarship is currently navigating against the current from the periphery to the center. Romblon's oral tradition is likewise sailing across the turbulent seas. Being marginalized, Romblon's oral literature, like other oral regional literature, has not been collected nor published or included in any anthology. It was the influential works of E. Arsenio Manuel[2] and Damiana Eugenio[3] who spearheaded the folklore collection and established the scholarship needed to navigate the vast ocean of this rich and varied branch of the Filipino cultural heritage. Lumbera (2001)[4] followed with his anthology of folk and contemporary literature from the regions and in 2006, Lopez with her book "A handbook of Philippine Folklore" where she offered a system of taxonomy for genre classification[5] and provided a range of international theories and methodologies in analytical folklore investigations. How-

[2]Manuel's "Guide for the study of Philippine Folklore" (1985) meticulously discussed the practical and theoretical approaches to collecting work and study, the field of oral traditions and literature and the methods of folklore investigation.

[3]Eugenio's pioneering work in Philippine folklore studies, the introductory volume of an eight-volume Philippine Folk Literature Series came out in printed form in 1982. Here she presented a whole range of Philippine folk literature, introduced a helpful discussion of the discipline and established a preliminary classification of types. Her eight-volume plan were published at various times: Myths (1987), Folktales (1989), Proverbs (1992), Riddles (1994), Legends (1996), Folksongs (1996) and an eighth volume; Epics (2001) was added, completing the coverage of all the folk literary genres and the latest was "Philippine Folk Literature: An Anthology – Second Edition (2006).

[4]The purpose of the collection as stressed by Lumbera were: (1) to "provide a dynamic base for a national pride and self-esteem" the Filipino needs, (2) for the teachers to regain their focus on the literatures from the regions for a "nationalist imperative" of tapping into the regional materials, (3) for the critics and historian to veer away for a while from the center and focus on the peripheral vernacular literature for a "fresh subject matter and insights," and (4) to "piece together images of the regions as limned in the collective works of their authors" and that these might serve as "components of a national portrait (pp. v-vi).

[5]This genre classification is a combination of the seminal works of E. Arsenio Manuel and Damiana Eugenio with consideration on the Philippine setting.

ever, more recent works by Cruz-Lucero (2007)[6] and Coben (2009)[7]argue that these collections should undergo analysis.

The attention to collection, documentation, and authentication has seldom been extended to the total body of the study of regional oral tradition. Previous works on regional oral tradition deal with haphazard collection methods and classificatory or thematic analysis only. Later works, on the other hand, went beyond these but did not use the proper collection method which is the tool to distinguish authentic from inauthentic works. Another pitfall is the inadequacy of knowledge of the source language without which the critic would only be analysing a text from a translation which is twice removed from the reality. What is lost in translation could only be retrieved by acquainting oneself with the analysis of the translation process written by the collectors, researchers or other critics. Worst is when the text is bare of its provenance, narrator, context of narration, audience reaction, historical, cultural and geographical relevance, i.e., the "metadata"[8] and field notes.

This paper proposes a framework in collecting Romblon's regional oral tradition and any regional oral tradition in general. Taken jointly, the collection, documentation and authentication would provide a basis for further investigation of Romblon's oral tradition or *karā'an*.[9]At the

[6]In this essay collection on folklore, regional literature, and other topics; Cruz-Lucero analyzed contemporary and cultural practices across regions by considering all of them as texts – an alternative analysis not the formalist theory which according to her is the vain of Philippine literature. This is one of the reasons, she added, why regional literatures were not included in the canon of Philippine literature especially the folk narratives. She also contrasted her approach to those of anthropologists, whose fieldwork requires at least eighteen months, stating that the historical and ethnographic material she gathered is used primarily as a means of textual interpretations.

[7]Coben interpreted the themes and subthemes of verbal arts and its performance of some indigenous groups of the Philippines in relation to its ethnographic, ecological and historical contexts. This work is different from previous studies of Philippine oral tradition since it goes beyond the classificatory or thematic analysis.

[8]These information are the "metadata" that is a verbal, catalogue-like descriptions of the content, provenance, context of an item (Wiering et al., 2009, p. 156) with the addition of local history, geography and culture gathered through field notes useful both in translation and analysis. The term "metadata" is loosely defined as data about data and usually connotes an electronically archived data. In this paper, however, this refers to the field collection of miscellaneous data about the text of the regional oral tradition that need not necessarily electronically archived.

[9]**Karā'an**: (from dā'an + ka-) n an antique. **Dā'an**– 1 *adj* an old object; i.e., something that had been used for a long time 'Ang **dā'an** nga bayay ni Biktor hay guba' na. As for the **old** house of Victor, [it] is already completely destroyed. Cf.*dāti*. This definition is from the "Romblomanon Dictionary" (2006) collected by Leonard E. Newell of the "Summer Institute of Languages" and published by the "Linguistic Institute of the Philippines." In Rom-

center of this investigation is proper collection (see Manuel 1985, Lopez 2006) that would provide authentic materials and other valuable information for translation and literary analysis. Library work which yields texts should be followed by fieldwork that would reveal the history, geography, context, culture and linguistic clarifications and other metadata and field notes.

The researcher, considering the abovementioned scope of the study, was constantly aware that a vast amount of Romblon's regional oral material was not given enough and thorough attention. For example, the collection itself could not equally represent the three ethnolinguistic groups of Romblon – Onhan, Asi and Romblomanon/Ini. There was difficulty finding carriers of the tradition in the *Onhan* and *Asi* groups. During the seminar-workshop on translation organized by this researcher with a grant from National Commission on Culture and the Arts (NCCA), more materials on the aforementioned groups were gathered but were not included in this study because of time constraint. Information about other carriers of the tradition was also pinpointed, but again, interviewing and recording what they know require time.

Romblon's Oral Tradition - An Overview

The small region of Romblon is unique among Philippine regions for several reasons. First, its history and geographical characteristic resulted in an amalgamated culture that is considerably different from its neighboring Bisayan regions. Its 20 islands and islets are scattered in the very center of the Philippines' territorial waters separated by rough seas and turbulent channels (Madeja 1993, p. 24.) namely, Tablas strait (West), Sibuyan Sea (north and east) and Romblon Sea (South). The cluster of islands is situated in the south of Marinduque, west of Masbate, east of Mindoro and north of Panay. Its current territories are the islands of Tablas, Sibuyan, Banton, Maestre de Campo, Simara, Carabao, Alad, Logbon, Cobrador, and other islets.[10] It has 17 municipalities: in the island of Tablas (San Agustin, Calatrava, San Andres, Odiongan, Ferrol, Looc, Santa Fe, Alcantara, Santa Maria), in the island of Romblon (Romblon), in the island of Sibuyan (Cajidiocan, San Fernando, Magdiwang),

blon, we call **karā'an** everything that is old yet valuable. So our songs and narratives are **karā'an**. The term was first mentioned by Melody Fornea, Division Supervisor in Music and the Arts, DepED, Region IV, MIMAROPA, Division of Romblon, in her introduction to her collection of folk songs.

[10]Kristoffer R. Esquejo. "Ang Romblon sa Panahon ng mga Kastila: Isang Kasaysayang Pampook."Paper submitted to Prof. Noel Teodoro of the Kolehiyong Agham Panlipunan at Pilosopiya, Departmento ng Kasaysayan of the University of the Philippines in the subject Kasaysayan 325, second semester, academic year 2008-09, pp. 1-2.

in the island of Carabao (San Jose), in the island of Banton (Banton), in the island of Corcuera (Corcuera), and in the island of Maestre de Campo (Concepcion). With this geographical characteristic, the culture in Romblon is the result of the interaction among these provinces and the island settlers themselves.

Second, because of its location and migration history, Romblon is populated by three ethnolinguistic groups scattered among the islands, each making a contribution to oral tradition. Ong (1989) in his "Orality and Literacy" observed that there is no way as of now to determine how many languages were lost or transmuted to other languages before the era of writing came. Hundreds of languages today have not been written yet since one has yet to find a way to write them effectively; besides "the basic orality of language is permanent" (p.7).

Romblon languages are experiencing the same fate. Several attempts had been made by scholars to put the languages into writing. Although Romblon languages have already seen the printed page through the efforts of literate natives who use the Tagalog alphabet, still the writings cannot be read effectively by non-natives due to phonological problems. In short, whenever written *Romblomanon/Ini*, *Asi*, and *Onhan* languages are read, Tagalog phonology is used.

There is a *Romblomanon Dictionary*.[11] There is also work in progress on the *Asi* language – Lyndon F. Fadri's the "Tuk-anan" glossary with Filipino-to-*Asi* and *Asi*-to-Filipino. All of these works, published or not, serve as a seminal effort that needs further study and revision. An effective system to write the language is yet to materialize that the Romblomanons have to consider their languages as oral which, according to Ong, commonly have a few thousand vocabulary and its people know little of the semantic history of any of these words (p. 8).

H. Otley Beyer, as mentioned by Fabella (1976), "described Banton tongue not as a dialect but a minor language (p. 6)." Beyer confirmed that *Asi* is very rich in vocabulary. Zorc (1975), in his doctoral dissertation entitled "The Bisayan Dialects of the Philippines: Subgrouping and

[11]"Romblomanon Dictionary" (2006) entries were collected and written by Leonard E. Newell of the Summer Institute of Linguistics and printed by the Linguistic Institute of the Philippines. The *Romblomanon* language is only spoken in the islands of Romblon, Sibuyan, Alad, Lugbon, and the municipality of San Agustin. This dictionary is an initial collection of Newell and still lacks many words in the San Agustin dialects mainly because he did not have informants from the area. Data on the Asi language are still being collected and nothing has been done on the *Onhan* language. The researcher plan is to prepare a glossary of these three languages.

Reconstruction," showed that Banton tongue or *Asi* does not belong to any Bisayan dialect subgrouping[12]. He added that the Banton (*Asi* language) subgroup, which comprises Banton, Sibale, Corcuera, and Odiongan, is an intermediate grouping between the Western Bisayan and the Central Bisayan subgroups (p. 351). His findings concluded that since *Asi* has a lower score than most of the other Bisayan dialects in any of the comparisons he used in his study, it could be proposed that the Asi group was one of the first Bisayan groups in the area. Later, as the Romblomanon and other Bisayan dialects moved in and surrounded the area, the *Asi* group began to borrow heavily from the more prestigious newcomers that resulted in the obscurity of its original source (pp. 351-352). This finding can be supported by the historical data on Romblon[13] recounting the *Asi* speaking natives as the first settlers of the Romblon archipelago. The other two languages are the *Romblomanon* (Romblon, San Agustin, Cajidiocan, San Fernando, and Magdiwang) which belongs to the Central Bisayan Dialect group and *Onhan* (Looc, Alcantara, Ferrol, Calatrava and Santa Fe) which belongs to the West Bisayan Dialect group. This grouping was shown clearly by Lobel's (2009) language map.

These three languages – *Romblomanon*, *Onhan*, and *Asi* – are spoken by around 200,000 people[14]. This group of islands in the Romblon archipelago has always been overlooked by most researchers because of transportation difficulty caused by the treacherous sea that surrounds the islands. It should be noted though, that the geography and the history of the settlers have given rise to the birth and enrichment of the three languages of Romblon.

Perhaps, in part because of this geographical characteristic and being an insignificant province, Romblon has not been a popular destination for scholars of folklore. It is not wholly part of the Hiligaynon speaking regions, nor it is wholly Kinaray-a – or even just the combination of the two major Bisayan Languages since there is the *Asi* speaking group native to the province who also contributed to the richness of the Romblon languages. It is precisely this uniqueness that makes Romblon an

[12]See Zorc's book and his tree diagram of the genetic relationships of the Bisayan dialects, p. 39.

[13]See Gabriel F. Fabella's books, Series nos. 1 (1976) and 2 (1977); See also the book of Mateo Meñez (1998).

[14]The population of Romblon was 279,774 persons as of August 1, 2007, based on the 2007 Census of Population. Among the 17 municipalities in the province, Odiongan was the most populous at 15.0 percent of the provincial population. It was followed by the municipalities of Romblon, the provincial capital (13.4 percent), San Fernando (8.0 percent), San Agustin (7.9 percent), Cajidiocan (7.6 percent), and Looc (7.4 percent). The rest of the municipalities had less than six percent each. The municipality of Concepcion was the least populous at 1.5 percent of the total provincial population (Ericta, 2010).

interesting field in studying regional oral tradition. The interaction between these ethnolinguistic groups produced a body of oral tradition that is both varied and fascinating.

A METHOD OF FOLKLORIC RESEARCH

The Collection Method

The failure of many untrained folklorists[15] to understand that folklore should be gathered methodologically with focus on authenticity and proper documentation has led them to haphazardly study previously collected materials without considering the methods used by its collector. Likewise untrained folklorists immediately collecting data without acquainting themselves with the collection methods already propounded in several books on folklore scholarship (e.g., Manuel, 1982; Lopez, 2006).

Being a literature student going into folklore study and anthropology is a daunting role. This paper attempted to bridge the rigors of collecting Romblon folklore from other sources and the field, textualizing it, and interpreting it as a narrative – all as text.[16] The researcher's literary background is sufficient but in terms of theoretical connections between literature, culture, and folklore; this study needed a new dimension.

According to Manuel (1985), an "initial interest in the subject (folklore) aroused in an introductory course to literature or anthropology is not enough (p. 4)." He suggested that the student or anyone interested in studying folklore should "enroll in folklore course, followed by a couple of courses in linguistics (phonology, grammar, or semantics) [p. 4]." Researchers need to circumnavigate this issue since most of them do not have the time for additional courses. Instead, books on folklore mentioned in this study should be read diligently page by page. Manuel has also endorsed that the "key to folklore studies" is a good "command of the native language" since this will ensure "greater assurance of securing accurate information and data (p. 5)."

Culled from the meticulous argument of the aforementioned books on collection methods and from the experiences gathered in collecting Romblon's oral tradition, this paper proposes easy steps in collecting regional oral tradition.

[15]The term "untrained folklorists" pertains to a folklore enthusiast with no training in folkloristics whatsoever whether academic degree or otherwise while "amateur folklorists" refers to a self-trained folklore enthusiast (Murray, 1954 as qtd. in Lopez, 2006).
[16]See Lucero (2007) in her study of folklore as text.

The steps are divided into two general areas of interest: survey and fieldwork. The first is a survey of the materials from secondary sources, in that the emphasis is on the use of special "tools" (bibliographic tools, indices, dictionaries, archives, annotation, and folklore terminologies) of folkloric studies (Lopez, 2006), previous collections of private collectors with the addition of internet and other communication technologies; and the second is authentication of the secondary sources from the primary sources, in that the emphasis is on fieldwork and proper documentation.

The type of work involved in the first step includes the initial collection using the special tools of folkloric studies to determine how much has been written and collected about the folklorists' region of choice. Afterwards, the folklorist could look for private collectors, like teachers and other enthusiasts. With the advent of technology, social networking sites like facebook and twitter are valuable tools in spreading a call for regional oral tradition materials. Similarly, emails and cellular phones could facilitate communication with other possible sources.

Even if a researcher is a native, it is still necessary for him/her to read on and thoroughly understand the history and culture of the place where the study will be conducted. Romblon, in this case, is difficult mainly because it is composed of three ethnolinguistic groups with different languages and culture. Thus, the history, geography, and culture of the Romblomanons – that have contributed to their native consciousness – must be the bases for research.

In this study, the materials were tracked down in different libraries. Only one historical study was found at the National Library but the needed thesis was missing. However, the writer was found teaching History at the University of the East. The clue was the masteral thesis in history of Roland F. Madeja written in 1993 and entitled "Romblon Province, 1570 – 1946: Its History and Development" (1993). This thesis is a valuable tool since most of the materials it studied were taken from archives written in Spanish and translated by the thesis writer himself. At the National Library too was the 1946 "Historical Data of Romblon" in a microfilm but Esquejo and Madeja agreed that it was not reliable; nevertheless, folklore materials were gathered from it.

Another Romblon historian, Kristoffer Esquejo, a native of Looc and a history teacher at the University of the Philippines, was chanced upon at a social networking site. Esquejo offered his papers on Romblon and his copy of the book of Gabriel F. Fabella, a Romblomanon historian, written in 1976 and 1977 about the Romblon archipelago. Esquejo also directed this researcher to the book of Mateo Meñez (1998), entitled "A

Brief History of a Typical Philippine Town," which is only available at the Odiongan Library and can be bought only from the family of the author. This is what Lopez referred to as "regional or community-based library (2006, p. 83)."

The 1982 "Philippine Folk Literature Bibliography" of Eugenio was likewise consulted. No recent lists like Eugenio's are available. It should be noted that there is no Romblon studies on the list. In other recent studies found in libraries, there is no Romblon citation as well.

Fieldwork, the second step, involves not only the tracking down of texts gathered from the secondary sources and recording them from the carriers of the tradition but also the gathering of "metadata" and field notes. Aside from the text, the provenance and context of an item are also important. As early as 1958, Halpert already saw such relevance and scrutinized the method of collection done during his time. He observed that most of the college manuscript materials did not give much importance to the scholarly documentation on the collector, informant, place, and date. Halpert believed that it would be more meaningful if more attention were given to the material in its full context. What has been done, which has earned a respectable history in the American and English tradition, is to collect in breadth, not in depth since the quantitative approach during those times was much more important than documenting data on the informants. For the "gentleman scholars," lower class informants were unimportant: they were only "the accidental preservers of a rich tradition that they could not appreciate (p. 98)". This orientation should not persist because the people who developed these materials are the most important since they, their consciousness, their society and their culture have nurtured this rich tradition. These metadata and field notes would provide the indices and notes that would provide a collection a dictionary-kind of information needed for an in-depth analysis. Such collection is worthwhile and informative; a hundred collected are no match for a single item embellished with these kinds of information. In the Philippine setting, E. Arsenio Manuel (1985), agreeing with Halpert, outlined numerous standards on proper collection and some of them are focused on the informants and the social and cultural context of the text.

