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## PUBLICATIONS AND PAPER PRESENTATIONS

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## **Solid Waste Disposal Practices and Problems Encountered**

### **Of the Coastal Residents in Boac, Marinduque**

*John Carlo J. Sto. Domingo, and Liza Marie M. Manoos*

#### **Abstract—**

*The study focused on the solid waste disposal practices of the coastal residents in the Municipality of Boac, Province of Marinduque. From the 11 coastal barangay, the researcher randomly selected three hundred sixty-six (366) residents living along the said coastal areas. Descriptive method was used aided by survey questionnaire and unstructured interviews. The findings revealed that direct burning, waste segregation, dumping in compost pit, barangay ordinances, trading in junkshops and others were the common solid waste disposal practices done by most residents along the coastal areas of Boac. The effects of the solid waste management practices were also shown wherein majority of the respondents foresee problems regarding the said practices. Furthermore, it was also revealed that the residents were aware of the law but do not fully understand it. It is therefore recommended that several interventions must be made to help the local government units of Boac to provide technical knowhow and increase awareness of the people in coastal waste management practices.*

**Keywords—***Solid Waste Practices, Coastal Areas, Boac Marinduque, Waste Management,*

*Waste segregation*

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## ETHNO-MATHEMATICAL PRACTICES IN MARINDUQUE

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### ABSTRACT

*This paper presents the usefulness of the devices and practices that have been utilized in community mathematics in the province of Marinduque. It also shows the creativity and resourcefulness of the people in the said province when engaging in trade and commerce even before the international standardization of system of weights and measure.*

*Sample respondents were taken from each of the six towns in the province. Actual interview was employed based on guide questions set. The study traced how the traditional mathematical practices helped in the civilization process of the localities in the Southern part of the Philippines.*

### Ethno – Mathematics, Indigenization.

#### Introduction

All aspects of Social development are brought about by fusion and diffusion of culture. Successful business entities are rooted on combined traditional and modern strategies of business transactions. The modernity and advancement of first world countries were brought about by mathematical culture that evolved through the years. Few to mention are the Arab countries, Greece, Korea, Japan and other countries who embraced, modernity yet preserved their respective ethnological practices.

The back to basic principle is highly environment used; health wise as a necessity to protect the environment and even aesthetics nowadays for various reasons: health wise, economy wise.

The Enhanced Basic Education Program of the Department of Education in Philippines requires the indigenization of curricula. Required contents are Mother Tongue, Folk Songs, Music and Arts, Laro ng Lahi, native dishes, and ethno – mathematics. The uses of indigenous learning materials deepen one's learning and love of culture thus fosters love of one's country. Few materials are available for use as reference in teaching measurement.

In the Philippine archipelago there are indigenous calculation methods and techniques used introduced in this study as ethno – mathematical practices.

Classical mathematics shaped the different cultures. E.g. European, The European culture rooted to the Greek culture that died after the fall of the full maturity in the advanced country is accounted to the rise of mathematics. (Leonor, 1998).

A certain place called Marinduque employs indigenous.

Mathematics teachers in all levels are constrained by the unavailability of reference materials in teaching the history of systems of weights and measures. Thus the undocumented recognized indigenous calculation practices in Marinduque were documented in this study.

Purposive sampling was employed in determining the 90 respondents (70 years and above province-wide considering the policy of the National Commission for Culture and the Arts of the Philippines in documenting practices or traditions. The respondents were interviewed on how they





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**The Relationship Between the Ratings in Mathematics  
and English of the Grade 10 Students of  
Landy National High School for  
School Year 2017-2018**

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**Abstract:** This study was conducted to identify the relationship between the ratings in Mathematics and English of the Grade 10 students of Landy National High School for S.Y. 2017 – 2018. The instrument used in this study was the list of grades in Mathematics and English that is given with the approval of the school head and the respective teachers on both subjects. The findings of the study showed that the Grade 10 students have a satisfactory performance on both the Mathematics and English subject. Furthermore, there is no significant difference between the mean ratings of the Grade 10 students. The mean rating of the students in English does not differ from their mean rating in Mathematics. Also, there is a high positive relationship between the ratings of the students in Mathematics and English. As the rating of the students increases, it is more likely that their rating in English will also increase. The study shows that the relationship between the ratings in Mathematics and English is significant. Thus, a high rating in Mathematics can be a result of having a high rating in English.

