

Teacher's Performance: Its Relationship to Student Achievement in Mathematics I of National High Schools of Basilan

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Abstract— This study on “Teacher’s Performance its relationship to student’s achievement in secondary Mathematics I” was conducted to see the performance of teachers in handling secondary Mathematics I. It aimed to assess teacher’s performance following the New Performance Appraisal for Secondary Teachers (NPAST) in terms of the seven task functions. Personal factors were considered to differentiate teacher’s performance between urban and Rural School. The study used the descriptive research using a checklist rated by the school administrators to identify teacher’s performance. A 50-item was developed to measure student achievement in Mathematics I from a sample of 408 students randomly selected from twenty-two (22) National high schools. Frequencies, Percentages, Chi-square (X^2) test F-test and T-test were statistically employed to test their significance. Results revealed that: Teacher’s performance in teaching Mathematics I gave no significant difference in term of the personal factors like Age, Civil Status, Income, Eligibility, Sex, Teaching, Experience, and Educational Qualifications. Chi-square computation revealed that urban secondary teachers have better performance than the rural secondary teachers in the development of Nation Consciousness, desirable values and habits, Instructional Materials, student’s evaluation, Professional growth, and Record-report management. Both urban and rural secondary Mathematics teacher’s performance did not significantly differ in terms of the Community/Allied services and being punctual in attendance. A Two-factor analysis of variance revealed a significant relationship that existed between teachers’ performance and students’ achievement in Mathematics I. The research work recommended that in pre-service education, teachers-to-be must be given the trainings in the seven educations; teachers-to-be must be given the trainings in the seven tasks/functions as identified in NPAST. It is best for neophyte teachers to apply and implement the new teaching methodologies learned in pre-service education. Actual teacher’s performance should be a sound basis for decision concerning teacher’s promotion, salary increase and further training and scholarship.

Keywords— Performance appraisal, teacher’s performance, student’s achievement.

I. INTRODUCTION

The classroom teacher is an important factor in molding the personality and character of his students. His actions, word, and thoughts influence much the development of their well-being. So he must be careful in conducting himself. His behavior is a model for his students. They believe in him and all what he says. He is their idol and example in all the things they do.

It is therefore imperative that a teacher must be a good individual radiating joyfully to his young students, his capability of doing right things morally, emotionally, spiritually

and physically. He must show to his students that he is the best of God’s creation.

Because of these unwanted results, something should be done to improve the student’s performance level. This is a much-needed activity because Mathematics is one of the tool subjects needing “intelligent application in appropriate life situation.”

Secondary teachers who are teaching Mathematics should be competent enough in all teaching strategies needed. They should be equipped with new techniques, ideas and knows how to emphasize the responsibility of students in learning. He should follow-up activities such as discussions, readings or test.

Our students today are noted to dislike or to lose interest in Arithmetic or Higher Mathematics. The introduction of the so-called modern Mathematics in the elementary schools has given rise to various reactions among teachers and students. There are those who believe that its introduction in our curriculum is a sign of progress and that our educators are responsive to the need, interest, and abilities of our children that may be expected in the advancing educational system. However, there are those who believe otherwise. They are of the belief that the introduction of Modern Mathematics in our schools is more confusing to the children; that it does not meet their needs and interests and possibility is beyond the abilities of our children, hence instruction is found ineffective and causes only waste of money, time and effort on the part of both teachers and students.

Background of the Study

This study was finally decided by the researcher, who has been a Mathematics teacher for five years since 1992. There is a need to conduct a study about the “Teachers’ Performance in teaching Secondary Mathematics I in National High Schools” because of poor performance especially on provincial examinations or even on school level.

First year high school students for the past two grading periods responded a little or gave no answer to a given question. Even first year college students taking Agriculture who were graduates from different secondary high schools show little knowledge in analysis and formulation of equations in Mathematics.

Observations show that students find difficulties in understanding the teachings in Mathematics. They find difficulty in grasping mathematical concepts. In some schools where there is lack of teachers, mathematics is being taught by a teacher even without the necessary specialization because of the localization policy of DECS. This lack of knowledge about

the different revisions of the curriculum results to giving poor input in Mathematics. Hence, this research work was undertaken to identify the performance of teachers in mathematics teaching.

Statement of the Problem

The study is primarily designed to evaluate teacher’s performance in teaching secondary Mathematics for first year in National High Schools of Basilan.

It seeks to answer the following questions:

1. Is there a significant difference in teacher’s performance in teaching Mathematics I in terms of the following personal factors:

- a. Age
- b. civil status
- c. Income
- d. Eligibility
- e. Sex
- f. Teaching Experience
- g. Educational Qualification

2. Is there a significant difference between Urban and Rural National High School Teacher’s Performance in Mathematics teaching in terms of the seven task/functions:

- a. Development of National Consciousness and desirable values and habits
- b. Instructional Materials Development
- c. Students Evaluation
- d. Professional Growth
- e. Records/report management
- f. Community and Allied Services
- g. Punctuality and Attendance

3. Is there a relationship between Teacher’s Performance and Students Achievement in Mathematics I among national High Schools?

Hypotheses:

The study postulated the following hypotheses:

1. There is no significant difference in teacher’s performance in teaching Mathematics “I in terms of the following personal factors:

- a. Age
- b. Civil Status
- c. Income
- d. Eligibility
- e. Sex
- f. Teaching Experience
- g. Educational Qualification

2. There is significant difference between Urban and Rural and Rural National High School teacher’s Performance in Mathematics Teaching in terms of the seven tasks/functions.