As such, the informants, after their songs were recorded, were interviewed regarding how they came to know the material. This was done to enrich documentation and the procedure followed the theory on context, E.A. Manuel's "depth of vertical test," the three generation test, was applied. In this test, the remote source of the material was first determined. If the informant had forgotten the source, the "horizontal spread test" was used. This step is the "five-version test" that is applicable when

versions are gathered from the same "culture group"; this means the material is "popular," with "time depth," and the character is traditional. There is also the "two-version test" when the material comes from another ethnic group.

Moreover, the audience's reactions were likewise recorded. When songs are gathered without reasons for their rendition, and the occasion for singing, an interview regarding these factors follows the documentation. When this happened in the course of this study, meanings of unfamiliar words as well as the cultural implications of the text and context were clarified. Thus, annotations were gathered right in the field.

In addition, the four basic qualities of folklore materials suggested by Lopez (2006) were also taken into consideration: (1) repeated transmission where folklore "is passed on repeatedly in a relative standard form and circulates among members of a particular group;" (2) multiple existence where "a folklore item must have more than one occurrence in place and time before it can be called folklore;" (3) loss of identity of author or creator where "every bit of folklore must have had an individual author or collective authors but once the material enters the stream of popular tradition, the original authors are forgotten and the item becomes folklore;" and (4) orientation on stability and change which calls "folklore a paradox, for it is a curious combination of stability and change" (pp. 38-39). Therefore, all retrieved private collections were archived in the indices of the study but only those that passed the four qualities of folklore were scrutinized and included in the analysis.

The foregoing discussion clarified the importance of the narrator and the context of his/her narration. Any regional oral material in this sense is a combination of the narrator or singer, the audience or listener, their culture, and the present culture. According to folklore researchers, studying the material, which is the text, without the context, both social and cultural, is superficial and not scholarly, (Foley 1986);[17] Thomas,

[17]In his view of oral tradition and the collective talent in relation to versions of any tradition, Foley stated that the oral poet is always "making/ or remaking" his work in the representation of all previous works on the matter that comprise his oral tradition. In other words, the oral poet is fashioning his own interpretation of all other texts into another version to point toward the work that he and other writers before him had been "(re)creat[ing], along with their audiences, as long as the oral tradition existed" (p. 207).

2000;[18] Park, 2000;[19] and Mathur, 2008.[20] In summary, these are the three dimensional perspectives[21] of folklore that should be studied together (Lopez, 2006).

In this aspect, this paper proposes the inclusion of the audience's comments that are uttered while a song is being sung or while a dance is being performed, or while a narrative is being told and should be presented interspersed with the text. Also the narrator's judgmental, explanatory, or evaluative comments should find print within the narrative.

Meanwhile, in documentation, there is the systematic procedure adopted by the Israel Folk Archives (IFA) that according to Hasan (1999) used the "audio or video recording." More importantly, Hassan mentioned that recording was better "accompanied by meticulous documentation of the circumstances of the narration as well as of the narrators' biographies (p. 72)." Voigt (2006) also talked about the advances in technology used by the folklore field workers. It was until about the twentieth century, Voigt said, when folklore collectors used pencils in writing on sheets of paper. But later, collectors made use of "photos, phonographs, films, tape recorders, and today, videos and sophisticated cameras provide much better and closer view of storytelling and its social framework (p. 311)." Documenting collected items in this age of technology is easier. Then, too, is the added view on the context of the tradition which is vital in any study. Most studies found in different libraries only included transcribed texts from field recordings. Fieldwork and its subsequent documentation are really invaluable in a scholarly study of regional oral tradition. Besides, information about other carriers could be extracted from them and from other natives who have witnessed and participated in the performance of an oral tradition.

[18]Thomas affirmed that researches about oral narration showed repeatedly that the process of telling stories was much more complex than the simple recitation of a memorized series of words. He mentioned the influential book, "The Singer of Tales" by Albert Lord (1960), citing the fact that the audiences play a significant part in determining how any particular tale is retold. He noticed that less attention was given to "context and artistry" of the total body of communication at a storytelling event. He also quoted the folklorist Robert A. Jorge's observations that the narrator's "judgmental, explanatory, and evaluative comments" were noticeably missing from most published records which only suggests that these comments were "extraneous" to narrating (p. 185).

[19]Park studied the performer and audience who, according to him, "were engaged in a mutually reflexive communion of performance and reception" (p. 270).

[20]Mathur pursued the marriage of context and content (p. 104).

[21]This is the **contextual theory** which is concerned with the "total performance aspects of the folklore event, that is, the personal aesthetics of the teller/performer and the nature of understanding of the lore by the audience" (p. 75). The teller/performer and the audience embody the culture, custom, and tradition of the place which in turn shapes the text.

Folklorists should go out to the field to study the tradition first-hand. They should never describe or explain the tradition without having personally experienced the performance by the folk (Ginkel and Henkes, 2003).

In summary, the following steps are proposed:

1. Track down in the field materials gathered from secondary sources and gather more as you go along.
2. Use audio or video recording devices in documenting oral tradition.
3. Gather the metadata and fieldnotes by
    a. Securing the bibliographical data of the informants,
    b. Interviewing the informants about the historical significance, geographical relevance, and cultural importance of the text,
    c. Visiting regional and community-based libraries for priceless local histories and sociocultural information[22] and
    d. Recording the context of performance of the materials.
4. Transcribe the documented materials by
    a. Transcribing from the recording,
    b. Doing word-for-word translation,
    c. Listing difficult and unintelligible words and
    d. Asking informants and the natives for clarification.
5. Write a glossary of terms used in the materials.
6. Contact informants and the natives for clarification purposes.
7. Revise transcription, word-for-word translation, and the glossary.
8. Write annotations.

[22]Lopez (2006).

9. Provide the songs with musical notations.

10. Classify the materials according to genre.[23]

The focus of investigation at the moment is proper documentation that ensures authenticity of materials. In this line of analysis, fieldwork is necessary, with focus on the text, teller/performer, informant, and context of narration or singing.

The Process of Translation

Although translation covers such a wide field, the steps outlined here are roughly divided in two sections of interest, each with a degree of overlap. A large part is on the translation process, where the emphasis is on what should be taken into consideration during the actual translation; and some parts, on the evaluation of the translation, which focuses on the assessment needed to validate the translated text.

The steps proposed are as follows:

1. Use the word-for-word translation (literal translation) previously done during fieldwork.

2. Make the metadata and field notes readily available for reference.

3. Decide on stand to take by

   a) Reflecting on the organic structure of the text and

   b) Identifying the purpose of translation.

4. Prepare the first draft of the translation by

   a) Focusing on the relevance of steps 1-3,

   b) Asking informants and native residents for clarification and

   c) Doing an idiomatic translation [whether you focus on the idiom of the (source language) SL to reflect on the (target language) TL or vice versa depending on your selected stand as translator (See step 3)].

[23]Use the genre classification of Philippine oral lore as outlined by Lopez (2006)

5. Proceed to do the second draft of the translation by

   a) Focusing on syntax, meter, rhyme, and matter of style of the SL and

   b) Asking informants and native residents for clarification.

6. Allow several readers from the TL and asked questions on how they understood the text by

   a) Comparing readers' understanding with the SL text and

   b) Asking for suggestions concerning the sense and syntax of the TL.

7. Ask a Filipino speaker to sing the folksongs.

8. Ask a translator/consultant who is a native speaker of the TL and do the final translation together.

9. Polish the final translation.

10. Describe the process of translation.

11. Append the SL text, interlinear with the final translation.

12. Include the metadata, field notes, glossary, word-for-word translation, and analysis on the process of translation in the appendices.

By describing the process of translation (step 10), this study was able to come up with an initial suggestion on translating into Filipino the texts in the three languages of Romblon. It should be noted however, that the translator/consultant[24] from the TL (step 9) is still in the process of checking the initial translation. What is appended and analyzed in this paper only went through steps 1 to 7, an aspect of a research constrained by limitations. Nevertheless, the translation done already provided enough data to adopt the aforementioned steps and to suggest the method and technique in the translation of the *karā'an* songs. Culled from the description of the process of translation, the following are the

[24]The translator/ consultant from the TL is Prof. Romulo P. Baquiran, Jr., an Associate Professor of the Department of Filipino and Philippine Literature, College of Arts and Letters, UP Diliman, Quezon City. He was one of the recipients of the translation grant awarded by the National Commission on Culture and the Arts.

considerations made and the methods and techniques used[25]:

1) Transference (adoption, transcription or loan words) - the transfer of culture-loaded words from the SL to TL without changing the spelling. Transference is important for words that are peculiar to the culture of the SL.

2) Transposition - shift or change in the grammar of the SL when translated to the TL

3) Addition/Expansion - grammar-induced words added to the translated text to clarify meaning

4) Reduction/ Contraction - grammatical reduction or contraction of words without changing the meaning of the original

5) Paraphrase - sentence recasting

6) Compensation - used when the loss of meaning in a stanza or sentence could be supplied in other areas

7) Functional Equivalent - the accepted translation in the TL is used. This technique is also called deculturalizing the language.

The method of adoption was used in four ways:

1) If the Spanish loan word has its exact equivalent in the TL, literal translation is employed; if not, the Spanish word is retained.

2) In some cases when the meaning is corrupted, the additional meaning is supplied in the footnote and entered in the glossary with its variation in the vernacular.

3) If the spelling is corrupted, the naturalization of the Spanish word into Filipino is used and is entered in the glossary with the original Spanish word.

4) If the Spanish word is not found in the dictionaries consulted, the vernacular naturalization of the language is used.

[25]The translation technique of Newmark quoted in Legaspi (1995) was used.

Additional considerations:

1) The culture of Romblon is the focus of translation and should be transposed to the TL (this is the stand chosen by the translator);

2) Vernacular names of local fish, sea creatures, flora and fauna, were considered as a contribution to the Filipino language;

3) Culture-loaded words were also not translated;

4) Token of expressions, like *ánay*, *ahay*, *gid*, o, *abaw*, were not translated;

5) The 'honorific expression' "po" is added in the translation;

6) Sinaunang Tagalog (ST) words that are still used by Romblomanons were not translated;

7) The context of the text (See Manuel, 1985; Lopez, 2006; House, 2006, Coben, 2009). permeated the translation;

8) The "evocative properties" of the original text were translated (See Adams, 1999);

9) The tune of the songs was considered in the translation (See Lopez, 2006, Eugenio, 2007) and,

10) The structures of the SL were preserved as closely as possible but not so closely that the TL structures were seriously distorted (See Bassnett, 2002).

These translation methods, techniques, and considerations were found to be applicable in translating texts in the three Romblomanon languages.

The Translation Principles, Methods, Technique Used and the Process of Translation

The quality of a translation can be measured not only by means of the credibility of the translator but also by determining how a text is translated (Jorge-Legaspi, 1995). This was underscored in her paper entitled "Isang Pagsusuri sa mga Teknik na Ginamit ni Rustica Carpio sa Pagsasalin ng Maikling Kwentong 'Doubt' ni Wong Meng Voon (An Analysis of the Technique Used by Rustica Carpio in Translating the Short

Story "Doubt" by Wong MengVoon)." Jorge-Legaspi also added that it was important to analyze the methods and theories employed in a translation of a work and to know the actual application of such devices to ensure an objective and reliable translation criticism.. Ensuring quality translation through reliable means is also the stand of Bassnett (2002) when she observed that translations should focus on the process not just on the product or the end result of the translation. It is on this premise that the following analysis of the process of translation was based. It should also be noted though, that the translation done followed the steps proposed in this study,[26] hence the metadata and field notes gathered during field-work were extensively utilized and the steps proposed were meticulously followed.

Meanwhile, this section of the paper is divided into two parts: first is the elucidation of the translation that focuses on the cultural context of the text and second is the linguistic characteristics of the three Romblomanon languages. This was based on the concept of Bassnett (2002) that a translator should take a position/stand first before starting to translate.

a. To exhibit the cultural context of the text

Translators are often faced with the dilemma on whether to consider the culture of the SL (source language) or the TL (target language). Most of them decide to show both cultures. Some of them lean heavily on the culture of the TL. The position chosen by this translator, however, is to show fidelity to the SL's culture since, being a literary historian of regional literature[27]; it is his task to ensure that the culture of the text is not lost in translation. Cruz-Lucero (1997) elucidates this point by discussing the problems that arise when the translator chooses the style to use. Several questions were raised. What aesthetic structure will guide the translator in the style of translation: is it the cultural context of the SL or the aesthetic taste of the contemporary reader? What kind of translation will one do: literal or loose? In translating regional texts into Filipino, is its purpose to extend the concept of the region or the concept of the nation? (p. 145)

To answer the questions raised, it is the purpose of this study to showcase the cultural context of the region; the national culture will only come second. As to the kind of translation, some texts warrant literal translation and some loose translation.

[26]See the proposed steps on translation.
[27]See Cruz-Lucero's (1997) three roles of a translator.

b. Problems Encountered and Technique Used to Illustrate the Linguistic Characteristics of *Onhan, Asi, and Romblomanon*

This study used a combination of the literal and the idiomatic translation. Translation is literal in a sense that the pattern of the translated text is similar to the source language. Hence, a word-for-word translation was followed. The style and rhythm were maintained. In some cases, the translation was idiomatic since the translation was in the natural form of the target language. Although this method was the general outline of the translation, there were times that some deviations were made. For example, in the song "Nang Diyútay Pa Ako (Nang Maliit Pa Ako)," functional equivalent and adaptation were employed:

SL: **Ánay** sang daku na, buot nga kuhaon

TL: **Ánay** nang Malakina, gusto nang asawahin

The literal translation is: "(Ngun it, Nang, or Subalit nang) Malaki na, gusto nang kunin." In Filipino culture "gusto nang kunin" is equivalent to "hihingin ang kamay" which means to ask one to marry. In the translation "gusto nang asawahin" is preferred since it rhymes with the rest of the stanza. There was also an intention to introduce the word "**ánay" because its contextual meanings, which are "ngunit," "nang" or "subalit** nang," were only entered as a footnote. It is interesting to note that the expression has several meanings, depending on the context. Consider the following use of the expression from the ballad "Familia Mordido" (the possible meanings are enclosed in parentheses):

Ánay nang pabālik nang San Agustin	**Ánay (At) nang** pabalik nang San Agustin
Punu'y pasahiro padyāgan katūlin	Kahit na kargado ang patakbo'y matulin
Ánay nang tumungod sa may Dakit-dakit	**Ánay (Ngunit) nang** tumapat sa may Dakit-dakit
Traysikil ni Jose pinalagūray pilit.	Ang traysikel ni Jose ay humabol ng pilit
Ánay nang na'una si Rowel kay Jose	**Ánay (Noon o nang** panahon na iyon) nang si Rowel ay nauna kay Jose
Ánay nang yadtu na sa sitiong Nyamsan	**Ánay (samantala) nang** andon na sa sitiong Nyamsan

The adaptation of the word "ánay" may not be practical because it has its own equivalent in the TL. But this decision may prove useful since the expression will extend the impression of the Romblomanon language and will eventually enrich the Filipino language. Therefore, in some cases, tokens of expression like *ánay*, *ahay*, *gid*, *o*, and *abaw*, are not translated since their meanings differ depending on the context of the situation.

Tentatively, the adaptation in the following examples may prove to be practical. The word "mantinir" in the song "Ang Pobre" as used in the line, "mantinir balinghoy[28], mántinir[29] kamote" means that the poor persona is only eating cassava and sweet potato for daily sustenance. The possible idiomatic equivalent in Filipino of this line is "nakakain" or "nagtitiyaga" which are both very limited. At this point, the word "mántinir" could be adapted although in the translation "nagtitiyaga" was still used, with a footnote added to explain the meaning.

Another word is "napayubo" in the song "Si Tatay nga Juan." "Napayubo" in Onhan denotes an incident where a person accidentally steps on a crevice and loses his footing. The closest equivalent in Filipino is probably "natapilok" which means a person accidentally tripped his foot on a protruding object on the ground causing him to stumble or lose his balance. Also "humiyom-hiyom" in the song "Si Inday nga Mapulapula" means to smile modestly, which in Filipino is "ngumiti ng mayumi." In this case "hiyum" could enrich the Filipino language.

Meanwhile, transposition was used in some lines when the syntax of the SL was different from the TL as in the following:

SL: Ang putli mong kaanyag/ dugay kong guinahandum

SUBJECT + PREDICATE

TL: Matagal kong hinahangad/ ang dalisay mong kagandahan.

PREDICATE + SUBJECT

(from "Yaring Gapangandohoy")

[28]Kamoteng-kahoy (Cassava).

[29]mantinimyéntopng [Espmantenimiento]: maintenance, prosesong sustento o gastos sa pagpapanatili var [Rom]: mántinir..

SL: Katulad sang tuburan ang gugmang dalitan

NOUN + ADJECTIVE

TL: Katulad ng bukal ang makamandag na pag-ibig

ADJECTIVE + NOUN

(from "Higad sang Bukid")

Usually, Bisayans are misunderstood to be disrespectful since when they talk they do not use 'honorific expressions.' To understand them and their culture, one reads their literature to see that their languages do not exhibit honorific expressions. To compensate this lack, and to appropriate the culture of the TL, the following translation used addition:

SL: Wa ako kabati. (From "Ang Binata")

TL: Hindi ko [po] narinig.