**Key Words:** ratings in Mathematics; ratings in English; Grade 10 students

## **I. INTRODUCTION**

English is considered to be the official secondary language of the Filipinos. From pre-school, English is taught to students until they graduate college. It is clear that students who speak other languages at home must attain some proficiency in English if they are to benefit from mathematics instruction in that language. The student who comes from a home where English is the only language spoken will be familiar with many of the linguistic structures to be encountered in the mathematics teaching. The medium used on examinations are commonly written in the English language. Learning materials at schools like textbooks are usually written in English, with few exceptions like books that are for Filipino subjects and/or history subjects. And as one of these subjects, Mathematics also uses the English language as a medium for instruction although there is a “Filipino version” of Mathematics for Elementary whose instruction is Mother-Tongue based. Therefore, there is a need for everyone to know the English language to enhance their ability to fully understand Mathematics.

Mathematical ability involves effective thinking with conceptual learning; students need to be taught to think logically along with practicing the numerical problems but on the contrary, they do practice a problem, and then repeatedly do the same kind of problems until that is hard-wired in their

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brains [1]. Since the medium used in classrooms on mathematics teaching is English, students cannot think logically when problems are presented if they can't comprehend what is being asked in the problem and what is given. Therefore, it is a need for students to be English proficient in order for them to clearly understand and analyze problems that are written in English medium.

Many studies show that the language proficiency has an impact to understanding Mathematics although there are other factors that affect mathematics learning, such as socio-economic status, school curriculum, gender, teaching quality, and parent's educational attainment [2]. When the language of instruction used is English, the learning of mathematics by students for whom English is a second language, like us Filipinos, raises some important issues. The learning of mathematics requires a variety of linguistic skills that learners should have mastered. Furthermore, special problems of reliability and validity arise in assessing the mathematics achievement of students from a language minority. To help students to better

understand Mathematics using English language as the medium of instruction, research is needed to find out what is the relation between the language learning and mathematics learning.

A dependency test was conducted by Rambely [3] between mathematics achievement and English proficiency shows that good mastering of English is needed to nurture and understand of mathematics to achieve excellent results. Furthermore, low English proficiency resulted in students experiencing a shortage in mathematics learning and obtained a lower grade in mathematics. Mathematics is a natural language involving certain vocabulary, syntax, logic and reasoning. The skills to understand the mathematical language need to be learned in the native language and the mother tongue is also a precursor to excellence in learning mathematics using a second language.

According to Anthony [4], research study and philosophies dealing with the relationship between language proficiency and mathematical proficiency have either positioned the one as dependent on the other or the two as autonomous.

According to Racca [5], educators agree that proficiency in the English language is the basis for success in academic pursuits. Reading, writing, and working with numbers are tasks that are based on language skills, describes this as the interplay between everyday language skills and more advanced communication skills. Indeed, language proficiency is a key to academic performance. A person who does not know English, for instance, may not have access to the world's known scientific and technological discoveries that are predominantly written in English. This means that students need to be proficient in English for a better grasp of knowledge in Technology, Science, and Mathematics. As claim, language proficiency in English is significantly related to academic performance. Academic subjects like Science, Mathematics and English often requires the use of language functions. The language functions play a significant role in critical and analytical thinking required in science and mathematics subjects. The more language functions with which students are adept, the more effective their thinking can be. Thus, the more the students are proficient with the English language, the more they are likely to perform well in their academic subjects [5].

Among the early studies that have pointed to the role of English proficiency in a student's performance in mathematics in this context was conducted by Yushau [6]. In this study, English language proficiency was found to be among the major factors that predicts student performance in mathematics.

The Department of Education asserts that students' proficiency in Science and Mathematics has a relationship with their language proficiency in English [5]. Majority of the students had not really mastered the different learning areas in Mathematics. From the performance of Grade VI pupils, it

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was reflected that their skills in problem solving was only 53%; analysis, 56%; and computation was 62%. These skills all require proficiency in English. Likewise, from the results yielded, Science noticeably tailed at fifth rank with only 56.87% percentile rank. It was noted that the questions given required comprehension and analytical skills of the learners. Again, English has something to do with the skills of the learners. Undeniably, in many a lesson in Sciences and Mathematics, English is very vital as a tool in comprehension, analysis, evaluation, and interpretation of results [5].