- a. Development of National Consciousness and desirable values/habits.
- b. Instructional Materials Development
- c. Student Evaluation
- d. Professional Growth
- e. Records/Report management
- f. Community and Allied Services
- g. Punctuality and Attendance

3. There is no relationship between Teacher’s Performance and Students Achievements in Mathematics I among National High Schools.

Theoretical Framework

There is really a need to do everything to attain a certain goal or target, Teachers should see to it that they are equipped with the knowledge before facing the students in a classroom.

The classroom teacher requires knowing the five principles of teaching by Erenico (1991)

The primary obligation of teaching is to guide children, youth, and adults, in the pursuits of knowledge and skills, to prepare them in this stage of democracy and to help them to become happy, useful, and self-supporting citizens. The ultimate strength of the nation lies in the social responsibility, economic competence, and moral strength of the individual Filipino.

The members of the teaching profession share with parents the task of shaping each student’s purposes and acts towards socially acceptable ends. Many educational techniques rely on a collaborative relationship with the home to be effective.

Teaching occupies a position of public trust involving not only individual teacher’s personal conduct, but also the interaction of the school and the community. When these various relationships are cordial, cooperative, and constructive, education is most effective.

Teaching has inescapable obligations with respect to employment. These obligations are always always shared employer-employee responsibilities based upon mutual respect and good faith.

Teaching is characterized by the uniqueness ad quality of the professional relationship among all teachers. Teachers' standards and attitudes about teaching and other teachers have an impact on community support and respect.

Aside from the given principles of teaching, classroom teachers too, must explain clearly the different principles of learning by Lardizabal. Bustos, Bucu and Tayco on their third edition as follows:

The learners must clearly perceive the goal. Effective instruction occurs when maximum communication exists between teacher and learner regarding the goals and objectives of instruction.

The learner must be psychologically and physiologically ready. This principle is in consonance with Thorndike’s law of readiness and law of effect. Edward L. Torndike is a well-known American psychologist and Educator. The law of readiness states that “when a person is prepared to respond or act, giving the response is satisfying and being prevented from doing so is annoying. This law is related to the law of effect and accounts for the motivational aspect of learning”. The law of effect states that learning is strengthened when it results in satisfaction but is weakened if it leads to annoyance.

To learn, the student must be motivated. A crucial principle in the teaching-learning process is that the learner must be motivated to learn.

To recall what he has learnt, the learner must repeat or practise it. Thorndike’s law of exercise states that constant repetition of a response strengthens its connection with the stimulus and disuse of a response weakens it.

The learner must put together the parts of tasks and perceive it as a meaningful whole. This is an extension of the principle formulated by the Gestalt School of Psychology. The principle

places emphasis upon the concept that learning is a process of discovering and understanding relationships and or organizing and finding significance in the sensory experiences aroused by the external situation.

The learner must see the significance, meanings, implications, and applications that will make a given experience understandable. Of importance to an educative experience are the background and previous experience of the learner. Unless new experiences are built atop previous ones, there will likely be a lack of continuity, reducing the amount and efficacy of learning.

The learner must be prepared to respond. There are times when the individual is more ready and better able to engage effectively in a particular set of learning activities. A number of factors influence this; among them is readiness which is related to maturation. A teacher sometimes may encounter situations where learners automatically and spontaneously or learners who are able to perform skills and activities without much apparent effort.

The processes of problem solving and learning are highly unique and specific. Each individual has their own unique style of learning and solving problems. As individuals become more aware of how they learn and solve problems and become exposed to alternative models used by other individuals, they can refine and modify their personal learning style so that this can be employed more effectively.

The desirable qualities of competent teachers are personal or social, and professional. Well-liked personal qualities of a teacher are sympathy and kindness. Professionally, a competent teacher knows what he is going to teach, why he is going to teaching, and how he is going to teach.

Conceptual Framework

The study anchored on the Teacher’s Performance in teaching Mathematics I. Theoretically speaking a competent teacher performs different tasks or functions to have an effective teaching. As appraised by school administrator at the end of the school year, teachers must have done the following tasks/functions as:

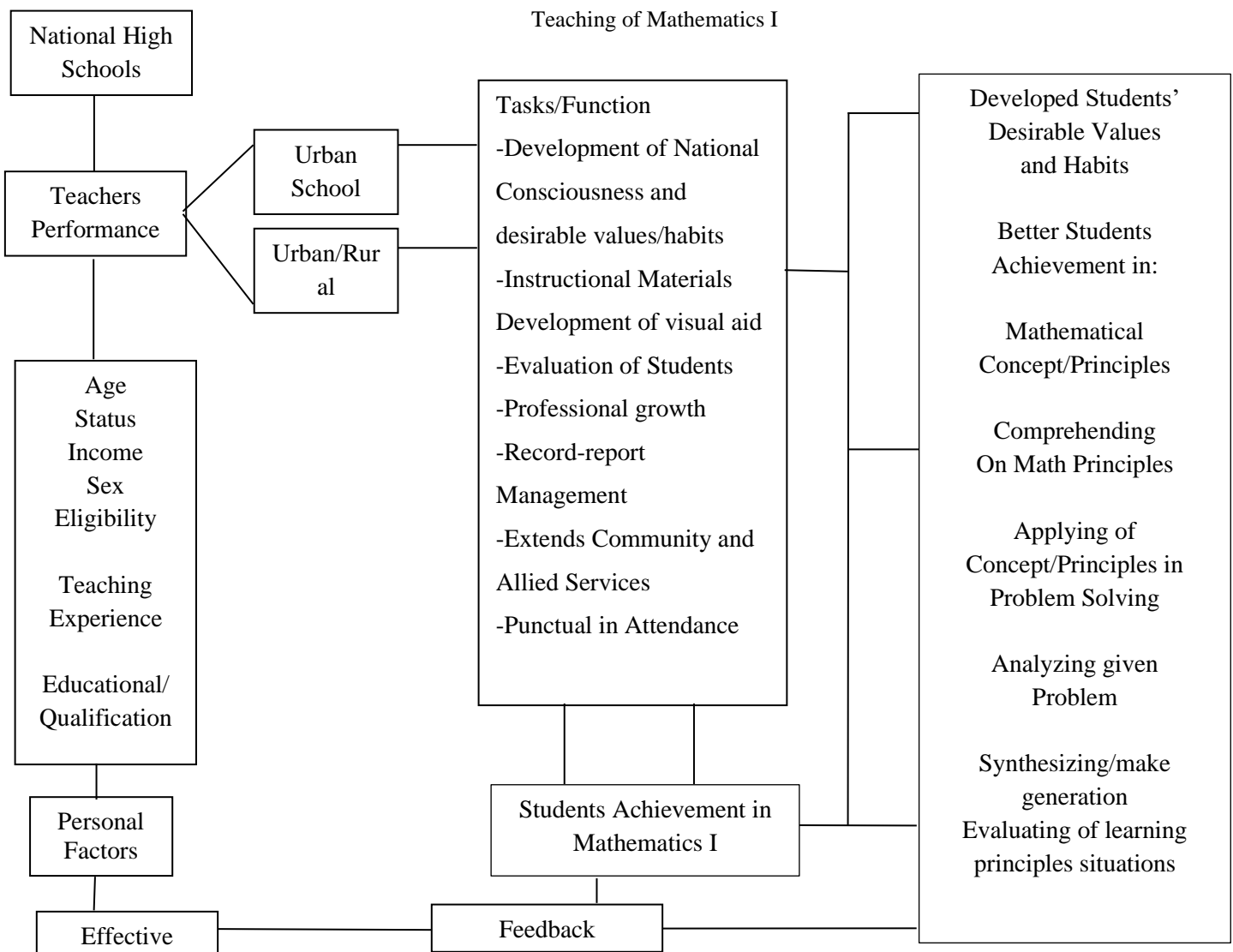


Fig. 1. Conceptual Framework

1. Developed National Consciousness and desirable values
2. Prepares instructional materials- (visual aids)
3. Evaluates students
4. Attains Professional Growth
5. Recorded, Reported Students Achievement
6. Extended Community and Allied Services
7. Being punctual in attendance

These seven criteria in assessing teacher's performance in national high schools are reflected in the New Performance Appraisal System for Teacher (NPAST).

As expected, the above-mentioned tasks/functions of a competent mathematics teacher will develop desirable values/habits, increased students achievement in understanding mathematical concepts and principles; comprehend mathematical principles; applying concepts/principles in problem-solving; analyzing concepts/principles in problem-solving; analyzing given problem/ situations; synthesizing/making generalizations/ evaluating learning concepts; students achievement in Mathematics serve as direct feedback to the performance of teachers handling the subject.

How effective the teacher's performance may vary on the following personal factors:

- a. age
- b. status
- c. income
- d. eligibility
- e. sex
- f. teaching experience
- g. educational qualifications

The study would like to prove/disapprove that teacher's performance is related to student's achievement in Mathematics I, among National high schools in Basilan. Figure 1 shows the Conceptual Framework of the study.

Significance of the Study

The study is very much timely and helpful considering the poor results, and performance as shown by the first year high school students for two grading periods. This study will provide relevant feedback, which could enrich the curricular offerings in the new programs, particularly in Mathematics.

This study will result in the significant improvement of teacher's competence as well as the students' quality of learning. It will reorient the teachers on responsibilities not only in the classroom task but also in community services wherein current thrust and involvement for national development of the country is incorporated.

The result of this study will benefit the school administrations particularly the Mathematics Supervisors on how well/competent the teachers are performing in the teaching of Mathematics.

It will encourage Mathematics teachers to do their best to improve quality of education particularly in improving the achievement of our student in Mathematics.

Scope and Delimitation of the Study

This study adopted the National High Schools of the seven municipalities of Basilan, namely: Isabela, Maluso, Tipo-Tipo,

Tuburan, Lantawan, Sumisip and Lamitan. It Included 22 National High School – with a total of 408 students.

There were seven identified personal factors i.e ; age, sex, status, socio-economic status, eligibility, teaching experience, and educational qualification considered for teacher's performance. A total of 40 teachers were rated by school administrators for this study.

The assessment included the seven tasks/function for teacher's performance as follows: development of national consciousness and desirable values habits, instructional materials development, student's evaluation, professional growth, records, reports management, community, and allied services, punctuality and attendance. Teacher's Performance was measured by a questionnaire, checklist by teachers/handling Mathematics on the identified school.

Only Mathematics I students were randomly tested using a 50-item teacher made test for school year 1997-1998.