SL: Hatagi ako piso (From "Kaykay")

TL: Bigyan nyo [po] ako ng piso

The honorific expression "po" of Filipino is added in the translation since the context of the text implies respect.

Moreover, the following words – tubóg[30], sánggòtan[31], sánggot,[32]

[30]It is a shallow sea near the beach.
[31]It is a designated area with mature coconut trees that bear nuts for sale and for tuba-making.
[32]*Sánggot* is scythe or scythe blade used to trim or slice the coconut bud to let the juice flow.

lóna[33], butay[34], kawit[35], tawtáw[36], mananggíti[37], kuragí[38]– were not found in the dictionaries consulted and their inclusion in the translation may enrich the Filipino language. These words are culture-loaded (terms used in *tuba* gathering and fishing) and should remain in their original form. However, entries were provided with footnotes, explanatory notes in the text, and all are found in the glossary.

There is also a rich corpus of Sinaunang Tagalog (ST) that is still used by Romblomanon speakers like tamáy[39], dagsâ[40], dáwi[41], púkan[42], bagnús[43], and lábay.[44] They were not translated but were entered in the glossary with footnotes to explain their meaning. Likewise, there is a rich corpus of Spanish loan words like:

> Téntar, tiyémpo, tráhe, tsúpa, tȯnto, abaníko, abyadȯr, agwantá, almiról, amíga, antes, antipára, apíke, aríyos, asúl, bakéro, bastá, báyle, bilyéte, bisti, buwélta, dága, deskánso, desmayá, desmayádo, desmáyo, disposisyón, dolor, entráda, eredéro, espého, falso, feliz, intránti, kálma, kasamyénto, kóla, koloréte, komún, konsuwelo, kóntra, korísa, lántsa, lárga, límpiyá, lómo, lóna, maldisyón, mantinimyénto, masyádo, móda, nágwas, notísya, óbra, palsó, péna, peniténsiyá, podér, punsiyón, púnta, rendído, responsȯryo, sirbì, and soltáda.

[33]*png* [*Esp*]: matibay at magasona telang hinabi sa abaka o sa himaymay na karaniwang ginagamit sa paggawa ng layag, tolda, bag, at katulad.
[34]*Butay* refers to the spathe, the unopened spadix of the bunch of coconut flowers. The outer covering when mature becomes a woody spathe that protects the coconut flowers. This woody spathe is relatively soft when young, but upon the blooming of the coconut, it remains the protective covering until the nut matures, and the woody spathe is called *butay*. The spadix is tapped for tuba. Tappers generally call the whole of the young spadix as butay.
[35]It is a bamboo container for *tuba* used by *tuba* gatherers.
[36]*png* [*ST*] **1:**paglalawit ng kawayan na gamit sa pangingisda **2:** [*Rom*] paglalawit at paguumang ng pamingwit at paggalaw-galaw dito upang makaakit ng isda ang pain.
[37]Coconut wine (tuba) gatherer.
[38]A brush for the coconut wine collecting container that consists of a strip of bamboo, frayed at one end by pounding; used to clean out the coconut wine collecting container (sayud) after removing the coconut wine and before being placed at the end of the bundled inflorescence (búyuk or butáy).
[39]*png* [*ST*]: masidhing pagpilit sa isang tao para gawin ang isang bagay.
[40]*pnd* [*ST*]: dalhin o tangayin sa tabing-dagat.
[41]*png* [*ST*]: pagkagat ng isda sa pain o bingwit; [*Rom*]: nabingwit na isda.
[42]*png* [*ST*]: pagputol ng malalaking punongkahoy.
[43]*png* [*ST*]: ubos lakas na pagpapatalas ng bakal.
[44]*pnr* lumalábay [*ST*]: matamlay at mabagal.

If the Spanish loan words have their exact equivalent in the TL, literal translation was employed; if not, the Spanish word was used. In some cases when the meaning is corrupted, enriched meaning was supplied in the footnote and entered in the glossary with its variation in the vernacular. If the spelling is corrupted, the naturalization of the Spanish word into Filipino was used and entered in the glossary with the original Spanish word. Take note of "Ing-ka-buenas noche nga daan" in the song "Country of Kanyugan." The line is translated as "Buwenas agad ang nadatnan." "Buwenas noche" literally means "good evening" but in the song, it means "buwenas" or good fortune.

Meanwhile if the Spanish word is not found in the dictionaries consulted, the vernacular naturalization of the language was used. Take note of aforementioned corrupted Spanish word "mantinir," the naturalized Filipino word is "mantinimyénto" and the Spanish word is "mantenimiento."

Comprising a contribution to the Filipino language are the vernacular names of local fish, sea creatures, flora, and fauna. Some creatures with Filipino names were traced in the dictionaries consulted. In cases of lack of identification, the local names were used, entered, and described in the glossary until corresponding Filipino names were found.

Lastly, the following lines exhibit losses in translation. Action was taken, and the glossary and footnotes were provided with additional clarification:

1) The idiom "malapadka sing mata" in the song "Walay Palad Nga Binayaan (Walang Palad na Iniwanan)" needs further explanation. The literal translation is "malawak ang iyong paningin," which, in other words, (or idiomatically) the person has many other relationships because he is still looking for somebody else and is not contented with his present relationship. Finding a cultural equivalent at this point was futile, hence, the translator translated the idiom into "marami kang tinitingnang iba."

2) Something is lost in translation as in the following lines:

SL: Naubos ko na ang kakandilaan [from "Sa Imo Inday (Sa Iyo Inday)"]

Sing kauugdok ko sa simbahan.

Literal Translation: Naubos ko na ang lahat ng kandila

Sa pagtatayo at pagsisindi nito sa simbahan

TL: Naubos ko na ang lahat ng kandila

Sa kasisindi nito sa simbahan.

Explanation:

"Ugdok" in literal translation is the time when someone builds or sets up something. "Kauugdok ng kandila" means someone sets up the candle and lights it. The Filipino translation which is *to light up a candle* lacks the action of setting up. Lighting a candle may mean that you light it and hold it not the exact "ugdok" in Romblomanon that says one sets it up and lights it too in a designated place of worship. "Tirik" in Filipino could also approximate "ugdok."

3) SL: Ang panit sa utbong[45] napalos sa puno. (From "Si Tatay nga Juan")

TL: Ang balat sa dulo natanggal sa puno.

Explanation:

"Utbong" is tip or "dulo" in Filipino, hence, the translation loses the connotation that the song talks about a male sex organ. The natives could easily discern the connection between "utbong" and its being the trope for the male sex organ.

4) SL: Tumukad[46] sa bukid (from "Sa Dughan may Sungay)

TL: Umakyat sa bukid

Explanation:

When Romblomanons go up or climb high areas, and then go down, they say generically, "sumaka" then "bumaba." Such actions are "umakyat" and "bumaba" in Filipino. But when Romblomanons say they will go up a mountain or some high places in their locality, they say "matukad," and when they go down or go to town, they say "malusob." "These

[45]This phrase connotes a male sex organ.

[46]"Tumukad/tukad" literally/ specifically means to walk or travel from a low place to/up the mountain or high areas. This is different from the "akyat" in Filipino which means to go up (anywhere).

verbs are referent-specific, for they cannot refer to any other action."[47] "Tukad" only means to go up geographically and "lusob" only means to descend geographically.

5) SL: Imo ako nga ginapaypay[48] (from the "Country of Kanyugan")

TL: Kinawayan mo ako

Explanation:

"Paypay" means to entice or beckon anybody to come over by waving the hands. The Filipino translation which is "kaway" is only waving the hands perhaps to catch the attention of someone or to acknowledge someone.

Consideration on the Tune of the Songs

Eugenio (2007) noted that "when folksongs are studied in literature, one important fact is often overlooked, and that is that folksongs are *sung* and, therefore, the tunes are just as important as the texts (p. 385)." Lopez (2006) shares this position that according to her "folksongs are a fusion of words and music and that this fusion is irrevocable (p. 303)."

Observations that musical notations are not included when folksongs are studied are likewise evident in the collections, anthologies, and studies consulted. This study, on the other hand, took this matter into consideration and incorporated some measures to ensure that the tunes were given equal importance. However, with the volume of collected materials and the time frame that limited this study, every song could not be provided with the musical notation; hopefully, the appended video and audio recording would for compensate this shortcoming. Besides, the ongoing translation grant awarded by the National Commission on Culture and the Arts would result in the musical notation of all the songs collected. As part of the grant, a translation seminar-workshop was also conducted where the importance of the tunes in translation was acknowledged and a musical annotator was selected among the participants.

[47]See Marne L. Kilates' "Ang Lugi at Tubong Salin (Profit and Loss in Translation)," a paper read in the "Pambansang Palihan sa Pagsasali ng Pampanitikan" held at Tagaytay, Philippines in 2009.

[48]Literally "kaway" or waving the arms, but it means waving to entice the man to come over.

Notation is the domain of musicologists and ethnomusicologists, and the effort made to preserve the music and extend it in translation would benefit them and all future studies. The additional burden of considering the tunes of the songs in translation, which fell on the translator who does not sing was minimized by the following observation:

> "There is a 'futility of time measure' in Philippine songs and it is compensated by the use of rhythm, repetition of one sound, and definite beginning and closing. The length of the song depends on the *indayog* (rhythm) of the language and not on a regular beat. The rhythm based on Philippine language is brought about by lengthening of vowels (*patinig*), repetition of syllables (*kataga*) and phrases (*parirala*), and the lengthening of the sound notes. In short, the melodic is subordinated to the rhythmic and the rhythmic pattern is derived from the words or subject (Maceda, 1977 qtd. in Lopez, 2006, 303)."

Fidelity to the meaning and cultural context of the SL was the priority of the translation and if the syntax, rhyme, and meter of the translation did not match that of the SL, the aforementioned time measure was employed. The final test was done by singing the translated text, using the tune of the original.

RESULTS AND DISCUSSION

Years of planning and conceptualizing, months of fieldwork and of organizing a seminar-workshop resulted in a collection of 125 documented, authenticated, translated, and analysed *karā'an* songs: 53 *karā'an* songs on love, courtship, and marriage; 31 humorous/ drinking bout *karā'an* songs; 16 didactic *karā'an* songs; 12 *karā'an* ballads; and, 13 unclassified *karā'an* songs which were entered as miscellaneous. Of the collection, 86 *karā'an* songs were from the *Romblomanon* ethnolinguistic group, ten (10) from *Asi*, and 29 from *Onhan*.

These songs were gathered by the researcher using the survey method – materials gathered at this point were considered secondary sources[49] – where the initially gathered materials were documented and

[49]The type of work involved in the survey included collecting information using the special tools of folkloric studies (e.g. Bibliographic tools, indices, dictionaries, archives, annotation, and folklore terminologies), collecting materials from private collectors like teachers and other enthusiasts, posting a call for *karā'an* songs in social networking sites (e.g. Facebook, Multiply, and Twitter), and using emails and cellular phones.

authenticated in the field. Materials from the fieldwork were considered primary sources.

Conspicuously, Romblomanon *karā'an* songs were the largest collection, largely because there is a rich corpus of previously printed materials from the 1946 microfilm of Romblon historical data, private collections retrieved from music teachers of the Romblomanon ethnolinguistic groups, internet postings, and social networking sites (considered as secondary sources in this study). These materials from secondary sources were gathered through the survey method to determine how much had been written about Romblon's oral tradition.

There were also a number of carriers of the tradition from the group (considered as primary sources in this study) who were tracked down and interviewed in the field. Only one carrier from the *Onhan* speaking group was interviewed none from the *Asi* group. The interviews were recorded. The *karā'an* songs from the *Asi* and *Onhan* groups came from secondary sources only and were documented through interviews during fieldwork and the seminar-workshop on translation, which was a part of the grant awarded by the National Commission on Culture and the Arts (NCCA).

Lastly, this study, was able to consider the problem previously cited in preserving oral tradition by collecting, documenting and authenticating the Romblon *karā'an* in the field. The fieldwork provided the metadata and field notes on the context of the text that would be helpful both in translation and analysis. Moreover, a framework in studying regional oral tradition was also proposed. With the easy steps introduced, folklore researchers and enthusiasts could start their own folklore collection and scholarly investigation. With the collection, documentation, authentication, translation and study of folklore being thoroughly guided, haphazard work on the subject would be a thing of the past.

CONCLUSION AND RECOMMENDATION

The study and the translation of Romblon *karā'an* will provide authentic materials for folklore scholars and other enthusiasts. Eventually, the publication of the translation will find its way into the anthology of Philippine national literature. The translation is the vehicle that will carry Romblon's oral tradition and any other regional oral tradition from the periphery towards the center – the Philippine National Literature.

More research, however, should be done to find more carriers of the tradition for a comprehensive collection. More carriers of the tradition

on the Onhan and Asi speaking groups should be sought. The oral tradition should be translated and published and be disseminated not only in Romblon but to the whole nation as well. The publication of the materials will elicit more information regarding other carriers and the translation will undergo needed scrutiny from the speaker of the three languages and from other scholars and translators. Likewise, the translated materials will be available to many, ensuring a wide dissemination of the province's culture and collective consciousness.

There should be more fieldwork on and subsequent translation of other genres of Romblon's oral tradition to eventually come up with an anthology. A published book should be circulated in the province and be used in schools. Major libraries in the Philippines should be provided with the book. This move will ensure the restoration of the tradition. Materials will also be available for scholars for critical analysis of the translation and literary merit.

Moreover, ethnomusicologists should look into the music of *karā'an* songs and historians should publish an updated book on the history of Romblon. It is also highly recommended that folklore collectors, enthusiasts and anybody who is studying regional oral tradition should use the framework proposed in this paper. However, the framework as proposed needs greater constructive criticism and validation in the field.

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RSU Research Journal Vol. 1 No. 1 June 2014 ISSN: 2350-8183 pp. 44-65

The Growth and Yield Performance of Three Rice Genotypes With Inorganic and Organic Fertilizers Under Aerobic Condition[1]

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Abstract *– This study consisted of three separate single-factor experiments, each experiment using a different rice genotype but the same fertilizer treatments and the same methodology. It aimed to determine the effects of using organic and inorganic fertilizers alone and in combination on the growth and yield of rice under aerobic condition. The genotypes used in the study were Malakas 1 (hybrid), Rio Grande (inbred) and Lubang (traditional). Five combinations of inorganic and organic fertilizers were used.*

Study showed Malakas 1 and Rio Grande were significantly earlier than Lubang variety in days to flowering to maturity (± 7 days) and its plant height. In the leaf area index there was no differences among the genotypes and treatments. For the number and productive tillers, the traditional variety Lubang had significantly higher yield than Malakas 1 and Rio Grande and relatively the treatment 4 or 75% organic fertilizer had the lowest yield compared to the higher level of inorganic fertilizer. In the length of panicles, there was no difference among the genotypes and treatments. In the case of number of filled spikelets, Rio Grande had the lowest compared to Malakas 1 and Lubang at all treatments.

Lubang had the significant lowest 1000 grain weight against Malakas 1 and Rio Grande. The effect of the treatments (F1 to F5) on the biomass of the three genotypes had significant variations. The yield of Malakas 1 (6.7 t ha $^{-1}$) and Rio Grande (5.51 t ha $^{-1}$) were significantly higher

[1]Dissertation submitted to the Central Luzon State University in 2010; at present, around 2 hectares are utilized for verification and validation using the output of the dissertation result. The newly collected upland traditional Rice of Romblon are now the materials for test. Some variations based on the landscape of the area were also considered.
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than Lubang (2.28 t ha $^{-1}$).

In the yield correlations, only percentage filled grains showed no significance compared to number of filled spikelets, 1000 grain weight and yield. While on the correlation of grain yield, only 1000 grain weight gave a positive result. It is recommended that further study of the same treatments in different locations and seasons to confirm or refute the results of this study.

Key Words *– genotypes, hybrid, inbred, traditional, aerobic rice, inorganic and organic fertilizer*

INTRODUCTION

Rice is the staple food for more than 90 million Filipinos where each consumes more or less two cavans (110-120 kilos) of rice in a year. It gives 41% of the total energy and 31% of the total protein intake of every Filipino. Almost 2.5 million Filipinos rely on the industry and 11.78 million Filipinos are in the labor sector (Zamora, 2009).

The production of rice is mostly done in irrigated lowland paddies. An average of about 4000 liters of water is needed to produce a kilogram of rice (Bouman *et al*., 2002 as cited by Htay, 2007).

Beset by some problems like the occurrence of El Niño phenomenon, rice production also faces other problems as rapid evaporation due to high temperature (global warming), deforestation and improper water management, high cost and ill effects of inorganic fertilizers; the government entities and farmers have to resort to some approaches in order to minimize the impact of these problems on rice production. One of these is the aerobic rice farming.

Aerobic rice culture uses external inputs like supplementary irrigation in a non-puddled and non-flooded soil. On the other hand, farmers can also resort to the production of organic fertilizers from farm wastes to reduce much dependence on costly inorganic fertilizers which are believed to be contributing to the degradation of soil properties and the environment.

Aerobic rice technology was first introduced in the Philippines by the International Rice Research Institute (IRRI) in the year 2000. Field trials and experiments were established in the provinces of Tarlac and Nueva Ejica. The technology showed favorable impacts. Its potentials, as well as the challenges that could arise, were identified. It was found out

that while aerobic rice technology could help reduce water requirement by 30-50% during the dry season thereby decreasing input cost, the yield could decline by 15-20%. In response to such adverse outcome, this technology is best adopted to rainfed areas that are generally productive only during rainy season and left idle during the dry season.