Guingab [7] also found out that in relating English language usage scores and academic achievement, findings showed that the two variables exhibited highly significant correlation. Likewise, correlation analysis of the language usage score and academic achievement in Science and Mathematics indicated a highly significant correlation. Regression analysis further confirms that the students' English usage score is a good predictor of their overall academic achievement and of their performance in both Mathematics and the Sciences. As their English usage score increases, their GWA, grades in Mathematics and grades in Science increase too. Curriculum planners and teachers of English should plan intervention activities to improve English usage of the students and create programs to hone the English proficiency of freshmen students so that they would be better equipped as they go up the higher years, thereby ensuring academic success.

This motivated the researcher to conduct a study to determine the relationship between the ratings in Mathematics and English of the Grade 10 students of Landy National High School.

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## **The Relationship Between the Admission Test Results and Licensure Examination for Teachers (LET) Results of the BSE Graduates of MSC from 2013-2014 to 2015-2016**

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***Abstract-*** This study was undertaken to evaluate the relationship between the Admission Test results and the Licensure Examination for Teachers (LET) results of Bachelor of Secondary Education Graduates of MSC from 2011-2012 to 2015-2016. The OLMAT (Otis-Lennon Mental Ability Test) and Teaching Aptitude Test has an average description based from the Local Transcription of Norms in the Guidance and Counseling Office. Most of the graduate respondents passed the Licensure Examination for Teachers (LET) showing a passing percentage on the LET. Also, the study revealed that OLMAT (Otis-Lennon Mental Ability Test) and Licensure Examination for Teachers (LET) results have moderate relationship. However, the Teaching Aptitude and Licensure Examination for Teachers (LET) result has low or slight relationship. The researcher accepted the alternative hypothesis, wherein, there is a relationship between the admission test results and the licensure examination for teachers (LET) results of Bachelor of Secondary Education Graduates of MSC from 2013-2014 to 2015-2016.

***Key words:*** admission, admission test, Licensure Examiantion for Teachers,

### **I. INTRODUCTION**

Philippine government ensures that the state shall promote quality education for everyone. As stated in Batas Pambansa Blg. 232, an act providing for the establishment and maintenance of an integrated system of education, “the state shall promote the right of every individual to relevant quality education regardless of sex, age, creed, socio-economic status, physical and mental conditions, racial or ethnic origin, political or other affiliation. The state shall therefore promote and maintain equality of access of education as well as the enjoyments of the benefits of education by all its citizens.”

In recognition of the Constitutional guarantee of institutional academic freedom, admission to any higher education institution is open to all students not otherwise disqualified by law or by the policies and rules of the Commission or the higher education institution. <sup>[1]</sup>

In order to attain a level of competency by teachers to provide quality of education, a law was created mandated by Republic Act No. 7836, an act to strengthen the regulation and supervision of the practice of teaching in the Philippines and prescribing a licensure examination for teachers and for other purposes. Every product or graduate of any education courses must take the said exam to be able to have a license for teaching profession.

Passing the Licensure Examination for Teachers (LET) is one of the requirements to acquire a professional license that will serve as the passport practice the profession. Teacher

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education graduate's performance in the licensure examination will reflect the effectiveness and quality instruction given by the training institutions.<sup>[2]</sup> Therefore, the licensure examination is a determinant of what kind of quality education is present at Marinduque State College particularly in the School of Education.