1. Development of National Consciousness and desirable values and habits.
2. Instructional Materials Development
3. Students Evaluation
4. Professional Growth
5. Records/Report Management
6. Community and Allied Services
7. Punctuality and Attendance

II. RESEARCH DESIGN AND METHODOLOGY

This section discusses the sampling design, the instrument used, the methods and procedure of gathering data, validation and the statistical treatment employed in the study.

The Research Setting

The study was conducted at the seven municipalities of Basilan, particularly the National High Schools. The seven municipalities were: Isabela, Lamitan, Maluso, Lantawan, Tipo-Tipo, Tuburan and Sumisip respectively.

The national high schools included: Basilan National High School, Begang National High School, Kumalarang National High School under Isabela municipality. Lamitan National High School, Colony national High School and Look National High School under the Lamitan municipality. The national high schools under Lantawan include; Atong-Atong National High School, Concepcion National High School.

The other National high schools under the four municipalities were as follows: Maluso National High School, Parangbasak National High School, Lubukan National High School, Parangbasak National High School, Saluping National High School, Sinangkapan National High School, Sinulatan High School, Sumisip National High School, Tairan National High School, Tipo-Tipo National High School, Tuburan Annex National High School and Tumahubong National High School Respectively.

These twenty-two high schools were headed by principals. The schools can be reached by land transportation.

Figure 2 shows the map of Basilan Province highlighting the seven municipalities which served as the research local of the study.



Fig. 2. Map of Basilan Province showing the seven municipalities

Research Design

This study is a descriptive research study, as the follow-up of the Mathematics teaching after the Secondary Education Development Program (SEDP). A 50-item test for teacher performance and another 50-item test for student achievement were developed for the purpose.

Sampling Design

The subjects of the study were the First-year high school students of the target National High Schools in Basilan taking Mathematics I.

Table 1 shows the number of students who were randomly selected using the lottery process. It included the number of teachers appraised by the administrators.

There were 408 students tested for achievements in Mathematics I and 40 teachers evaluated for performance in this research study making a total of 448 respondents.

Research Instrument

Two sets of assessment instrument were prepared for this study: one for the student’s achievement and the other for the teacher’s assessment/performance.

Content. The two sets of assessment were prepared differently from each other. To evaluate teachers performance, a checklist consisting the seven functions of teachers taken from the “Guidelines of the performance Appraisal System for Teachers (PAST)”, was used as a pattern. Fifty (50) indicators of the seven functions based on the Guidelines of the Performance Appraisal System for Teacher were prepared for the teachers. See Table 2 for the table specification. Another fifty (50)-item test taken from Mathematics I textbook was made for the student’s evaluation for Mathematics achievement.

TABLE 1. Numbers of Students/Teachers in Mathematics I

School	Number of Students	Number of Teachers evaluated for teachers/performance	Total
Urban High School	130	12	142
Basilan NHS	46	4	50
Lamitan NHS	44	4	48
Rural High School			
Atong-Atong NHs	5	1	142
Begang NHS	19	1	20
Bubuan	8	1	9
Colony NHS	9	1	10
Conception NHS	9	1	10
Jacinto Cuevas NHS	8	1	9
Kumalarang NHS	6	1	7
Look NHS	10	1	11
Lubukan NHS	8	1	9
Mangal NHS	6	1	7
Parangbasak NHS	14	1	15
Saluping NHS	7	1	8
Sinangkapan NHS	6	1	7
Sinulatan NHS	6	1	7
Sumisip NHS	6	1	7
Tairan NHS	6	1	7
Tipo-Tipo NHS	26	2	28
Tuburan Annex NHS	7	1	8
Tumahubong NHS	22	1	23
Grand Total	408	40	448

TABLE 2. Table of Specification for Teacher’s Assessment Instruction

Teacher Performance	Item Number	No. of Items	Percent
1. Development of National Consciousness (desirable values, Habits)	1-16	16	32%
2. Instructional Materials Development	17-19	3	6%
3. Student Evaluation	20-24	5	10%
4. Professional Growth	25-28	4	8%
5. Records-report Management	29-31	3	6%
6. Community and Allied Services	32-34	3	6%
7. Punctuality and Attendance	35-37	3	6%
8. Teachers Personality and Human Relation	38-50	13	26%
TOTAL		50	100%

Another 50-item test taken from Mathematics I textbook was made for the student’s evaluation for Mathematics achievement.

To measure student achievement in Mathematics I, %0-item multiple-choice test was constructed. See table 3 for the Table of Specification in Mathematics I Achievement test.

Permission was requested from the Division Superintendent of Basilan Schools Divisions to conduct the study in all national high schools in Basilan. Appendix A shows a copy of the permission letter.

The researcher herself administered the assessment instruments to the different urban and rural high schools involved in this study. To validate the teacher’s performance the researcher conducted a follow-up interview.

TABLE 3. Table of Specification for Mathematics I Achievement Test

Skills Contents	Know Ledge ment	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
Angles	1	2	34			38	4
Polygons	3	4		5			3
Triangles	6		8	7		9	4
Quadrilaterals	11	12		10			3
Parallelograms & Trapezoids	14	13					2
Circles		16			15		2
Chords, arcs & central angles	18					17	2
Metric System		20		19	21,22		4
Time			23		24		2
Perimeter	25	28	26,29	27			5
Circumference	36		30	32	31	33	5
Areas:							
a. Rectangle							
b. Square							
c. Parallelograms		37		38,39			3
d. Triangles							
e. Circles							
Volumes:							
a. Spheres	40		42	41			3
b. Rectangular solid & circles							
Rate		44	43	45			3
Unit Price			47			46	2
Speed	48		50			49	3
Total	10	9	10	10	5	6	50
Percent (%)	20%	18%	20%	20%	10%	12%	100%

The Samples

There were 408 student- respondents and 40 teachers- respondents as shown in Table I. ten 10 percent of each class enrolment from national high schools were randomly selected. On the other hand, their administrators or heads assessed forty teachers from the Public national high school, making a total of 448 respondents. The numbers of teacher-respondents in each school were clearly shown on Table 1.