Aside from aerobic rice culture, organic farming has been considered as another approach to climate change adaptation. In the Philippines it is still in its emergent or incipient phase though the discourse on organic agriculture is fast gaining ground in the country. Organic agricultural production is limited though steadily growing, reportedly between 10-20 percent annually (FAS/USDA, 2000), but reliable statistical data are hardly available. The organic market in the country has been described as a "niche market". A number of organic products are increasingly being sold in major supermarkets, with a price premium reportedly ranging from 20-30 to 30-50% over non-organic products (Yussefi and Willer, 2003). In 2005, the President of Philippines issued Executive Order No. 481, on the "Promotion and Development of Organic Agriculture in the Philippines", recognizing the potential of organic agriculture in the country and providing government support in the development of the sector.

The primary movers of the industry consist of development organizations that are working toward the goal of alleviating poverty among marginalized farming communities of the archipelago. However, Philippine organic rice is yet to be labelled as "organic" because the functional definition for the product is not clear (Alfon, 2005). On the importance and benefits of organic farming, Medina and Mendoza have separately established that the return on investments (ROI) for organic rice production is in fact better than conventional farming. Medina *et al.* (2000) showed that the return on investment (ROI) for organic rice was 2.8 while that of conventional rice is 1.45. These farms are located on eroded land with acidic and low fertility soil. In another case study where the rice farms were located on more fertile soil, Mendoza (2001) said that organic rice gave an ROI of 3.48 while conventional rice is 2.53.

In a paper presented in the International Conference of Asian Organic Agriculture in 2002, Mendoza claimed that "since the cash cost of production was 33% lower in the organic farm, the net revenue per hectare was higher (332 USD ha^{-1} in the organic farm and 290 USD in the conventional farm) despite the slightly lower yields (3.25 t ha^{-1}) in organic compared with the yields obtained (3.52 t ha^{-1}) in the conventional farms." Farmers are able to retain rice for their families while waiting for the next cropping season. This improves the level of food security of the fam-

ily. The higher cash cost in the conventional farms was due mainly to the agrochemicals which accounted for 83.2% of the cash cost (fertilizer, 65%; pesticides, 18.2%) (Mendoza, 2002).

With the present condition of water scarcity and the benefits of organic farming, this study attempted to generate actual rice production data based on local conditions on yield, water and nutrient productivity using organic and inorganic fertilizer combinations on the growth and yield performance of traditional, in-bred and hybrid rice varieties under aerobic conditions.

MATERIALS AND METHODS

Land Preparation

The experimental area, approximately 1,200 m^2, is a part of 9-hectare rice field of the Romblon State University, Odiongan, Romblon. The land area of 18x52 m was plowed and harrowed twice to hasten decomposition of plant residues and expose weed seeds.

The area was divided into three blocks and each block was subdivided into three main plots for the three varieties of rice and five subplots for the fertilizer treatments after a thorough preparation. Each subplot measures 3 x 6 m or 18 m^2 and was separated by bunds of 30 cm. wide. Main plots had 50 cm bunds and a distance of 1 meter per block was observed. Treatments were assigned at random. There were 12 furrows in each plot at a distance of 25x25 cm set toward the direction of the subplots.

Treatments and Experimental Design

The experiment used a 3x5 split-plot in randomized complete block design (RCBD) with three replications. The following treatments were assigned per plot:

Factor A- Fertilizer

F1 - 100% IF (90-40-30 NPK)
F2 - 75% IF + 25% OF (67.5-30-22.5 NPK + 2.5 t ha^{-1} OF)
F3 - 50% OF + 50% IF (5 t ha^{-1} OF + 45-20-15 NPK)
F4 - 75% OF + 25% IF (7.5 t ha^{-1} OF +22.5-10-7.5 NPK)
F5 - 100% OF (10 t ha^{-1})

Factor B-Variety
V1 - Malakas 1 (Hybrid)
V2 - Rio Grande (Inbred)
V3 - Lubang (Traditional)

Seeding and Seeding Rate

The seeds were dry seeded at a rate of 60 kg ha^{-1} or an equivalent of 6 g per furrow or 72 g per plot of 15 m^2. Seed weight of each variety was determined to adjust the seeding rate based on weight and number of seeds per furrow with a distance of 25x25 cm between furrows. There were 12 furrows in each plot set using a fabricated 5 tooth steel harrow.

Irrigation

Flush irrigation was applied to all of the 45 experimental plots of 18x52 m or a total 936 m^2 after seeding and was repeated at about 80% emergence 4-5 days after sowing. All the plots were maintained at field capacity (at least 2 cm depth at the time of application) where water was applied and measured equally using a flow meter (pre-testing of volume of water at field capacity using a flow meter). Irrigation water was supplied using a 0.5 hp water pump from a shallow tube well. The volume of water supplied was recorded including the amount of precipitation in millimeters throughout the duration of the study. Supply of water was stopped 10 days before harvest to hasten ripening and hardening of soil.

Weed Control

Nominee, a post-emergence herbicide, was applied 10-15 days after seeding at a rate of 25 ml (2 ½ tbsp.) Nominee was mixed with 25 ml (2 ½) of Agrisol per spray load (16 L). The plots were flushed with water a day after spraying to hasten the effect of the herbicide. On the spot uprooting of weeds was undertaken throughout the duration of the study. Cleaning of dikes was a usual activity to reduce harborage of pests.

Crop Protection

The study area and its surrounding paddies were monitored daily for pest and disease incidence. Cymbush was sprayed twice at the early stages to control green leafhopper, leaf folder and whorl maggot at a rate of 2-3 tablespoons per spray load (16L). It was also used to control stem borer and rice bug at booting stage following the same rate.

Harvesting

Harvesting was undertaken by cutting the stalks close to the ground using a scythe when 80-85% of the grains were straw colored or approximately 30-35 days after heading. The palay were threshed by feet immediately after harvest plot after plot and after each variety. The grains per plot were contained in properly marked sacks per variety, treatment and block. Samples of grains were taken from each plot to determine the moisture content.

The entire yield per variety, treatment and plot were contained separately in a properly marked sack and sun-dried. The adjusted weight of the clean grains was recorded.

Sampling

Yield was taken from 10 m^2 harvest area excluding two-border rows on each side and 0.5 m on both ends of the plot. Plant characters were taken from 10 randomly marked plant samples from 5 randomly identified and marked 0.5 m long sample rows within the harvest area. Destructive samples for biomass and nutrient analysis were taken from rows outside the harvest area except the outermost rows.

Data Gathered

Soil Analysis. In order to determine the fertilizer uptake and residue after the experiment, soil samples were taken from the center of each sub-plot at a depth of 30 cm using a soil auger. NPK, moisture content, pH and organic matter (OM) content were analyzed. These samples were properly labeled and personally delivered to the Bureau of Soils and Water Management (BSWM), Department of Agriculture (DA), Quezon City. Moreover, a sample from the organic fertilizer was also analyzed for ammonium nitrogen and nitrate nitrogen to determine available N aside from the NPK, organic matter content (OM) and MC.

Climatic Data. Only the precipitations (mm) were recorded at the PAGASA substation in Odiongan, Romblon. The same were monitored and recorded throughout the duration of the study. An improvised rain gauge was also set at the experimental area to counter check the records on precipitation.

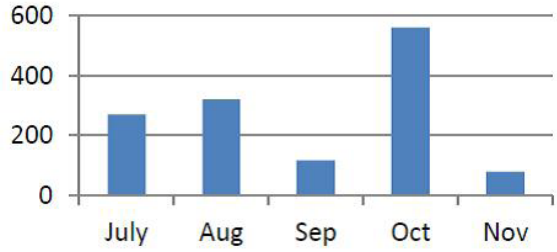

Figure1. Total monthly precipitation in Odiongan, Romblon in millimeters (2010).
(Source: PAGASA Substation, Odiongan, Romblon)

*Plant Height (cm).*This was measured from the base of the plant to the tip of the panicle at maturity. Ten sample plants were taken randomly from each plot in all replications.

Days to Flowering. The dates were noted when 50% of the plants per variety were at heading stage. The days were noted from the date of sowing.

Surface Leaf Area. The surface leaf area was derived from four leaves of all the three sample plants per plot following the formula with a factor of 0.75 (Yoshida, 1981);

Surface Leaf Area = K x Length x Width

The length of each sample leaf was measured from the base to its tip while the width was taken from the widest portion of the leaves with K as the correction factor.

Biomass. The entire aerial parts of the plant constituted the samples. Biomass was measured from three sample plants outside the harvest area at maturity. Samples were oven dried at 70°C for 48 hours until constant weight.

Tissue Analysis. Four leaves from top of five sample plants outside the harvest area were taken, air-dried, grounded and screened in a fine mess net. The same were contained in properly marked paper envelops for submission to the Bureau of Soils and Water Management (BSWM), Department of Agriculture (DA), Quezon City for N level analysis. Samples were taken at heading stage.

Productive Tillers. Tillers with well-developed panicles and grains

were counted from the ten sample plants per plot at harvest.

Length of Panicles. The same sample plants for productive tillers were used. Ten sample panicles were chosen randomly. The length was measured from the base to the tip of each panicle.

Number of Spikelet per Panicle. The total number of filled and unfilled grains was taken from ten sample panicles randomly chosen from the ten sample plants per plot.

Percent Filled Spikelet. This was taken after determining the number of spikelet from ten sample panicles per plot using the formula;

$$\% \text{ Filled Grains} = \frac{\text{No. of filled grains per panicle}}{\text{No. of spikelets per panicle}} \text{ X } 100$$

*Weight of 1000 Grains (g).*The grains were randomly taken from each sample yield, counted and weighed using a digital scale. The same was also adjusted after determining the moisture content of the samples.

Grain Yield (t ha^{-1}). Grain yield was derived from the harvest area of 10 m^2 excluding the border furrows. Moisture content was taken from the sample grains to determine the adjusted grain weight.

$$\text{Grain Yield} = \frac{\text{weight of samples (kg)}}{10\ m^2} \times \frac{10{,}000 m^2}{1 ha} \times \frac{1 \text{ ton}}{1000 kg} \times \frac{100\text{-MC}}{86}$$

Statistical Analysis of Data

The data were analyzed using the analysis of variance for randomized complete block design. Means with significant effects per ANOVA was compared using Duncan's Multiple Range Test (DMRT).

RESULTS AND DISCUSSION

Days to Flowering

The three varieties of rice bore flowers from 79-86 days after seeding (Table 1). The flowers of Malakas 1 emerged significantly earlier than Rio Grande by 3-4 days and 7-8 days earlier than Lubang. The variations in terms of flowering among varieties were characteristic of each variety and were not affected by the levels of fertilizer applied under aerobic condition.

All the flowers of the plants in each subplot (variety) emerged practically almost on the same day. The modern varieties of rice (Malakas 1 and Rio Grande) matured earlier than the traditional variety (Lubang).

Table 1. Days to flowering of three rice varieties as affected by levels of organic and inorganic fertilizers under aerobic condition

Variety	Mean
Malakas 1	79.33c
Rio Grande	82.00b
Lubang	86.33a

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT

Days to Maturity

The maturity of the varieties under study ranged from 108-110 days after seeding (Table 2). Lubang matured significantly late compared to Malakas 1 and Rio Grande. Malakas 1 and Rio Grande matured with the same number of days and significantly earlier than Lubang.

Table 2. Days to maturity of three varieties of rice as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Mean
Malakas 1	108^{b}
Rio Grande	108^{b}
Lubang	110^{a}

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT

Plant Height

The analysis of variance revealed highly significant differences among varieties and levels of fertilizer among the height of plants under aerobic condition. There is no interaction effect between varieties and levels of fertilizers.

Lubang was found to be significantly taller than Malakas 1, while Malakas 1 was also significantly taller than Rio Grande (Table3). The significant differences among the varieties tested in terms of plant height might be attributed mainly to their genetic make-up since there are varieties that are genetically tall or short.

The effects of the levels of fertilizers (F1, F2 andF3) were statistically comparable in terms of height despite being significantly different from F4 and F5. The same effects of F2, F3 and F5 were observed while the effect of F4 is comparable to that of F5.

Table 3. Plant height (cm) of Malakas 1 at maturity as affected by levels of organic and inorganic fertilizers under aerobic condition

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	100.73	96.00	96.33	94.33	97.00	96.88
Rio Grande	87.73	88.67	87.33	84.67	85.00	86.68
Lubang	148.97	149.00	152.67	144.33	146.33	148.26
Mean	112.48	111.22	112.11	107.78	109.44	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

Leaf Area Index (LAI)

In the analysis of variance, significant difference among varieties were observed but there were no differences found on the levels of fertilizers on the leaf area index (LAI) of the different rice varieties. There were no interaction effects between variety and levels of fertilizers on the surface leaf area of the plants.

The LAI of Lubang was significantly higher than Malakas 1 and Rio Grande while Malakas 1 was significantly higher than Rio Grande.

The five levels of fertilizer had comparable effects on the LAI of the different rice varieties (Table 4). The LAI of the plants were not significantly affected by the different levels of fertilizers under aerobic condition.

This would suggest that the LAI of the plants were all dependent on the genetic make-up of the varieties under study in terms of vegetative growth. Lubang had the highest LAI among the varieties tested.

Table 4. Leaf Area Index of three varieties of rice at heading stage as affected by levels of organic and inorganic fertilizers under aerobic condition

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	3.67	3.53	3.70	3.25	3.82	3.59
Rio Grande	2.75	3.36	3.07	2.73	2.72	2.93
Lubang	3.53	3.56	3.44	3.26	3.73	3.50
Mean	3.32	3.49	3.40	3.08	3.42	

Number of Tillers

There were significant differences among the number of tillers produced by the three varieties of rice at maturity. Rio Grande produced 11 tillers which is comparable to Malakas 1. The differences in the number of tillers of Malakas 1 and Lubang were not significant (Table5).

Table 5. Number of tillers per 0.5 linear meter per three sample rows of three varieties of rice at maturity as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	10	11	11	10	11	10.67[ab]
Rio Grande	11	11	12	10	11	11.33[a]
Lubang	10	10	10	9	10	9.93[b]
Mean	10.33	10.89	11.11	9.89	11.00	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

The number of tillers of the three varieties of rice was not affected by the levels of fertilizers applied. Also, there were no significant interaction effects per analysis of variance between the effects of variety and levels of fertilizer on the number of tillers under aerobic condition.

In this study, there was a complementary function on the effects of inorganic and organic fertilizer on the level of N and P though the results were not significant. The comparable effects of fertilizer levels

on the number of tillers are supported by the results of this study on the levels of leaf nitrogen, which, the same were also comparable among the fertilizer levels. This is further supported by the levels of phosphorus in the soil that increased at an increased level of organic fertilizer.

Number of Productive Tillers

As shown in Table 6, Rio Grande produced significantly more number of productive tillers than Malakas 1 and Lubang, while Malakas 1 produced significantly higher number of productive tillers than Lubang. There were significant differences among the number of productive tillers produced by the three varieties of rice under aerobic condition.

The effects of different levels of fertilizer were significantly different on the number of productive tillers produced by the three varieties of rice. The number of productive tillers produced by F1, F2 and F5 were not significantly different by DMRT. There were no differences found between the number of productive tillers of F1 and F4 respectively.

On the conditions of this study, the N level of Rio Grande and Malakas 1 had an edge over Lubang, despite comparable levels of leaf N among varieties and levels of fertilizer. While leaf N was certain, the levels of phosphorus on the leaves were not determined but soil phosphorus increased as the level of organic fertilizer applied increased. Finally, the poor performance of Lubang is attributed to the early lodging while the significant performance of Rio Grande can be attributed to the genetic make-up being short where apparent competition between the vegetative and the reproductive parts of the rice plant on sink allocation was evident to have favored flowering and thus the number of productive tillers. The same observation applies to Malakas 1.

The effect of variety was independent of the effects of the levels of fertilizer on the number of productive tillers produced by the three varieties of rice.

This result shows that the number of productive tillers had more contribution to the variations by variety in terms of yield.

Table 6. Number of productive tillers per linear meter per three sample rows of three varieties of rice at maturity as affected by levels of inorganic and organic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	9	10	10	9	10	9.67[b]
Rio Grande	10	10	11	10	10	10.40[a]
Lubang	8	9	9	8	10	8.93[c]
Mean	9.22[b]	9.89[a]	10.22[a]	8.89[b]	10.11[a]	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

Length of Panicles

There were no significant differences in the length of panicles among the three rice varieties at maturity as affected by levels of fertilizers (Table 7).

The effects of the different levels of fertilizer on the length of panicles at maturity were not significant. No significant differences on the effect of the levels of fertilizer were found among the three varieties of rice.

These results would imply similar genetic potential of the varieties tested in terms of length of panicles and the same was stable at different levels of fertilizer used.

Table 7. Length of panicle (cm) of three varieties of rice at maturity as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	26.67	25.67	25.33	25.33	25.33	25.67
Rio Grande	25.00	24.33	25.00	24.33	24.00	24.53
Lubang	25.67	25.67	26.00	25.33	25.00	25.53
Mean	25.78	25.22	25.44	25.00	24.78	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

Number of Spikelet Per Panicle

Variety showed significant effects on the number of spikelet per panicle but there was no significant interaction effects observed.

Malakas 1 and Lubang produced significantly comparable number of spikelets per panicle with a mean of 97 and 91 spikelets respectively. The two varieties produced significantly higher number of spikelets per panicle than Rio Grande with a mean of 63 spikelets only (Table 8).