Based from the study of Napilot, et.al (2012) entitled "The Status of PHEM Graduates from Scholl Year 2002-2003 to 2007-2008 and MAPHE graduates from School Year 2008-2009 to 2011-2012", the study revealed that out of seventy-seven (77) PHEM and MAPHE graduates who took the licensure examination for teachers from 2003-2007, forty (40) of 51.9% passed while thirty-seven (37) or 48.1% failed.<sup>[3]</sup>

Based from the study of Medina (2016) entitled "Passing Percentage of Technology and Livelihood Education Graduates in Licensure Examination for Teachers Academic Year 2013-2014", the study revealed that T.L.E has an average passing rate of 36.84% for the past five years. According to him, the remaining 63.16% are either failed or not immediately take the LET.<sup>[4]</sup>

Based on the study conducted by Macdon (2016) entitled "Employment Status of BSE Mathematics Major Graduates Academic Year 2013-2014 and 2014-2015", 73% of the graduate respondents have successfully passed the Licensure Examination for Teachers.<sup>[5]</sup>

In study of Jimena (2014) entitled "Passing Percentage of Social Science Graduates in Licensure Examination for Teachers (LET) from A.Y 2006-2007 to 2012-2013", Social Science has an average passing rate of 53% for the past seven years. According to him, the remaining 47% are either failed or not immediately take the LET.<sup>[6]</sup>

However, due to the above mentioned passing percentage of the Bachelor of Secondary Education graduates in the Licensure Examination for Teachers (LET), the researcher would like to study the relationship between the admission test results and the licensure examination for teachers results of Bachelor of Secondary Education Graduates of MSC from 2011-2012 to 2015-2016.

Specifically, the study looks on the profile of the respondents, the admission test results of the respondents, and the Licensure Examination for Teachers Results.

A student who graduates from the secondary level of education from the Department of Education shall be eligible for admission to any degree program. However, a student who has not completed the secondary level, but who has qualified in the Philippine Educational Placement Test (PEPT) may be eligible for admission.<sup>[6]</sup>

The basic requirement for eligibility for admission of a student to any tertiary level degree program shall be graduation from the secondary level recognized by the Department of Education.<sup>[7]</sup>

All interested enrollees shall be given a chance for admission to the Marinduque State College regardless of age, sex, nationality, religion or membership in any political party. Provided they meet the qualifications required of the course. In addition, any student found to be precluded from enrolling in this institution.<sup>[8]</sup>

The Process Flow Chart of Admission Office of Marinduque State College are:

1. Client fills up the application form.
2. Client pays the entrance examination fee at the Cashier's Office.
3. Client submits accomplished application form for evaluation and intake interview.
4. Admission office checks the requirements submitted.
5. Indorse the client to the Guidance Office with the complete requirements for the entrance examination.
6. The Guidance Office issues an examination slip to the client indicating the venue of the examination.

The Admission Test composed of:

1. Mental Ability Test

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2. Teaching/Engineering Ability Test
3. Differential Ability Test
  - a. Verbal
  - b. Numerical
  - c. Abstract
  - d. Mechanical
  - e. Space
  - f. Spelling
  - g. Language

In January 1977, Presidential Decree 1006 entitled “Professionalization of Teachers” regulating their practice in the Philippines, otherwise known as the Decree Professionalizing Teaching was promulgated. It was declared a policy that teacher education be of the highest quality and strongly oriented to Philippine conditions and to the needs and aspirations of the Filipino people. The examination for teachers was jointly given by the Civil Service Commission and the Department of Education and Culture. Passers in the board examination were qualified for registration as professional teachers and were given the Professional Teacher Certificate. <sup>[9]</sup>

Section 9 of Presidential Decree No. 1006 tells that in order that a candidate may be deemed to have successfully passed the examinations, he must have obtained a general average of at least 70 percent to all subjects with no rating below 50 percent in any subject.

According to the study conducted by Pascua and Navalta (2011) as cited by Almonte (2015), academic performance in terms of Specialization (Computer Education, English, Filipino, Mathematics, Science and Social Studies), General Education (Social Science, Mathematics, Science, Filipino, and English) and Professional Education serves as the strong predictor of Board Examination Performance.

Likewise, based on the study conducted by Pachejo and Allaga (2013) in Rizal Technological University, academic performance of examinees in the field of Specialization (Computer Education, English, Filipino, Mathematics, Science and Social Studies), General Education (Social Science, Mathematics, Science, Filipino, and English) and Professional Education serves as the key factor in their LET Performance. <sup>[10]</sup>

According to Almonte (2015), passing the LET is an indicator that a would-be teacher is somehow adequately prepared in terms of content. Passing the LET also shows that a would-be teacher has the potential to become a great teacher, that is, if he or she has the determination and interest to become one.

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