Method and Procedure

The descriptive research method was used in this research using a checklist rated by the school administrators to evaluate teacher’s performance. A 50-item test was developed and used to measure student’s achievement in Mathematics I.

The researcher sought the permission from the College President (Appendix A) to conduct the study and used the first year student of the Sta.Clara Campus for the test item validity. Permission from the Superintendent (Appendix B) was granted after submitting a letter of request to conduct the study to all national high schools.

Validation

The instruments used in the study included, a set of checklist and a 50-item multiple-choice test taken from the Mathematics I textbook, covering the lesson for the Third Grading Period of the SEDP series. The 50-item multiple-choice test was first field-tested to the first year students of the Sta.Clara Campus. Responses of each item were analyzed to identify the easy item or option, by computing its discrimination index. A group of experts validated the questions, arrangement of options and

gave some suggestions in restating, rewording and revising the poor options.

The checklist was revalidated by another group of experts, which included Mathematics and English Supervisors from the DECS Division Office before the finalization of the instruments.

Statistical Treatment

The researcher of the study compared teachers' performance and the student's achievement in Mathematics I during the third grading period.

The following specific problems were treated statistically:

1. For Teachers' Performance in Teaching Mathematics I, frequencies, mean, and the chi-square formula were employed to get the significant difference.

Formula:

$$a. X = \frac{\sum X}{N} \qquad SD = \frac{\sqrt{\sum(X-X)^2}}{N}$$

$$b. X^2 = \frac{N(ad-bc)^2}{klmn}$$

2. Significant difference between the urban and rural school was determined with the use of t-test of school was determined with the use of t-test of independent means:

Formula:

$$\sqrt{\frac{S_1D_1}{N_1} + \frac{S_2D_2}{N_2}}$$

3. To get the relationship between teacher's performance and student's achievement, two-factor Analysis of Variance or the so-called ANOVA was employed.

Formula:

$$a. SS_t = \sum X^2 - \frac{(\sum X)^2}{N}$$

$$b. SS_w = \frac{\sum X_t^2 - \frac{(\sum X_t)^2}{N}}{N}$$

$$c. SS_c = \frac{\sum (\sum X_c)^2}{N_c} - \frac{(\sum X_t)^2}{N_t}$$

$$d. SS_r = \frac{\sum (\sum X_r)^2}{N} - \frac{(\sum X_t)^2}{N}$$

$$e. SS_{c,r} = SS_t - SS_w - SS_c - SS_{c,r}$$

III. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Teachers' performance was determined in a sample of teachers handling Mathematics I in all national high schools. This was evaluated by school administrators using a questionnaire of 50 items covering the seven task functions only. Personality and achievement were excluded. Four hundred eight (408) were randomly selected from the National high schools.

Achievements was measured and defined as the number of correct responses made on the 50 item teacher-made test in Mathematics I.

Teachers' Performance was compared according to personal factors, and seven task functions. Achievement Scores were analyzed and tested using t-test, and F-test.

Teachers Performance in teaching Mathematics I included the following personal factors: Age, Civil Status, Income, Eligibility, Sex, Educational Qualification, and Teaching Experience.

Hypothesis 1. There is no significant no significant difference in teachers' performance in teaching Mathematics I in terms of the following personal factors; Age, Civil Status, income, Eligibility, Sex, Educational qualification, and Teaching Experience.

From the sample of 40 secondary teachers there were Twelve (12) teachers who belonged to the 20-29-age bracket, which made up 30 percent of the samples. Twenty four (24) samples composed the 30-39-age bracket, which was 60 percent of the total number of teachers. Ten percent or only four (4) teachers who were under 40-50 groups.

Based on Table 4 the teachers of the first age bracket got a performance mean of 5.59 while the second group got 5.63. The last group got a performance mean of 5.42 of the age grouping. It was the 30-39 age groups who got higher performance mean followed by the 20-29 groups. It is obvious that middle age teachers have better performance because of their teaching experience and they were seasoned teachers in terms of latest teaching methodologies and strategies whereas the younger ones still in the process of adopting to the new environment and ecology in teaching.

TABLE 4. Number/Percentage of Teachers and Their Performance According to Age Group

Age Group	No. of Teachers	Percent	Performance	Rank
20-29	12	30%	5.59	2
30-39	24	60%	5.63	1
40-50	4	10%	5.42	3
Total	40	100%	Satisfactory	

Overall performance of teachers according to age falls on the satisfactory rating. It was the 30-39 age group ho ranked first followed by the first group and the third group.

The following are the grade points or weight points of teacher's performance:

Excellent - - - - -	9-10
Very Excellent - - - - -	7-8
Satisfactory - - - - -	5-6
Unsatisfactory - - - - -	3-4
Needs improvement - - - - -	1-2

By computation, the difference between the second group and the first group age bracket was only .04 and between the second and third group was .21 while the first and third group was .17. There was no variation in their performance only slight difference in the points less than 1.

Regarding Civil Status, Tables 5 shows the frequencies, percentage, and performance mean of Secondary Mathematics I teachers.