The number of spikelet per panicle is a stable varietal character. However, other environmental factors like water, nutrients, temperature and radiation could not be discounted. In this study, the varietal yield potential posed more influence. The leaf area index is also an important plant character that directly imposes influence on the rate of photosynthesis. Lubang had the highest LAI followed by Rio Grande whose apparent influence could be attributed to the nutrient absorbing capacity of each variety. Though the effects of the levels of fertilizer were not significant, mineralization and the absorption of indigenous nutrients might have favoured Lubang and Malakas 1 due to root density and thickness.

Table 8. Number of spikelet per panicle of three varieties of rice at maturity as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	106	91	102	90	97	97.33[a]
Rio Grande	65	62	70	61	60	63.47[b]
Lubang	90	91	88	96	91	91.13[a]
Mean	87.00	81.44	87.78	82.33	82.33	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

Number of Filled Spikelet

Table 9 reveal that Malakas 1 and Lubang produced comparable number of filled spikelet per panicle among the three varieties of rice at maturity. The Malakas 1 and Lubang produced significantly higher number of filled spikelet per panicle than Rio Grande with 53 filled spikelets.

Table 9. Number of filled spikelet per panicle of three varieties of rice at maturity as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	88.00	79.00	86.00	76.00	80.00	81.87[a]
Rio Grande	55.00	50.00	60.00	50.00	51.00	53.27[b]
Lubang	78.00	76.00	74.00	82.00	81.00	78.33[a]
Mean	74.00	68.22	73.67	69.77	70.67	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

There were no significant differences found on the effects of different levels of fertilizer on the number of filled spikelet per panicle among the three varieties of rice at maturity.

Also, no significant interaction effects were observed between variety and levels of fertilizer on the number of filled spikelet per panicle of the three varieties of rice.

The climatic conditions at the time of the study had an apparent influence on the number of filled spikelet per panicle at maturity. Intermittent rain showers were recorded at heading stage thereby causing partial shading during the period of flowering. This, still, is a varietal character of hybrid and traditional varieties to survive inclement weather conditions.

Percentage Filled Spikelet

The results of the Analysis of Variance showed that both the variety and levels of fertilizer were not significantly different and showed no interaction effects. The percentage filled spikelets per panicle of the three varieties of rice were not significantly affected by the different levels of fertilizer. There were no significant differences among the percentage filled spikelet per panicle among the three varieties of rice (Table 10).

Table 10. Percentage filled spikelet per panicle of three varieties of rice as affected by levels of organic and inorganic fertilizers under aerobic condition

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	83.67	82.67	82.00	83.00	82.67	82.80
Rio Grande	84.67	81	86	81.67	85.00	83.67
Lubang	86.33	82.33	83.67	84.33	86.00	84.53
Mean	84.89	82.00	83.89	83.00	84.56	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

All the five levels of fertilizer had the same effects on the percentage filled spikelet per panicle of the three varieties of rice. The results could again be affected by the inclement weather conditions during the heading stage. When solar radiation is low, the source activity may be insufficient to produce enough carbohydrates to support the growth of all the spikelet. As a result, the numbers of unfilled spikelet may increase.

1000 Grain Weight

The grains of Malakas 1 and Rio Grande were significantly comparable in terms of weight per 1000 grains at 25.77g and 27.08g and were found to be significantly heavier than the grains of Lubang with 24.24g. The differences in grain weight obtained may be due to varietal differences (Table 11).

Table 11.Weight (g) of 1000 grains of three varieties of rice as affected by levels of inorganic/organic fertilizer under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	25.57	25.21	26.16	25.31	26.59	25.77a
Rio Grande	27.75	26.4	27.06	27.25	26.58	27.01a
Lubang	24.35	24.54	24.55	24.41	23.35	24.24b
Mean	25.89	25.38	25.92	25.66	25.51	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

The effect of the levels of fertilizer showed no significant differences on the weight of 1000 grains of the three varieties of rice. The levels of fertilizer did not significantly affect the weight of the grains of the three varieties of rice. Though considered to be a stable varietal character, the grain weight of Lubang was directly affected by its early lodging which gave rise to new shoots and leaves.

Biomass

There were significant differences among the biomass of the three varieties of rice as affected by levels of fertilizers. The effects of the levels of fertilizer on the biomass of rice varieties were significant at 5% level.

The biomass of the three rice varieties was comparable (Table 12) while significant variations in all the levels of fertilizer applied were observed. F3 had the highest biomass followed by F4 and F1 while F5 had the least recorded weight.

It could be gleaned based on the analysis of variance that plant biomass was influenced by the levels of inorganic and organic fertilizers applied. However, it should be noted that it was more on the effects of the levels of organic fertilizer (F3 and F4) as against the biomass as affected by F1. There was an apparent contribution from the indigenous N, timing of application, and the amount of N lost via leaching and volatilization. The slow release nature of organic fertilizers and the availability of N in the form of nitrate (NO_3) and ammonium (NH_4) must have compensated the results.

The low biomass of F2 and F5, however, could still be attributed to the amount of inorganic and organic fertilizers that might have been available as affected by aerobic condition.

Table 12. Plant biomass (t ha^{-1}) of three varieties of rice at maturity as affected by levels of inorganic/organic fertilizers under aerobic condition

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	11.54	12.46	14.13	11.66	10.79	12.12
Rio Grande	13.52	8.73	18.31	11.78	10.89	12.65
Lubang	15.03	14.78	16.40	22.77	12.12	16.22
Mean	13.36^{abc}	11.96^{bc}	16.28^{a}	15.40^{ab}	11.27^{c}	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT.

On the other hand, despite results that were not significant, Lubang still recorded the heaviest biomass owing to its varietal characteristics of being tall and with profuse vegetative growth.

Grain Yield

The grain yield (t ha^{-1}) of the three varieties of rice were significantly different (Table 13). Malakas 1 produced a mean yield of 6.7 t ha^{-1} which was significantly higher compared to Rio Grande (5.51 t ha^{-1}) and Lubang (2.28 t ha^{-1}). Malakas 1 produced the highest yield among the three varieties.

The effects of the different levels of fertilizer in yield were not significantly different at 5% level. Statistically, the yields of rice were comparable at all levels of fertilizer under aerobic condition. These results imply the potentials of organic fertilizers to support grain yield being slow release fertilizer, increased microbial population under aerobic condition, and the availability of NH_4-N and NO_3–N at 2.543 ppm, 2.231 ppm respectively.

The influence of variety on grain yield can be attributed to the number of productive tillers; it being an identified unique potential of Malakas 1 and Rio Grande rice varieties. Lubang, however, may have had similar performance in terms of relative growth parameters, being the tallest of the three varieties under study, its grain yield was affected by its early lodging. Also the yield potential of traditional rice variety is lower due to its genetic makeup.

Table 13. Grain yield (t ha^{-1}) of three varieties of rice as affected by levels of organic and inorganic fertilizers under aerobic condition.

Variety	Fertilizer Level					Mean
	100% IF	75% IF + 25% OF	50% IF + 50% OF	25% IF + 75% OF	100% OF	
Malakas 1	6.67	6.72	6.83	6.51	6.79	6.70[a]
Rio Grande	5.61	4.95	5.83	5.45	5.74	5.51[b]
Lubang	1.92	2.17	2.17	2.45	2.67	2.28[c]
Mean	4.73	4.61	4.94	4.80	5.07	

*Within a row and within a column, means followed by the same letter are not significantly different at 5% level using DMRT

The leaf area index of the three varieties tested, also, had an apparent influence on yield. Lubang had the highest LAI but its leaves were droopy while Malakas 1 and Rio Grande had erect leaves. The high LAI of Lubang, on the other hand, had an influence on decreased weed population.

Yield Correlation

The correlation coefficients of yield components with different growth characters are presented in Table 14. Plant height and surface leaf area showed highly significant positive correlation with the number of spikelet and filled spikelet per panicle. However, highly significant negative correlations were noted with 1000 grain weight and yield.

The number of tillers and productive tillers also showed highly significant positive correlation with 1000 grain weight and the latter also showed highly significant positive correlation with yield while a significant positive correlation between number of tillers and yield was also observed. A highly significant negative correlation was also seen among the number of tillers, the number of productive tillers and the number of spikelet and filled grains.

Length of panicle showed significant positive correlation with the number of spikelet and number of filled spikelet but not significant negative correlation with 1000 grain weight and yield. Biomass, on the other hand, showed a significant negative correlation with yield and not significant correlation with the rest of the yield parameters.

Of all the yield parameters, percentage filled grains showed no significant correlations with all the growth parameters.

Table 14. Correlation analyses between growth and yield performance of three varieties.

Growth	Yield				
	Number of spikelet	Number of filled spikelet	% Filled spikelet	1000 Grain Weight	Yield ($t\ ha^{-1}$)
Plant Height	0.3908**	0.3863**	0.0764^{ns}	-0.6607**	-0.8883**
Leaf Area Index	0.32802	0.25946	-0.27474	-0.17162	-0.06473
No. of Tillers	-0.4619**	-0.4624*	-0.1707 ^{ns}	0.3821**	0.3462*
No. of Prod. Tillers	-0.4663**	-0.4257**	-0.0618 ^{ns}	0.5175**	0.4471**
Length of Panicles	0.6308*	0.5734*	-0.0756 ^{ns}	-0.068	-0.0431

ns-not significant *- significant at 5% level **- significant at 1% level

The highest negative significant correlations was observed between plant height and yield; leaf area index and yield can be attributed to the genetic make-up of the varieties tested. Lubang, having the highest LAI and the tallest among the three varieties of rice, had the lowest yield while Malakas 1, which is shorter than Lubang had the highest yield and Rio Grande which is shorter than Malakas 1 had the second highest yield.

The results further showed highly significant positive correlation between the number of tillers and the number of productive tillers with yield. Malakas 1 and Rio Grande were statistically tied having the highest number of tillers but Malakas 1 had the highest yield. This can be attributed to the genetic make–up, shading before heading, flowering and ripening stages.

Correlation of Grain Yield to other Yield Components

Other yield components were negatively not significant to grain yield except percent filled spikelet which is not significant while 1000 grain weight had a positive highly significant correlation with grain yield.

The 1000 grain weight contributed much to this result since grain size is a stable varietal character while grain weight was affected by the production and partitioning of carbohydrates which is a product of photosynthesis. Grain size as a varietal character does not necessarily mean that all the grains will have the same size and so the weight.

This observation is evident with Lubang which is known for its large grain size but had the lowest grain yield. The grain weight of Lubang was directly affected by its early lodging that caused a competition in the partitioning of assimilates, particularly carbohydrates, with the vegetative parts which was further caused by the emergence of new shoots.

Table 15. Correlation on grain yield and other yield components.

Other Yield Parameters	Grain Yield
Biomass	-0.361278
No. of Spikelet	-0.008160
No. of Filled Spikelet	-0.038290
% Filled Spikelet	0.108260
1000 Grain Weight	0.569770**

ns- not significant *- significant at 5% level **- significant at 1% level

CONCLUSIONS AND RECOMMENDATION

The performance of the modern varieties in terms of the growth parameters e.g. number of tillers and number of productive tillers, were comparable under aerobic condition. The poor performance of the traditional variety is a stable genetic character in terms of height and vegetative parts that caused early lodging. The number of tillers and the number of productive tillers where noted to be influential factors on mean yield of Malakas 1 and Rio Grande.

The effects of the levels of fertilizer were not consistent but became a practical option for the supply of P and K in the soil. The level of nitrogen was critical in the conditions of the study even at a high rate of organic fertilizer.

On the practical side, the use of organic fertilizer had the positive alternative use compared to inorganic fertilizer. Future researches on the different levels of N with a constant level of organic fertilizer at 10 t ha^{-1} should be undertaken. Studies that would verify the performance of modern and traditional varieties under aerobic condition should be undertaken in different locations and at least in two seasons.

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RSU Research Journal Vol. 1 No. 1 June 2014 ISSN: 2350-8183 pp. 66-82

Influence of Age Combination and Protein Supplementation on the Rate of Lay, Egg Quality and Chick Viability[1]

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Abstract *- Farm trial was conducted to determine the effect of short-term game fowl management interventions on egg production and chick viability. It involved two studies. In study 1, the experimental treatments were: a) brood cock x brood pullets, b) brood stag x brood hens, c) brood cock x brood hens, and d) brood stag x brood pullets. In Study 2, protein supplementation at different day intervals with different dosage (number of capsule) were used: a) zero supplementation, b) one capsule per week, c) two capsules per week, and d) three capsules per week.*

Results showed that egg production, egg shape index, hatchability and chick viability were not influenced by age combination of brood fowls. Relatively, more males were produced by old-old and young-young combinations, although the differences were not significant. Short-term supplementation of brood fowls with high protein concentrate and energy utilization enhancer did not influence egg production and egg and chick viability. There were relative improvements in egg and chick viability, suggesting that those may be with long term supplementation.

It is recommended that a study for longer duration of time of pairing of the different combinations be conducted to further test the productive efficiency in terms of rate of lay, hatchability and chick viability, and supplementing brood fowl with energy utilization enhancer for a longer duration of time and with a bigger experimental bird population.

Key Words **-** age combination, brood fowl, chick viability, egg quality, fowl management, protein supplementation.

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INTRODUCTION

The current status of the local game fowl industry is solely the result of the Filipinos' love for cockfighting. In fact, cockfighting is regarded by many as the Filipino's national sport, not just a pastime. Over the past several decades, it is the understanding of basic genetics that has helped the modern breeder maintain and improve some of the great families of game fowl that have been passed down through generations.

Maintaining and improving bloodlines is the primary goal of game fowl breeders. Breeding and selection are two very important aspects of game fowl production that spells the difference between success and failure (Bunan, Lorenzo & Gorgonia, 2002). Oftentimes, the knowledge that a particular pullet or hen belongs to a good bloodline is enough for it to be designated as a brood fowl. Hence, the importance of the brood hen should never be forgotten as it contributes to the genes of the progeny.

The hen is the other part of the entire equation in breeding gamecocks. It is important to be very choosy in buying pullets or hens. Some breeders prefer to buy hens instead of pullets because at least their bloodline has already been proven. However, throughout the history of game fowl breeding, the importance of the hen has been overlooked, even ignored. Any present day breeder competing in the fierce arena who ignores the importance of the hen is not only at his own peril, but also at the peril of his fowl's competitive success.

To preserve ideal bloodline, the mating must be made between ideal cock and hen. Thus, the mating will result in: Cock and Hen mating producing ½ cock, ½ hen (F1 or Filial Generation 1); Father to daughter, Mother to son (F2 or filial generation 2); Granddaughter to Grandfather, Grandmother to grandson (F3); Granddaughter to Great Grandfather, Great Grandmother to Grandson (F4) (Shy, 1982).

Game fowl breeding is a tedious and lengthy undertaking that requires fulltime attention. A strain that has been purebred for a number of years should be selected for crossing. It is usually more satisfactory to get a cock because one can select the best as seen in the battle (Bark, 1964). Troiano added that when breeding game fowl for their fighting characteristics, most cockers select and breed game fowl for their power, speed, cutting ability, brains, temperament, and heart, in other words, their "gameness" (2004).

Apart from adopting a good breeding program, proper management of the breeder flock is essential to produce good hatching eggs. The

vigor and health of a chick depends on the care of its parents before the egg is laid. All birds in a breeder flock should be reared with proper management practices. Birds in the breeding flock should be healthy and free of physical shortcomings that can interfere with proper mating and egg production. The potential parent birds must be able to produce fertile hatching eggs before chick quality can be improved.

Another concern of the local game fowl breeders is the hatchability of the eggs that their breeders produce. The eggs should have good hatchability, a problem under certain situations. Hens for egg production must have the ability to lay large numbers of eggs. Selection of hens based on the rate of lay is the primary objective of the poultry breeder. The traits considered to be of economic importance include rearing mortality, laying mortality, egg production, food consumed per dozen of eggs produced, and body weight, according to "Systems Used for Breeding – Incubation and Embryology" (n.d.).

There are criteria that need to be considered and followed in selecting eggs for hatching to ensure production of quality game chicks. These include size, weight, shape, eggshell quality (smoothness, shell thickness) and yolk quality. The viability of eggs developing to hatching stage is based on temperature (38 °C – 40 °C), humidity (60% to 65%), velocity and movement of air to supply the egg with oxygen in the incubator and stored energy within the egg (Boerjan, 2002).

The most important factor affecting hatchability is incubation temperature (Taylor, 1999). Variations in chick weight at hatch has also been attributed to the amount of water lost from the eggs laid by young breeders, as well as the thicker shell membranes, cuticle and more viscous albumen, act as a significant barrier to water vapor diffusion between the interior of the egg and of the incubator temperature (McLoughin and Gous, 1999).

Nutrition is another aspect of game fowl management that raisers have to contend with. Poultry and game bird feeds are referred to as "specially prepared" feeds. These are exclusively formulated to contain all the protein, energy, vitamins, minerals, and other nutrients necessary for proper growth, egg production and health of the birds.

Game fowl owners and breeders have the tendency to raise their game fowl quite extravagantly. Often, high-quality commercial game bird feeds are not available and feed substitutes are fed to the bird. More often than not, game fowls are given supplements and medicines that are either in excess of what they need, or not needed at all (Bunan et al., 2002).

The most convenient way of feeding chickens is with a pelleted ration, whether the birds are confined indoors or allowed to range outdoors. Most diets contain corn for energy, soybean meal for protein, and vitamin and mineral supplements. Commercial rations often contain antibiotics and arsenicals to promote health and improve growth, coccidiostats for combating coccidiosis, and sometimes mold inhibitors. However, it is possible to obtain unmedicated feed-check feed labels to see if they contain feed additives (Fanatico, 2003).

Nilipour (1997) pointed out that breeder feed and its micronutrient composition not only dramatically influence the production and health of breeders but also the production of high quality, fertile eggs able to nourish the developing embryos for 21 days. Bunan, et al. (2002) added that feeding game fowls with a 16 – 18 % crude protein (CP) ration appears to give them the best body conformation.