TABLE 5. Frequencies, Percentage and Performance Mean of Secondary Mathematics I Teacher According to Civil Status.

Civil Status	Frequencies	%	Performance Mean	Rank
Single	10	25%	5.42	2
Married	30	75%	5.56	1
Total	40	100%	Satisfactory	

There were ten single secondary teachers, which made up 25 percent of the samples while 30 married teachers made up 75 percent of the total sample. The single group got 5.42 performances mean while the married group got 5.56 performances mean which ranked first higher than those single groups. Between these two groups a mean difference of .14 existed which was statistically not significant having a value less than 1. Both groups having satisfactory performance showed no significant difference however the married group got better performance than the single group because of experience as working parents they are exposed to more responsibilities and seems to be matured in terms of decision-making.

On the other hand, INCOME IS SHOWN ON Table 6. Twenty (20) teachers fall on the salary bracket of P8, 000.00 – P11, 000.00 which made up to 50% of the total teacher samples eighteen (18) teachers fall on the salary bracket of P10, 000.00 – P11, 000.00 which was 45% and 5% or two (2) teachers who are receiving the salary bracket of P11, 000.00 and above.

TABLE 6. Salary Bracket, Frequencies, Percentage. Their Respective Performance Mean and Ranked

Salary	Frequencies	Percentage	Performance Mean	Rank
P8,000 9,000	20	50%	5.43	3
10,000 11,000	18	45%	5.63	2
11,000 Above	2	5%	5.67	1
Total	40	100%	Satisfactory	

The teachers, which fall on the salary bracket of P8, 000.00 - 9,000.00, got the performance mean of 5.62. Teachers belonging to salary bracket of 10, 000.00 – 11,000.00 got 5.63 and the teachers with the third bracket of 11,000 – above an above – got 5.67 as the performance mean. After computation, comparison and assimilation of the three-salary bracket, the result was that, the third salary bracket ranked first or got the highest number mean percentage. Between the second and the first bracket the mean difference was .05. It shows that teachers of the three groups of salary bracket having satisfactory performance showed no significant difference according to their salary.

Talking about Eligibility, 7.5% or three (3) teachers passed the DECS teachers Examination's. Two (2) teachers or 5% passed the Civil Service Test and for the Professional Board Examinations for Teachers or the PBET there were thirty two (32) teachers who passed which made up 80% of the total teachers-sample. Three (3) teachers passed the Licensure Examinations for teachers or the so-called LET made up to 7.5%.

Table 7 shows the eligibility's of the sampled teachers, their corresponding frequency, percentage mean and the ranks of the different eligible.

TABLE 7. Eligibility's, Frequencies, Percentages Performance Mean and Ranks of Teachers

Eligibility	Frequencies	Percentage	Performance Mean	Rank
DECS (Teacher Exam)	3	7.5%	5.69	1
Civil Service Test	2	5%	5.43	4
PBET	32	80%	5.49	3
LET	3	7.5%	5.60	2
Total	40	100%	Satisfactory	

From Table 7, DECS (Teachers Exam.) got 5.69 as the performance mean, Civil Service Eligible got the performance mean of 5.43 while PBET got 5.49 as the performance mean 5.60 was the performance mean of LET. The results of the performance mean shows that DECS (teachers exam.) ranked first as the oldest eligibility examination given to teachers. It means further that older teachers have more experience, knowledgeable and have better performance. Ranked second was the LET, third is the PBET, and fourth was the Civil Service Test. There was no significant difference on their performance, all got satisfactory performance.

Considering the sex on the personal factor of the 13 samples of secondary teachers, there were fourteen (14) male teachers, which made up to 35% and there were twenty six (26) females teachers, which was 65% of the Samples.

Based on Tables 8, Male teachers got a performance mean of 5.39 and 5.58 was the performance mean of the female teachers.

Table 8 shows the sex, frequency, percentage, performance mean and ranks of the secondary teachers.

TABLE 8. Sex, Frequencies, Percentage, Performance Mean and Ranks

Eligibility	Frequencies	Percentage	Performance Mean	Rank
Male	14	35%	5.39	2
Female	6	65%	5.58	1
Total	40	100%	Satisfactory	

The overall performances of teachers according to sex fall on the satisfactory rating. It was the female group who ranked first with the highest frequency and highest performance mean. It also shows that there were more female teachers who were interested and with patience in teaching Mathematics I in both urban and rural schools.

After the computation, the difference between male and female was 19. It shows that there is no significant difference between male and female in terms of performance mean. Both groups performed well because of the training and exposure they have during pre-service education and more female teachers are in the teaching profession.

Giving the focus on teaching experience or the number of years in service, there were 15% or six (6) teachers who belonged to the group of lower than five years in service.

Eighteen (18) teachers belonged to the group with 5-9 years in service which made up to 45%. There were six (6) teachers on 10-14 years in service making up to 15%, 12.5% or five (5) teacher classified on 15-19 years in service and another five (5) teachers for the 20-24 years in service which made up 12.5%.

TABLE 9. No. of Years in Service, Frequency, Percentage Performance Mean and Ranks of Sample

No. of Years in Service	Frequencies	Percentage	Performance Mean	Rank
Lower – 5	6	15%	5.56	4
5 - 9	18	45%	5.40	5
10 – 14	6	15%	5.59	3
15 – 19	5	12.5%	5.61	2
20 – 24	5	12.5%	5.65	1
Total	40	100%	Satisfactory	

From Table 9, the performance mean of teachers that falls lower than 5 years in service was 5.56 and it ranked 4. The fifth rank was the 5-9 years in service with 5.40 performances mean. The 10-14 years in service ranked third with 5.59 performances mean of 5.61 and 20-24 years of service ranked first or 1 with the performance mean of 5.65 satisfactory rating was the overall performance of the teachers involved in the study according to number of years in service.

The difference between the first and second group was .06 and 0.19 was also the difference between the third and second group. The difference between the fourth and the third group was .02 and between the fifth and the fourth group was .04. There was no difference in their performance because the difference was lesser than 1. Although the difference is not significant, it connotes that the longer the teachers stay in the service; the better is the performance of the teachers. They said, experience is the best teachers 20-24 years were 5.66 than those lower than 5 years which was only 5.42.

The last personal factor involved in study, was the Educational Qualification. Results and the Computed Outcomes were found on Table 10. Table 10 includes the educational qualification, the frequency or number of teachers, the percentage, the performance mean and its corresponding ranks.

There were thirty eight (38) teachers who were graduates of BSED making up to 95% and 5% or two (2) BSC graduate.

TABLE 10. Educational Qualification, Frequency, Percentage, Performance Mean and Ranks

Educational Qualification	Frequencies	Percentage	Performance Mean	Rank
BSED	38	95%	5.52	1
BSC	2	5%	5.38	2
Total	40	100%	Satisfactory	

The performance mean of BSED was 5.52 and it ranked first and BSC was 5.38 which ranked second.

Between BSED and BSC, the difference was 0.14. All the teachers showed satisfactory performance. Though the results have given no significant difference but ranking shows that the BSED teachers had better performance mean higher than the BSC. This is because of their pre-service preparation where

methods and strategies were strengthen and enhanced during their practicum.

Urban and Rural School teachers’ performance in teaching Mathematics I in terms of the seven task functions;

1. Development of National Consciousness (desirable values and habits)
2. Preparation of Instructional Materials Development
3. Provision for Student Evaluation
4. Professional Growth
5. Records/Reports Management
6. Community and Allied Services
7. Punctuality and Attendance

The overall performance of teachers is satisfactory. The differences were less than 1, so testing for its significance not necessary (Downie). There was no significant difference in age, civil status, Income, Eligibility, Sex, Educational qualification and Teaching Experience. This is the result of the new recruitment process where non-eligible are not accepted or hired; and the effect of the SEDP trainings for all secondary teachers have been trained for teaching Mathematics.

Hypotheses 2: There is no significant difference between Urban and rural school Teacher’ Performance in Teaching Mathematics I in terms of the seven task/functions:

1. Development of national consciousness (desirable values and habits) by the teachers as incorporated in the New Performance Appraisal of School Teachers (NPAST). This function has 16 indicators. The first indicators (I₁) is Observes significant National Celebration and Events particularly, National Heroes Day; (I₂) Wears Filipino attire during special occasions; (I₃) Listens to folk songs and cultural music; (I₄) Patronizes/uses Philippine made products; (I₅) Shows brotherhood and understanding with fellowmen regardless of status, religion and cultural difference; (I₆) Visits local historical places and shrines within the municipality, city, or province; (I₇) Tries-up with current local/national situation/ problems and thrust; (I₈) Provides lessons/opportunities/situations for the development and practice of self-discipline, self-reliance, self- control and tolerance; (I₉) Provides lesson/opportunities/situations for the development and practice of honesty and truth fullness; (I₁₀) Provides lesson/opportunities/situations for the development and practice of habits of personal cleanliness, thrift and wise use of leisure; (I₁₁) demonstrates desirables values and habits as example to the learners; (I₁₂) Follow-up learners’ behavior particularly through consultation with parents/guardians, other teachers and peers; (I₁₃) Keeps profile of learners behaviors and checklist of habits; (I₁₄) Display proverbs, mottoes, adages, posters, and others; visuals with focus on desirable values and habits; (I₁₅) Undertakes activities or projects with historical or social-economic significance; (I₁₆) Provides story/situational problems particularly in Mathematics and Science, related to national development. See the frequencies of responses for the first task function on Table 11.

In both urban and rural schools, there were 202 who responded for always, while 119 answered sometimes/never from the urban schools. Likewise, 76 responded for always and 244 who answered sometimes/never from the rural schools, for task function I Development of National Consciousness (desirable values and habits). See Table 12 for the summary

frequency and percentage of responses for this task function (I) for both urban and rural schools.

TABLE 11. Frequency of Responses for the Development of National Consciousness (Desirable Values and Habits)

Indicators	Public		Private	
	Always	Sometime/Never	Always	Sometimes/Never
I ₁	16	4	16	4
I ₂	10	10	1	10
I ₃	10	10	1	10
I ₄	17	3	2	18
I ₅	18	2	3	17
I ₆	3	17	2	18
I ₇	16	4	3	17
I ₈	16	4	4	16
I ₉	18	2	4	16
I ₁₀	18	2	4	16
I ₁₁	19	1	8	12
I ₁₂	10	10	8	12
I ₁₃	5	15	5	15
I ₁₄	4	16	3	17
I ₁₅	5	15	4	16
I ₁₆	16	4	8	12
Total	201	119	76	244

TABLE 12. Summary Responses of Both Urban and Rural Secondary Teachers on Development of National Consciousness (Desirable Values and Habits)