The concerns of game fowl raisers and breeders are: a) the proper selection and pairing of brood fowls to produce and develop bloodlines that are superior in all character traits; b) the quality and hatchability of eggs produced; c) correct and proper incubation management practices; and d) proper brooding and growing management of the chicks to produce excellent game birds in the future. This study was conducted to help solve the troubles encountered by most game fowl raisers and breeders. In general, this study aimed to determine certain aspects of game fowl management in relation to the rate of lay, egg quality, chick viability, and brooding performance of game chicks.

MATERIALS AND METHODS

The component experiments of the study focused on and were limited to short-term management interventions aimed at enhancing the reproductive performance of brood fowl and egg and chick management in relation to the rate of lay, egg quality, chick viability, gender ratio, and their brooding performance. The study was conducted at El Dia Game Farm, San Mateo, Rizal from August to October 2007.

Experimental Design and Data Analysis

All component studies were laid out following Completely Randomized Design. Data were analyzed using Analysis of Variance for completely randomized experiments. Difference among treatments means ascertained for significance using Duncan's Multiple Range Test (DMRT).

Study 1 - Age Combination of Brood Fowls and Egg and Chick Viability

Brood fowls belonging to a single bloodline were used. They were either 1-year old or 3-years old or older, based on farm records kept. They were paired accordingly, and collection of hatching eggs from each pairing lasted for one month.

The following pairings (treatments) were made:

Treatment 1 – Brood Cock x Brood Pullets

Treatment 2 – Brood Stag x Brood Hens

Treatment 3 – Brood Cock x Brood Hens

Treatment 4 – Brood Stag x Brood Pullets

Each treatment had one brood stag (male chicken less than 1 year old) or brood cock (male chicken more than 1 year old) paired with five brood hens (female chickens more than 1 year old) or brood pullets (female chicken less than 1 year old), each female comprising one replication. The birds in this pairing were housed in a 3 m x 3 m x 5m breeding pens with steel framing, nylon mesh walls and roof with earthen floors. Trap nests were placed in each breeding pen to facilitate recording of individual egg production.

Brood Fowl Management

Feeding. Farm-formulated breeder feed consisting of 60% concentrate feed and 40% duck layer pellet was fed to the experimental birds throughout the study. Each brood fowl was given 40 grams of this feed every feeding time. Feeding times were 7:00 a.m. and 4:00 p.m. Water was added with *adlibitum*. The breeder ration was mixed prior to feeding. The concentrate feed was soaked for 12 hours prior to mixing to remove toxic materials, foreign objects, and to facilitate digestion and utilization of nutrients by the brood fowls.

Egg collection and recording. Egg collection started three days after pairing, when the eggs laid by brood hens or brood pullets were already expected to be fertile. Eggs were collected three times a day just before feeding in the morning, 12:00 noon, and just before feeding in the afternoon. Using a pencil, each egg collected was marked with the leg band number of the brood hen or brood pullet, the wing band number of the brood cock or brood stag, and the date it was laid. The collected eggs were stored for a maximum of 4 days under room temperature (around

27˚C) before incubation.

Egg incubation. The collected eggs were set in a forced draft electric incubator with automatic egg turning mechanism. They were candled after 18 days of incubation, just before they were transferred to the hatcher incubator with pedigree trays. Non-viable eggs were counted and taken out. The chicks that hatched were counted, weighed, and wing banded for identification.

Chick brooding. After wing banding and weighing, the chicks that hatched were immediately placed in battery brooders, each with a 25-watt incandescent bulb to provide the brooding temperature required.

Chick feeding. The chicks were group-fed twice a day; the amount of feed given per feeding time gradually increased as they grew older.

Data Collection

While not really an indicator of the influence of age gap on egg viability, egg production of the brood hens and brood pullets was recorded and compared for possible differences. Each egg laid during the experiment period was weighed and its length and width were taken using a Vermeer caliper. Egg shape index was taken as:

$$\text{Egg shape Index} = \frac{\text{Egg width (mm)}}{\text{Egg length (mm)}}$$

Eggs representing each replication were sampled for shell thickness, which was taken using a micro-caliper. The remaining eggs were artificially incubated and their hatchability was taken as:

$$\%\ \text{Hatchability} = \frac{\text{No. of Chicks Hatched}}{\text{Total No. of Eggs Set}} \times 100$$

Chick weight was taken as soon as it was taken out of the incubator. The male-to-female ratio was taken as soon as genders were already discernible.

Study 2 – Energy Utilization Enhancer Supplementation of Brood Fowls and Egg and Chick Viability

One of the main ingredients of a commercially available energy utilization enhancer is L-carnitine, which is known in media advertisement as the fat burner. Its effectiveness in reducing "sapola" or gut fat

has been proven in game fowls being conditioned for fighting. Practical tests that prove its effectivity is a reduction in body weight and the thin feeling whenever the vent of the chicken is pinched after supplementation, which is an indication that it has utilized its fat deposits (Bunan, et al., 2002). It would be interesting to know whether the ability of this product to mobilize fat deposits of the chicken would have profound effects on egg and chick viability if given to brood fowls. Hence, this study was conducted.

Treatments

Brood fowls of the same age group or body weight category were subjected to a month-long commercially available energy utilization enhancer supplementation program to determine its influence on egg and chick viability, including chick gender ratio.

The product is in capsule form, hence given orally. The following supplementation schemes were followed, representing the treatments. In the absence of a recommended dosage and mode of supplementation, these schemes were arbitrarily assigned:

Treatment 1 – No supplementation (control)

Treatment 2 – 1 capsule (250mg) per week

Treatment 3 – 2 capsule (250mg) per week

Treatment 4 – 3 capsule (250mg) per week

One brood cock was assigned to 5 brood hens and housed in a breeding pen earlier described in Study 1. Each brood hen represents 1 replication. Trap nests were placed in each cage to facilitate records of egg production. The energy utilization enhancer capsules were given in the morning right after the brood hens' forced feeding with it.

Brood Fowl Management

Feeding, egg collection and recording, incubation and chick management were similar to those described in Study 1.

Data Collection

Feed consumption. Individual feed consumption was recorded by noting the number of times each brood fowl was given its 40-gram ration. Total feed consumption was taken as the sum of all 40-gram feeds given over the one-month period of experiment. It was noted that the amount of feed was just enough for the daily ration of the entire number of flock per cage and no leftovers were noticed.

Egg production. Data on egg production were taken as all eggs laid 3 days after supplementation started up to a month thereafter.

Egg attributes. Data on egg dimension, hatchability were taken as described in Study 1.

Chick data. The initial weight of each chick that hatched was taken. The male-to-male ratio of the brood from each mating combination was determined as soon as gender was discernible.

RESULTS AND DISCUSSION

Study 1 – Age Combination of Brood Fowls and Egg Viability

Brood Fowls belonging to a single blood line were used. They were either 1 year old or 3 years old or older, based on farm records kept. They were paired accordingly, and collection of hatching eggs from each pairing lasted for one month.

The influence of age combination of brood fowls on egg characteristics and viability is presented in Table 1.

Table 1. Effect of age combinations of brood fowls on egg and chick viability

Treatment	Hen Housed Egg Production	Egg Shape Index	Egg Weight (g)	Shell Thickness (mm)	% Hatchability	Chick Weight (g)	Chick Gender Ratio
T1: Brood Cock x Brood Pullets	11	0.78	47	0.024	55	26	1.08
T2: Brood Stag x Brood Hens	5	0.78	47	0.024	60	19	1.00
T3: Brood Cock x Brood Hens	8	0.79	39	0.020	50	26	1.22
T4: Brood Stag x Brood Pullets	8	0.78	39	0.021	26	26	1.74

Egg Production

The one-month egg production in all treatments was generally low, the highest being only 11 eggs and the lowest is five (5) eggs. In spite of what appeared to be a considerable difference (11 vs 5 eggs), the difference between any two treatments was not significant.

The data on egg production appear to represent the typical rate of egg laying in game fowls. Game fowls are generally poor egg producers, partly because such chickens are usually selected for pugnacity and fighting style, with the rate of egg production usually not being part of the selection program.

Age grouping of brood fowls did not show any influence on rate of lay. This is expected since egg laying is solely a hen's function and, thus, entirely depends upon its body condition and genetic potential.

While brood pullets laid more eggs than brood hens, their rate of egg production was unexpectedly low as to be just similar to that of brood hens. To some extent, though, relative performance of the brood hens used in the study conforms to the observation of Bunan, et al. (2002) that the ability of the brood hen to reproduce declines with age.

Egg Shape Index

The shape of the eggs laid by brood fowls of different age combinations ranged from 0.78 to 0.79, indicating that pairing of brood cocks with

brood pullets does not alter egg shape.

Like egg production, egg shape is a trait that entirely depends upon the phenotype and genotype of the brood hen, hence, is not expected to be influenced by the brood cocks regardless of its age. The result shows that egg shape is more or less consistent in game fowls, and their age is not a factor that alters it.

Egg weight was similar among all treatments. Brood fowls in Treatments 1 and 2 laid eggs that were on average, eight (8) grams heavier than those in Treatments 3 and 4. However, it may probably be due to factors that include body size of the brood pullets and brood hens, this difference was not significant. While the body weight of the brood fowls was not taken, its effect on egg weight was evident if the egg weights in Treatments 1 and 2 were compared. The females in Treatment 1 were pullets, while those in Treatment 2 were hens.

Normally pullets and hens lay similar eggs. As the birds grow older, the size of its egg also increases, oftentimes with a corresponding decrease in egg production. This is because egg size is nearly related to the age of the female breeder (McLoughlin & Gous, 1999).

It is interesting to note that the brood fowls of similar ages (brood cock x brood hen; brood stag x brood pullets) laid lighter, thus similar eggs than the pairings of varying age combination. However, it is difficult to account this result to age combination, since egg weight is entirely dependent upon the pullet or the hen.

Shell Thickness

Eggs laid by birds in Treatments 1 and 2 had slightly, but not significantly thicker shell than those laid by birds in Treatments 3 and 4.

While the results are not significant, the data on shell thickness appear to go with egg weight. In fact, the slight difference in egg weight could have been due partly to shell thickness. While not really a major concern of the study, it is worth noting that the thickness of the shell of the eggs laid by all the brood fowls used was just half as that of the commercial birds, which was about 0.40 cm. understandably, smaller eggs have thinner shells. What is interesting is that the size of the eggs laid by the game fowls was about 3/4 that of the commercial chickens, but their shell was half as thick. This could mean that game fowl eggs have characteristically thinner shells.

Egg Hatchability

Hatchability of eggs ranged from 50% to 75%, with brood pullets paired with brood stags having the highest hatchability and brood hens paired with brood cocks, the lowest. However, it may probably be due to small sample size, the differences among treatments were not significant.

While not significant, the difference in hatchability is worth considering. It appears to conform with the mating combination, with brood pullets paired with brood stags attaining the highest hatchability while the brood hens paired with brood cocks, the lowest. In a way, this result is a contradiction of the common belief of some game fowl breeders who wait until their brood stocks is at least two years old before using them for breeding purposes. With chickens sexually maturing at six months of age, 8-month old brood fowls should be in their prime and, thus, should be able to produce healthy progeny.

The result strengthens game fowl breeders' practice of pairing old brood fowls with younger ones to attempt to produce healthy progeny from superior but aging game fowl. To a certain extent, the result also confirms that pairing old brood fowls results in problems in hatchability and chick quality, a reason for the limit of about five (5) years for brood cocks and four (4) years for brood hens as recommended by Bunan, et al.(2002).

Chick Weight

Except in Treatment 2 where the chicks produced were lighter (19 g vs 26 g), all treatments produced day-old game chicks with similar body weight (26 g). The 7-gram difference, though, was not enough to yield any significant result.

If results are to be considered minus their non-significance, these appear to contradict the fact that chick size depends on egg size, the eggs produced by the brood hens in Treatment 2 being heavier and thus bigger than those laid by the brood fowls in Treatments 3 and 4. It is generally accepted that there is a positive correlation between pre-incubation egg weight and chick weight at hatching. The embryonic growth over time, within the differently sized eggs was exponential, and the growth is limited by the space within the eggshell, thus the development of the embryos within the small eggs lagged behind that of the embryos from bigger eggs from the eight (8) days of incubation (McLoughlin & Gous, 1999).

It appears that in case of the eggs in Treatment 2, the growth of the embryos was somewhat restricted as shown by their relatively lighter

weight at hatching. A consequence of selection of high yield breeds is an increasing variability in hatchability of eggs from flocks of different ages. Eggs from young and old breeders differ significantly with respect to size, eggshell conductance and heat production (Boerjan, 2002).

In the present study, however, the result was the opposite, suggesting that as brood hens grow older, they become less able to deposit more of the nutrients needed for embryonic development. It could be that the brood fowls used were already past their prime, with their reproduction ability already diminishing. Such reason though, is purely theoretical, since brood hens in Treatment 3 produced heavier chicks from relatively lighter eggs.

Gender Ratio

The gender ratio of the eggs hatched by brood fowls of different age combinations ranged from 1.00 to 1.74 but showed no trend, indicating that pairing brood cocks with brood pullets does not alter chick gender ratio.

Like egg production, chick gender ratio entirely depends upon the phenotype and genotype of the hen and roosters; hence, it is not expected to be influenced by the brood cocks regardless of its age. The result shows that chick gender ratio is more or less consistent in game fowls, and their age is not a factor that alters it.

Chick Mortality

No mortality was recorded. The chicks were raised only for one week and were alert at hatching, hence, the good viability.

Study 2 – Energy Utilization Enhancer Supplementation of Brood Fowls and Egg and Viability of Chicks

The effect of energy booster supplementation of brood fowls on egg production, egg shape index, egg weight, shell thickness, egg hatchability, chick weight and gender ratio is presented in Table 2.

Table 2. Effect of energy utilization enhancer supplementation on egg and chick viability

Treatment	Hen Housed Egg Production	Egg Shape Index	Egg Weight (g)	Shell Thickness (mm)	% Hatchability	Chick Weight (g)	Chick Gender Ratio
T1: Control (none)	8	0.77	39	0.200	62	26	1.27
T2: 1 capsule /week	8	0.77	47	0.025	62	26	1.17
T3: 2 capsules/week	8	0.78	37	0.021	75	19	1.00
T4: 3 capsules/week	9	0.78	47	0.023	66	27	1.08

Egg Production

Egg production of brood fowls supplemented with varying dosages of energy booster capsules was similar to those of the control. L-carnitine, the active component of the energy booster, was supposed to enhance fat mobilization to allow the body to use it more efficiently, in the process reducing the body fat reserves. Apparently, short term supplementation did not readily improve egg produced. The seemingly low production with or without energy booster capsule supplementation may also mean that brood fowls were already optimally laying, only that they were limited by their genetic potential; or, the addition of concentrate in their diet may have significantly altered its nutrient composition. The alteration resulted in nutrient imbalance, one that was not able to support egg production at an acceptable rate. The diet given to the brood fowls was a combination of breeder pellet (40%) and concentrates (60%).

Egg Shape Index

Egg shape index was essentially the same among all the treatments, indicating that this was not influenced by the energy booster supplementation. The similarity of indexes with those in Study 1 indicated that game fowl eggs had a characteristic shape, the index of which ranged from 0.77 to 0.79.

Egg Weight

Contrary to expectations, egg weight was not influenced by energy booster supplementation. With enhanced energy utilization as a result of

supplementation, there should have been an improvement in the energy-to-protein ratio that was available for utilization. However, this did not happen, with the energy-to-protein ratio of the diet already altered because of the addition of concentrate mix. It may have been the effect of using booster supplement was more readily seen if brood fowls and brood pullets were given plain breeder diet.

Shell Thickness

While not significant, the results in shell thickness were more a reflection of egg size than those in Study 1. The smaller the eggs tended to have thinner shells than the bigger counterparts. However, while the control group eggs had the thinnest shell, it was not clear whether the relative increase in egg shell thickness with energy booster supplementation was treatment-related or not because of inconsistencies in egg size.

Egg Hatchability

There were no significant differences in egg hatchability. The variations were considerable, but were not enough to elicit good statistical results probably because of small sample size. Egg hatchability seemed to favor energy booster supplementation, being higher in treatments where brood fowls were given higher doses of the supplement. This could be because the role of L-carnitine in the energy booster supplement was not just confined to energy mobilization.

Chick Weight

Chick weight was not significant by energy booster supplementation of brood fowls. At any rate, it appeared to be a reflection of egg weight, since the bigger eggs produced the heavier game chicks.

Although not analyzed, what was interesting to note was that if the weight of the day-old chicks was taken relative to egg weight, only those in Treatment 1 fell within the acceptable range of 65% to 68% as proposed by Deeming (1995) as an alternative way of assessing chick quality. Since the eggs were incubated in a single forced draft incubator, still unknown was the cause for the chicks in the treatments where brood fowls were supplemented with energy booster capsules tended to be drier than those in the control (55%, 51%, and 59%, respectively vs 67%), .

Chick Gender Ratio

Chick gender ratio was essentially the same among all the treat-

ments, indicating that this was not influenced by energy booster supplementation. Although the control produced the highest ratio, it was encouraging to note that the least ratio was 50:50, which was better than what is considered norm in the industry where female chicks outnumber males. However, apart from this, results being non-significant, there could be other factors like season of the year and health of the brood fowls that also influence chick gender ratio.

Chick Mortality

There were no mortalities in the one-week period that the game chicks were raised. Hence, the data on chick mortality was no longer presented.

SUMMARY AND CONCLUSIONS

STUDY 1.

Age grouping of brood fowls did not show any influence on rate of lay. While pullets laid more eggs than hens, their rate of egg production was unexpectedly low as to be just similar to that of hens. Like egg production, egg shape is a trait that entirely depends upon the phenotype and genotype of the hen, hence, is not expected to be influenced by the brood cocks regardless of its age. Therefore, it was concluded that egg shape is more or less consistent in game fowls, and their age is not a factor that alters it.

Because brood fowls of similar ages (brood cock and brood hen; brood stag and brood pullets) laid lighter, thus smaller eggs than the pairings of varying ages, it is difficult to account this result to age pairing, since egg weight is entirely dependent upon the pullet or the hen. Thickness of the shell of the eggs laid by all the brood fowls used was just half of that of the commercial birds, which was about 0.40 cm. It is therefore concluded that game fowl eggs have characteristically thinner shells. Hatchability of eggs appeared to conform with the mating combination, to the brood pullets paired with brood stags attaining the highest hatchability while the brood hens paired with brood cocks, the lowest. Therefore, in attaining high hatchability, brood pullets may be paired with brood stags.

STUDY 2.

Egg production of brood fowls supplemented with varying dosages of energy booster capsules was similar to those of the control. Short term supplementation did not readily improve egg production in game fowls.

Egg shape index was essentially the same among all the treatments, indicating that this was not influenced by energy booster supplementation. Game fowl eggs appeared to have a characteristic shape, the index of which ranged from 0.77 to 0.79. Contrary to expectations, egg weight was not influenced by energy booster supplementation because the energy to protein ratio of the diet may already have been altered by the addition of concentrate mix in the regular feed given to the brood fowls. Shell thickness was more a reflection of egg size in Study 1. The smaller the eggs the more they tended to have thinner shells than their bigger counterparts. However, it was not clear whether the relative increase in egg shell thickness with energy booster supplementation was treatment-related or not because of inconsistencies in egg size. Egg hatchability seemed to favor energy booster supplementation being higher in treatments where brood fowls were given higher doses of the supplement. Therefore it is concluded that the role of L-carnitine in the energy booster supplement is not just confined to energy mobilization. Egg weight was not influenced by energy utilization enhancer supplementation of brood fowls. It appeared to be a reflection of egg weight, since the bigger eggs produced the heavier game chicks.

RECOMMENDATIONS

Based on the findings, the following are recommended:

A further study on pairing of the brood pullets paired with brood stags for a longer duration of time may have to be conducted to further test their productive efficiency in terms of rate of lay, hatchability and chick viability. A further experiment may have to be conducted on supplementing brood fowl with energy utilization enhancer for a longer duration of time and with a bigger experimental bird population. Moreover, further study on brood fowls supplemented with 10% HPS using pure breeder feed (with no concentrate) has to be conducted to test the rate of lay, percent hatch and viable chicks produced.

A further study on the brooding performance of male game chicks supplemented with of 10% HPS – without antibiotics or with 15% HPS + antibiotics could be coupled with a study on the same aspects of game fowl management on rate of lay, egg quality and chick viability during summer months.

The use of protein concentrate and energy utilization enhancer for brood fowls and game chicks is recommended, since there is an apparent improvement in performance despite the shortcomings like small sample size at the time the studies were conducted. And, the use of medications

following a veterinarian-prepared health program is essential because of the improvement in game chick performance.

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RSU Research Journal Vol. 1 No. 1 June 2014 ISSN: 2350-8183 pp. 83-104

Understanding the Influence of Teacher Beliefs in Shaping Filipino Professoriate's Signature Pedagogy for Teacher Education[1]

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Abstract *- Using the phenomenological design of qualitative inquiry, this study sought to describe how teacher beliefs become instrumental in shaping a distinct pedagogy for teacher education. Interestingly, this investigation surfaced the trilogy of influence typologies that shape Filipino professoriate's distinctive teaching approaches for teacher education, namely: contextualizing, configuring and concretizing power. Findings concurred with literature which recognizes the strong impact of teacher beliefs on instructional practices, highlighting the influence of beliefs in shaping signature pedagogies. To deepen understanding of teacher education's signature pedagogy and how it is shaped by teacher beliefs, further research along this line of inquiry is recommended, particularly in other educational and cultural communities.*

Key Words - Filipino professoriate, teacher beliefs, teacher education, signature pedagogy

INTRODUCTION

Teacher beliefs refer to "the highly personal ways in which a teacher understands classrooms, students, the nature of learning, the teacher's role in the classroom, and the goals of education" (Kagan, 1990, p. 423). Teachers interpret their experiences with learners and content based on their beliefs (Hativa, 1998) and develop distinct teaching strategies in accordance with those beliefs (Northcote, 2009). In short, beliefs inform teachers' choice and use of instructional strategies (Kagan, 1992), causing a strong impact on quality of student learning (Northcote, 2009).

[1]Dissertation submitted to the University of Sto. Tomas in 2011; the study was one of the publishable papers comprising the author's dissertation-by-article. The author also investigated the influence of teacher's knowledge and reflection on shaping the signature pedagogy for teacher education.

Pajares (1992) argued that research on teacher beliefs is an essential aspect of educational inquiry, claiming that "attention to the beliefs of teachers and teacher candidates can inform educational practice in ways that prevailing research agendas have not and cannot. The study of beliefs is critical to education" (p. 329). Accordingly, educational research has focused on teacher beliefs as factors that greatly affect teaching and learning. As Nespor (1987) emphasized, "to understand teaching from teachers' perspectives we have to understand the beliefs with which they define their work" (p. 323). Postareff, Lindblom-Ylännne, and Nevgi (2007) maintained that only by addressing teacher beliefs about teaching and learning can meaningful development be truly actualized.

Shulman (1987) explained that teacher beliefs are derives from accumulated knowledge of subject matter, educational materials and structures, formal teacher training, and "wisdom of practice," i.e., from actual teaching experience. Refining their earlier study on academics' beliefs about teaching and learning, Samuelowicz and Bain (2001) enumerated nine dimensions of teacher beliefs, namely: desired learning outcomes, expected use of knowledge, responsibility for organizing or transforming knowledge, nature of knowledge, students' existing conceptions, teacher-students' interaction, control of content, professional development and interest and innovation.

In an effort to summarize research on beliefs, Pajares (1992) endeavored to clear disagreements about the exact meaning of beliefs and how to distinguish the former from knowledge resulting in unsatisfactory conceptualizations and divergent interpretations of beliefs and belief structures, provided a definition of beliefs based on the best studies on the construct, discussed the nature of belief structures as described by major scholars, and synthesized research findings about the nature of beliefs. He summed up studies on teacher beliefs by suggesting "a strong relationship between teachers' educational beliefs and their planning, instructional decisions, and classroom practices" (p. 326).

Thus, researchers and practitioners' understanding of teachers and teaching has been enhanced by inquiries into teacher beliefs and how they impact practice (Speer, 2008). As pointed out by Mansour (2009), research on teacher beliefs has become part of the process of understanding teacher concepts of teaching and how they influence pedagogical decisions and practices.

However, despite general agreement that teacher beliefs strongly impact practice, Speer (2008) expressed concern that research has focused on general explications of teacher beliefs linked with equally gener-

al descriptions of pedagogical practices, failing to fully explore the influence of beliefs on situation-specific teaching strategies and establish "the connections between particular beliefs and specific moment-to-moment instructional practices that teachers are encouraged to adopt" (p. 219). This study was designed to contribute to the understanding of the influence of teacher beliefs on specific teaching approaches by describing the contribution of beliefs to the development of Filipino teacher educators' distinct pedagogy. Specifically, this study sought to answer the following central question: In what way are beliefs instrumental in shaping signature pedagogy for teacher education?

Shulman (2005a) defined signature pedagogies as "the characteristic forms of teaching and learning…which organize fundamental ways in which future practitioners are educated for their new professions" (p. 52). Inextricably associated and identified with preparing people for a particular profession (Shulman, 2005c), these teaching and learning approaches eventually become "idiosyncratic, habituated, and completely embedded in a particular discipline" (Golde, 2007, p. 346).

Woeste and Barham (2006) pointed out that signature pedagogies of the different professions develop among students the knowledge, skills, disposition and habits they will need as they pursue their duties and responsibilities as professionals. Since teacher education does not have a pedagogical signature and a distinct personality as a profession, it can be argued that students might find difficulty in internalizing the values and character of the discipline because these are best learned through signature pedagogies (Shulman, 2005a). Focusing on beliefs as factors that influence teachers in their choice of teaching strategies, this study intended to offer insights into how teacher education may form and finally establish its own distinct Filipino pedagogy.

METHODOLOGY

Since the inquiry calls for an eidetic description of a phenomenon, specifically the influence of beliefs in shaping the participants' distinct pedagogy for teacher education, the phenomenological design was used in this study.

Originated by Husserl, the acknowledged founder of modern phenomenology (Giorgi, 2008), and commonly used to describe "as accurately as possible the phenomenon, refraining from any pre-given framework, but remaining true to the facts" (Groenewald, 2004, p. 5) phenomenological research is generally recognized as appropriate for gaining greater understanding of human experiences (Schweitzer, 2002). By describing

how individuals carry out the activities of their daily living, phenomenology seeks to understand the world as encountered in experience (Küpers, 2009). In short, phenomenology is the study of human experience and how things are perceived in and through experience (Fochtman, 2008).

Teacher educators (N=24; 6 males, 18 females) from various colleges and universities in the National Capital Region of the Philippines, particularly Manila and surrounding cities were the respondents in this phenomenological inquiry. Teaching either professional education or specialization courses under the teacher education program, the participants held various positions in their respective schools, ranging from faculty member to dean of the teacher education department. All teaching full-time at the time of this study, the participants' educational attainments ranged from bachelor with units in masterate to full-fledged doctors. They had an average of 14 years in service.

Data for this study were gathered through the use of multiple operationalism which included semi-structured interviews and videotaped classroom ethnography, a descriptive approach involving detailed observations of classes (Clemente-Reyes, 2002). Demographic data such as names, gender, number of years in service, academic ranks and educational attainment were likewise gathered from the participants through the use of a questionnaire.

Prior to actual data gathering, informed consent from the participants and their deans were obtained, explaining to them the purpose of the research. Copies of the video and audio data from the class observations and interviews were given to the participants and their deans as soon as the materials were burned into compact discs. To avoid ethical breaches, the principles of confidentiality, protection from harm, privacy and truthfulness were strictly observed during the conduct of this study.

Data explicitation for this study was guided by the principles of qualitative analysis described by Fagerberg and Norberg (2009), thus: preliminary reading of the verbatim transcription of interview data to gain naïve understanding of the text, structural analysis in which data were grouped into meaning units to form sub-themes and themes, comparing themes with naïve understanding and related studies, and finally reflecting on the themes to gain comprehensive understanding of the data.

The principles of phenomenological reduction (Gray, 1997) were observed by "bracketing a priori theories, hunches and suppositions" (Van der Mescht, 2004, p. 5) to obtain a thorough understanding of the phenomenon.

Whenever possible, the participants' statements were compared with their corresponding classroom ethnography video data to ascertain consistency. Generally, their statements of beliefs were reasonably consistent with their "pedagogising" moves recorded on tape.

As a final measure to enhance the study's credibility, which depends, to a large measure, on eidetic and faithful description of the phenomenon under investigation (Chiovitti &Piran, 2003), the categories and themes that emerged during data explicitation were subjected to further verification procedures.

RESULTS

Analyses of the participants' articulations of beliefs disclosed a trilogy of power typologies that the former appeared to be instrumental in the formation of Filipino professoriate's signature pedagogy for teacher education (FPSPTE). To preserve the authenticity of responses, the respondents' statements were not edited but were printed verbatim, except for a few very minor corrections for grammatical integrity.

Teachers' beliefs possess a contextualizing power that emanates from their conception of teaching, as well as from contentions that delineate the conduct of teachers and reinforce their motivations and aspirations, or cause for teaching. Similarly, teachers' beliefs have a configuring power which, derived from beliefs, give their pedagogy a strong foothold, foresight and focus. Lastly, teachers' beliefs have a concretizing power which stems from their contentions regarding instructional methods, the teaching-learning environment or pedagogical milieu and the learners, or mentees. As shown in Figure 1, the three typologies of influence interact with one another as indicated by the double arrows, and to a certain extent also overlap with one another as indicated by the intersecting circles. The whole configuration represents a system whereby the distinct teaching approaches of select Filipino teachers are influenced by their pedagogical beliefs.

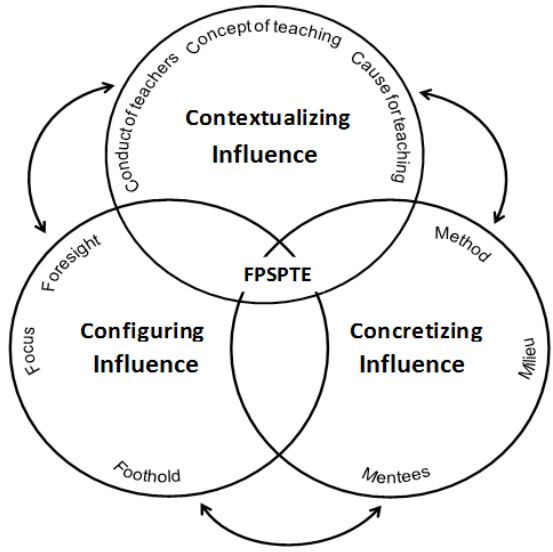

Figure 1. The trilogy of influence typologies that shape Filipino professoriate's signature pedagogy for teacher education.

Contextualizing power of teacher beliefs

The data gathered indicate that one source of the contextualizing power of beliefs is teachers' clear conception of teaching as a profession. Their beliefs tend to give them a clear pedagogical perspective of their teaching practices in relation to other concerns of teaching and learning. For one, having firm beliefs regarding the essence of teaching crystallizes their understanding of how teaching relates to other aspects of their personal and professional lives and how their influence as teachers will impact the learners. The following words from a participant show a clear concept of teaching and a deep understanding of a teacher's place in the educational process:

> *Teaching is simply sharing your life with other people, building something that would last for eternity. If a teacher does something stupid, it will multiply and will last until eternity.*

Teachers' beliefs regarding teaching enable them to comprehend their role in the educative process, exerting a strong influence on their pedagogical decisions and actions. The power of teachers' conception of teaching to contextualize their pedagogy is further illustrated in the fol-

lowing explanation of a history teacher:

> *I would compare a teacher to somebody who's molding. You're really the one who molds the students and I believe that teachers should closely guide the students. You really have to take into consideration the nature of the one you are molding.*

Having a clear conception of teaching enables teachers to understand and appreciate not only their role but also their responsibility as professionals, enhancing their awareness of how they relate to other factors in the educational process such as the learners and the community. This is exemplified in the following words from a participant:

> *Because teaching is a noble profession, we really show our best – do our best. We try to serve as a model, a model to our students, a model to the community.*

The collected data further show that like concepts on teaching, teacher beliefs regarding motivations and aspirations, or cause for teaching, are factors that help contextualize pedagogy. Teachers' convictions regarding their reasons for teaching apparently determine how they view themselves in relation to other circumstances that surround teaching and learning, as implied in the following words from a participant: *Motivation of mine – I'm helping the country to have citizens who would help alleviate poverty and improve people's lives and help them become better persons.*

Apparently, teachers' beliefs about their motivations for teaching exert a strong influence on their pedagogy. This influence is so powerful that it practically governs teachers' actions in front of the learners. This is another aspect of the contextualizing power of beliefs pertaining to teachers' cause for teaching.

Conduct of teachers which is another aspect of pedagogy influenced by beliefs, also helps to contextualize teaching, as the data gathered show. Likewise, since behavior is beliefs-driven and teaching practices are greatly influenced by teachers' beliefs, it can be inferred that beliefs regarding teachers' conduct place pedagogy in proper context in relation to teaching's moral and social dimensions. This is demonstrated in a participant's reply when asked about his guiding philosophy regarding his conduct as a teacher:

> *Knowing your responsibility as a teacher, your moral, your social obligation, you should know that it is not a job but a vocation.*

Evidently, the participants' beliefs pertaining to the conduct of teachers and their causes for teaching, as well as their concepts on teaching, constitute a meaningful framework that helps clarify the context of their pedagogy.

Configuring influence of teacher beliefs

Data obtained from the interviews suggest that the configuring influence of beliefs allows teachers to see clearly how their pedagogy relates to relevant philosophical, social and educational variables, enabling them to see how these diverse elements may be made to work harmoniously toward the attainment of desired educational outcomes.

Moreover, data gathered imply that the respondents' educational beliefs enable them to anchor their teaching approaches to philosophies they believe will work best for them, giving their pedagogy a strong foothold. How teachers' beliefs influence this particular aspect of pedagogy is best captured by the following sharing from participants regarding the process by which they design their course syllabus:

> *We always start off with the purpose of the course and which philosophies will work with it and what's needed in the field. So we would always look at it not only from the point of view of the content itself but how it would influence other factors surrounding every individual considering that they would be teachers. So it's more on the reality of teaching.*

Teachers' understanding of the purpose of the curriculum is another aspect of pedagogy influenced by beliefs. Such understanding enables teachers to see how their pedagogy relates to the world outside the classroom, giving them a clear picture of the interrelationships between and among social institutions and their respective needs. Thus, teachers' beliefs regarding the purpose of the curriculum are windows into their pedagogy, as demonstrated by a participant's contention:

> *The curriculum should really be responsive to the needs of the society, otherwise, it's useless. There must be what we call complementation between the needs* [of the society] *and the curriculum.*

Interestingly, statements of philosophies, mission, vision and goals from colleges and universities seem to serve only as benchmarks but ultimately it is the teachers' beliefs that govern their actions inside the classroom. This is best demonstrated by a statement from a science professor:

> *They serve as guide, but basically teaching comes down to one thing: we try to equip our students with knowledge and skills. So statements of visions and goals just differ in wordings but basically, the bottom line is still the welfare of the students and that is what I always prioritize. I always strive for excellence.*

Nevertheless, teachers' beliefs still give their choice of teaching methods a resilient foundation, giving them a clear and stable basis for their classroom practices, which in turn configures their pedagogy.

Providing clarity of focus to pedagogy is another dimension of the configuring power of teacher beliefs. Beliefs regarding the focus of instruction enable teachers to systematically address the multifarious concerns in education, facilitating the attainment of educational goals and objectives.

In the Philippines all institutions of higher learning operate under the supervision of the Commission on Higher Education (CHED). Consequently, instruction in Philippine higher education institutions tends to center on CHED-issued policies, including course descriptions. However, the influence of personal beliefs still plays a major role in determining what actually happens inside the classroom. When asked whether she prepares her own syllabus, a participant replied that she does and explained:

> *I check out what's expected in the course depending upon the description given by the CHED and then what's described by the* [name of university] *curriculum. When I'm assigned a course, I check out the description and see what's needed in the field. I have to tie them up and see what available resources I could make use of.*

The Philippine government requires graduates of teacher education programs to pass a licensure examination before they are allowed to practice professionally. The effect of this requirement on Philippine teacher education programs particularly on instruction can be gleaned from the following statements:

> *Here in the college of education we are – the school is expecting our graduates in education to pass the licensure examination so we really do our best so that they will be equipped with enough knowledge.*

> *I want my students to pass, or even top, the licensure examination. That would mean that they really learned.*

The desire to have as many licensure examination passers as possible apparently influences the beliefs of the participants. These beliefs in turn shape their pedagogy and practically dictate what happens inside the classroom. As a participant explained: *That is always my endpoint when I teach. I ask myself: "Will my students pass the licensure exam? Will they be as competitive as students from other universities?"*

Foresight is likewise an aspect of teaching that is strongly influenced by beliefs, which in turn configures pedagogy by fashioning it after a specific vision. Although the short-term goal is for students to pass the licensure examination, evidently the teacher informants look far beyond it ---- to something more lasting and far-reaching. As a professional education professor explained:

> *I really want my students to become good teachers, not just board passers but effective teachers. I tell them that as* [name of school] *graduates, they would probably be in the teaching area for a maximum of five years. After that they'll find themselves in higher positions already.*

The participants' beliefs regarding their students' future needs as teachers definitely play a major role in their pedagogy which apparently aims to prepare the students not only for teaching but also for life. Their teaching is imbued with elements intended to develop students not just as teachers but as human beings who will face greater challenges than those they will encounter inside the classroom. As an informant explained:

> *I want to produce graduates who would be able to face challenges in life. I don't teach them just so I can add something that they don't know yet. More than that, I want them to be confident of the knowledge I give them. I want them to be able to speak out and stand for whatever they believe in.*

The teachers' pedagogy even goes beyond the future concerns of students as teachers and as individuals and extends to what they may

contribute to the society. Seemingly, the participants' pedagogical foresight includes social transformation as a dimension of their teaching, as reflected in the following words from an informant:

> *They're my hope to improve the system so I'm very hopeful that as a result of whatever effort we could do in the class, there would be a certain change that we could contribute – transformation probably in the society, in a way, because they will be teachers.*

Truly, the participants' beliefs give their teaching a strong foothold, focus and foresight, organizing the different elements and dimensions involved in the educative process into a meaningful whole. Hence, the configuring power of teachers' beliefs.

Concretizing power of teacher beliefs

Analysis of the qualitative data further reveal that the concretizing power of beliefs stems from their ability to influence teachers' choice of specific pedagogical strategies and the kind of atmosphere they want to prevail in their classrooms and to guide them in their interaction with the learners. In short, teachers' beliefs determine the actual teaching methods that teachers adapt in their classrooms, giving their pedagogy a concrete and operational form.

Method of teaching is an aspect of pedagogy that is strongly influenced by teachers' beliefs. While most colleges and universities prescribe course content, what is actually taken up inside the classroom depends to a great extent on the teachers' decision. This is even more so with regard to instructional modalities which are completely determined by teachers' choices, as these two statements show.

> *Everything that we take up in the classroom has to be seen fresh in reality. If they would not have any use for it in the future, I wouldn't teach it. It's very important to me that my students develop their thinking skills. They have to be very critical and they have to think beyond the surface of things.*

> *I do not follow the sequence of topics in the book because I'm not using a single book. I'm using different books. So I have to arrange the subject matter (sic) based on my own decision or perception of how it should be arranged.*

Instructional milieu, or the environment in which teaching-learning takes place, is another aspect of pedagogy influenced by beliefs. Undoubtedly, the kind of atmosphere that prevails inside the classroom depends primarily on teachers' beliefs on what the setting of the teaching-learning process should be like. Like its effects on the choice of methods, the effects of beliefs about the conditions under which teaching and learning should take place tend to concretize teachers' pedagogy, as can be inferred from the following verbalizations from a participant:

> *I want them to be noisy. I want my classroom to be like a marketplace where people buy and sell. But this time they will be buying and selling ideas. I want my classroom to be a place where ideas are freely exchanged and discussed.*

The teachers' rapport with the mentees, or the students, is another aspect of pedagogy influenced by teachers' beliefs. Because of their beliefs regarding how teachers should interact with the learners their teaching approaches assume specific forms and character which, in turn, concretize their pedagogy. The following articulations from two informants illustrate how the power of beliefs concretizes pedagogy by defining teachers' interaction with learners:

> *I deal with different students in a different way. I believe that a person is unique. They have different needs, different learning styles. So I see to it that my teaching style would help them and cater to their needs.*

Without doubt, beliefs are powerful influences on the formation of distinct teaching modalities because of the ability of teachers' convictions to contextualize, configure and concretize pedagogy.

DISCUSSION

According to Yero (2002), there is power in how people view the world around them. Considering that "beliefs are the best indicators of the decisions individuals make throughout their lives" (Pajares, 1992, p. 307); this argument appears difficult to refute.

Utilizing the mechanisms of phenomenological inquiry this study has drawn out the contextualizing, configuring and concretizing power of selected Filipino teacher educators' beliefs and how they shape their distinct teaching practices which, by extension, may also offer valuable insights into how teacher education may develop its signature pedagogy.

Contextualizing power of teacher beliefs

Teachers' beliefs and their complex relationship with teaching practices are defined by context and can only be understood when examined in relation to specific circumstances because teachers' practices are basically reflections of their culture which serves as framework through which experiences are given meaning (Mansour, 2009).

Since beliefs are vital elements of the process by which people filter information and assign value judgments (Mansour, 2009), it would follow that they enable people to structure their experiences and contextualize them in a meaningful way. Thus, authors who refer to beliefs as cognitive or mental "maps" (Pajares, 1992; Yero, 2002) are accurate in their descriptions in as much as beliefs enable individuals to navigate and make sense of their experiences in accordance with their convictions and ideologies.

Teachers' actions are motivated by their understanding of the various aspects of educational context such as "school and society, organizational imperatives and debate on pedagogical ideas" (Carlgren & Lindblad, 1991, p. 512), among others. Teachers' beliefs enable them to meaningfully relate their pedagogy to numerous variables that form the backdrop of education**,** hence the contextualizing power of teachers' beliefs.

Concepts on teaching is one factor that places pedagogy in proper perspective. Their personal views of their work enable teachers to see their pedagogy not as an isolated activity but as an integral part of a larger whole. This is important because effective teaching arises from teachers' clear understanding of the interrelationship between and among educational variables.

In a study conducted by Parpala and Lindblom-Ylänne (2007) regarding teachers' concepts ofngood teaching, "putting teaching into a larger context" (p. 360) emerged as one of the sub-dimensions of the dimension "teaching practice", illustrating the importance teachers place on contextualizing pedagogy to connect it to a larger framework. Considering that our responses to situations are mediated by our concepts (Pratt, 1992), it becomes apparent that teachers' concepts on teaching exert a strong influence on how they contextualize their pedagogy. As pointed out by Pratt (1992, p. 204), people "view the world through the lenses of [their] conceptions, interpreting and acting in accordance with [their] understanding of the world." Thus, teachers should have clear concepts on teaching and meaningfully connect it to the larger picture because it is only by so doing that they can become good and effective

teachers. As pointed out by Fives and Buehl (2008), effective teachers, in addition to having immense content knowledge, understand the contexts, among other things, that influence teaching practice.

Similarly, teachers' motivation, or cause, for teaching contextualizes pedagogy. To the extent that beliefs shape individual systems of values that determine behavior (Mansour, 2009), teachers' primary reasons for teaching exert a strong influence on their pedagogy, prompting them to use distinct teaching strategies that are consistent with their motivational orientation.

Their motivational beliefs enable teachers to locate themselves in the overall educational scheme, contextualizing their pedagogy and defining their distinct teaching approaches. Thus, teachers should be fully cognizant of their motivations for teaching to fully understand how they contribute to the teaching and learning process.

Similarly, teachers' beliefs pertaining to conduct place their pedagogy in context. According to Clark (1988), teachers acquire beliefs about responsibilities and proper conduct, among other things, as early as the pre-service years. This implies that even before professional practice, teachers already have personal schemata for appropriate teacher behavior or conduct. Since beliefs tend to resist change (Kagan, 1992), teachers generally continue to hold on to these behavioral beliefs until in-service years, they become even more unbending with the passing of time.

The General Teaching Council for England (GTC), the professional body for teaching in England, described teachers' work as one "shaped by…important values of public life, including: selflessness; integrity; honesty; objectivity; accountability; openness; and leadership" (2009, p. 2). Given this argument, it can be assumed that teachers' personal beliefs regarding professional conduct contextualize their pedagogy, to the extent that their values mediate their encounter with the teaching profession.

Configuring power of teacher beliefs

In a parallel manner that beliefs contextualize teaching, teachers' ideologies also configure pedagogy. The word "configure" is used in this study as it is defined by MSN Encarta (n. d.), an online dictionary: a verb that means to "arrange parts for particular use: to set up, design, or arrange the parts of something for a specific purpose." Teachers' beliefs enable them to structure the different elements and processes of education from a relatively broad context and confine it to a more specific and more defined framework, especially beliefs pertaining to educational founda-

tions, focus and foresight.

Teachers' beliefs play a significant role in the process by which pedagogy and other educational components gain a strong foothold. For one, teachers' beliefs determine, to a large measure, the successful implementation of educational programs. As pointed out by Vacc and Bright (1999), a curricular design has greater chances of full implementation if teachers' beliefs are compatible with its philosophical underpinnings. For another, teachers tend to support educational reforms if such changes are consistent with their ideologies or beliefs (Datnow & Castellano, 2000).

To the extent that teachers respond to educational changes based on their beliefs, pedagogy gains stability because of teachers' convictions, facilitating its efficient integration into the overall framework of the educational structure. The systematic organization of this structure is a prerequisite to the attainment of its goals and objectives. Thus, it is of foremost importance that teachers' beliefs be considered in professional development programs because the success of such programs depends to a great extent to teachers' beliefs and knowledge (Kane, Sandretto, & Heath, 2002).

Focus of instruction, which is also strongly influenced by teachers' beliefs, likewise contributes to optimum configuration of pedagogy. Teachers are constantly faced with social realities that affect teaching (Carlgren & Lindblad, 1991), and teachers schematize these realities through the lenses of their beliefs. As Speer (2005) averred, beliefs influence teachers' decisions regarding what knowledge should be taught, what teaching methods to employ and what goals to achieve.

As pointed out earlier by one of the respondents, the focus of instruction in their teacher education program is generally to achieve the highest possible level of success in the board examinations. Although the ultimate goal is to equip the students with knowledge, skills, attitudes and values they will need as teachers, passing the licensure examination appears to be one of the immediate concerns, as revealed by several participants during the interviews. Arguably, this emphasis on instruction oriented toward government-sponsored licensure examinations has become the common yardstick for teachers' assessment of their teaching practices. It also provides them a frame of reference for positioning their pedagogy where it can give the greatest contribution to organizational success.

Pedagogical foresight is likewise a factor that configures teaching. According to Diakidoy and Kanari (1999, p. 226), "teachers' beliefs influence their perceptions and evaluation of outcomes". This implies

that teachers' beliefs determine their concept of the ultimate purpose of education, for how will teachers evaluate educational outcomes without clear personal criteria for evaluation?

Although majority of the participants in this study identified passing the licensure examination as their immediate goal for the students, their statements of beliefs reflected a profound awareness of a higher purpose for their pedagogy. More important than passing the board examination, the teacher participants expressed the desire to produce graduates who will eventually become effective teachers and make significant contributions to society. This vision of the kind of teachers they want reflects pedagogical ideologies that go far beyond the practicality and immediacy of licensure examinations. Obviously, this projection of their pedagogy into the future influence the participants' teaching practices. This, in turn, configures their pedagogy to the extent that it gives them a clear perspective of how their teaching approaches interface with other aspects of education as it performs its function in society.

Concretizing power of teacher beliefs

Teachers' beliefs contextualize pedagogy by delineating its framework and configuring it by assembling it together with other educational components to constitute systems for obtaining educational goals. Additionally, teachers' beliefs also concretize pedagogy by dictating the teaching maneuvers or the "concrete operational acts of teaching" (Shulman, 2005a, p. 54) that teachers use inside their classrooms. Specifically, teachers' beliefs about method, milieu of instruction and their mentees concretize pedagogy.

According to Northcote (2009) teachers' beliefs influence their choice of specific teaching methods which, in turn, affect quality of learning. This is supported by Mansour (2009) who said that teachers' beliefs are strong predictors of behavior inside the classroom. In short, teachers' beliefs generally indicate the actual features of instructional methods that they use (Kagan, 1992), justifying the claim that beliefs are "far more influential than knowledge in determining how individuals organize and define tasks and problems and are stronger predictors of behaviour" (Pajares, 1992, p. 311).

Similarly, teachers' beliefs pertaining to instructional environment or milieu determine their behavior inside the classroom. According to Austin and Reinhardt (1999), there exists a strong relationship between and among teachers' beliefs, class practices and learning atmosphere. Relatedly, Fang (1996) maintained that teachers' beliefs are determined by situations and demonstrated in teaching practices in accordance with the

intricacies of classroom instruction.

The relationship between beliefs and the learning environment is symbiotic: situations or settings shape teachers' beliefs (Fang, 1996) and beliefs shape the learning milieu. As pointed out by Alexander and Dochy (1995, p. 414), "beliefs are evident in the way teachers define the learning environment." A study by Hativa, Barak, and Simhi (2001) reported teachers' awareness of the need for a classroom climate that is conducive to learning and to show affection and respect for the learners by providing feedback and making themselves available. Raymond (1997), for his part, described a teacher's preference for classrooms where students are quiet, stationary and attentive at all times.

Despite the apparent differences in teachers' beliefs pertaining to the atmosphere under which instruction should take place, the fact remains that their convictions exert a strong influence on their choice of teaching methods. This, in turn, concretizes their pedagogy, determining the actual teaching moves that they execute during instruction.

Lastly, teachers' beliefs regarding the learners or mentees give definite form to pedagogy. Since students are the direct recipients of instruction, teachers usually view them as the primary consideration in instructional planning and implementation. As Tatto (1996) stressed, teachers' impression of their teaching approaches is strongly influenced by their assessment of its adaptability to particular needs of the learners. This implies that teachers' beliefs regarding the learners inform their choice of specific instructional strategies, concretizing their pedagogy. Since beliefs are highly personal (Kagan, 1990), it can be assumed that teachers' beliefs regarding learners lead to a person-specific pedagogy, i.e., pedagogy that is distinct to an individual teacher and tailored to specific group or type of learners. This assumption is supported by Nathan and Koedinger's (2000) assertion that "teachers' beliefs about students' abilities play a central role in shaping teachers' judgments and instructional practices" (p. 226).

CONCLUSION

This study intended to eidetically describe the way teachers' beliefs are instrumental in shaping a distinct pedagogy for teacher education. Interestingly, the participants' statements of their educational beliefs gave rise to the trilogy of power typologies that shape their distinct pedagogy namely, contextualizing, configuring and concretizing power which, in turn, may offer insights into how teacher education may develop its own pedagogical signature.

This study has shown that beliefs exert a profound influence on teachers' pedagogical decisions and choice of instructional strategies and therefore strongly impact student learning. The findings in this study concur with literature which generally recognizes the strong impact of teachers' beliefs on their teaching practices, highlighting the power of beliefs to shape signature pedagogies. Thus, teacher education programs should take beliefs into account during program planning and implementation because they tend to remain unchanged once adopted, making it difficult for teachers to change beliefs even if they do not appear contributory to effective and meaningful learning. Furthermore, it is imperative that teacher educators hold beliefs consistent with the principles of effective pedagogy because their students' behavior inside the classroom when they finally teach professionally will be influenced by their own experiences as students. In other words, teacher educators should set good examples of beliefs for students to emulate.

By drawing out the powerful effect of teachers' beliefs on Filipino teacher educators' characteristic teaching practices, this paper hopes to contribute to the understanding of teachers' beliefs and how they shape distinct pedagogies for the professions, particularly teacher education.

Since beliefs are context-based, inquiries into their influence on the teaching practices of teacher educators in other cultural and educational communities may offer invaluable insights into how beliefs shape unique teaching repertoires and, by extension, how teacher education may form its own signature pedagogy.

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