Types of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Percentage		
Urban	201	63%	119	37%	320	100%
Rural	76	24%	244	76%	320	100%
Total	277	53%	363	57%	640	100%

TABLE 13. Responses of both Public and Private Secondary Teachers on Instructional Materials Development

Indicator	URBAN		RURAL	
	Always	sometimes/Never	Always	Sometimes/Never
II ₁₇	13	7	3	17
II ₁₈	3	17	6	14
II ₁₉	8	12	9	11
Total	24	36	18	42

TABLE 14. Summary Responses of both Urban and Rural Secondary Teachers in Instructional Materials Development

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Frequencies		
Urban	24	40%	36	60%	60	100%
Rural	18	30%	42	70%	60	100%

The summary shows that 201 or 63 percent of the respondents from the urban school always follow the task functions and 119 or 37 percent for sometimes/never do the tasks. Similarly 76 or 24 percent of the rural school respondents always develop national consciousness while 244 or 76 percent sometimes or never do it. Urban national high schools have a total of 50 percent similar with those from the rural schools.

Using chi-square formula: $\chi^2 = \frac{N(ad-bc)^2}{Klmn}$, the arrived χ^2 is equal to 99.4520 for $df=1$, the tabulated χ^2 is equal to 3.841 at .05 level of confidence. The arrived χ^2 is grater (>) than the χ^2 tabulated. This means that the result is significant, and we can accept that there is a significant difference between the urban and rural school teacher’s responses on development of national consciousness, desirable values and schools have observed national celebrations and events, wear Filipino attire during special occasions, listened to folks songs and cultural music; visited local and historical places and shrines within the city or province particularly this year as we celebrated the Centennial year.

1. Instructional Materials Development. This task function 2 has three indicators; (II₁₇) Utilizes support teaching aids/materials (II₁₈) Provides a daily visual materials (pictures, lectures in enumerated forms and etc.); (II₁₉) Prepares necessary and related visual aids before the lesson. Respondent’s responses are shown on Table 13.

Based on the responses shown on Table 13, twenty-four (24) of the urban secondary teachers always utilized support-teaching materials. There were also 36 of this group who sometimes or never do this task. There were eighteen (18) of the rural secondary teachers who always utilized support-teaching materials and prepared the necessary materials before the lesson and 42 response of the both urban and rural secondary teachers is shown on table 14.

The summary of responses indicates that twenty four (24) urban secondary teachers responded always or 40 percent who developed the instructional material in teaching process and 36 or 60 percent who responded sometimes/never develop the instructional materials in their teaching process. While eighteen (18) teachers or 30 percent of the rural national high schools

always develop instructional materials and forty two (42) or 70% responded for sometimes uses or really develop instructional materials in their teaching process or never do that task.

With the used of the χ^2 or chi-square formula and a quite long computation, the arrived χ^2 resulted to 13.1868 at $df=1$. The tabulated χ^2 is equal to 3.841 at .05 level of confidence. The tabulated χ^2 is lesser than the arrived χ^2 and it means it is significant. It shows that there is a significant difference between the urban and rural secondary schools in terms of instructional materials development. Both schools are using Instructional Materials and utilizing it in their teaching process. Urban groups see the importance of using visual instructional

materials in spite of the economic crisis. Improvisations and recycling are sorted to.

1. Student Evaluation. The third task function of the NPAST of Secondary teachers has five indicators, (III₂₀) Administers one periodic test and at least ten other written/performance test every rating period for each class/subject and write at least three evidences of utilization's of test results; (III₂₁). Gives a day-to-day test of what pupils/student have learned at the end of a lesson/class recitations; (III₂₂) Regroups pupils/students and conducts appropriate group activities; (III₂₃) Presents graphically pupils materials; and (III₂₄) Provides remedial instructions to overcome discovered weakness. The frequencies of responses are shown on table 15.

TABLE 15. Frequencies of Responses for Students Evaluation

Indicator	URBAN		RURAL	
	Always	Sometimes/Never	Always	Sometimes/Never
III ₂₀	20	0	6	14
III ₂₁	10	10	7	13
III ₂₂	9	11	6	14
III ₂₃	4	16	4	16
III ₂₄	15	5	7	13
TOTAL	58	42	30	70

TABLE 16. Summary Responses of both Urban and Rural Secondary Teachers on Student Evaluation

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Percentage		
Urban	58	58%	42	42%	100	100%
Rural	30	30%	70	70%	100	100%

TABLE 17. Frequency of Responses for Professional Growth

Indicator	URBAN		Rural	
	Always	Sometime/Never	Always	Sometime/Never
IV ₂₅	19	1	4	16
IV ₂₆	16	4	12	8
IV ₂₇	15	5	4	16
IV ₂₈	6	14	13	7
Total	56	24	33	47

Table 16 presents the total number of teacher's respondents for the third task function. There were 58 teachers who responded Always evaluating student in urban schools and 42-responded sometimes/never. On the other hand only thirty (30) rural teachers sometimes evaluated students/never-evaluated students. See table 16 for the summary of responses.

The summary indicates that 58 and 58 percent of the urban teachers answered always evaluate the student and 42 or 42 percent answered sometimes or never evaluate the students on their day-to-day teaching. Likewise, only 30 or 30 percent who always evaluate their students and 70 or 70 percent sometimes evaluate their students or never evaluate their students.

Using chi-square formula $X^2=N(ad-bc)^2 / Klmn$ the arrived χ^2 is equal to 15.9091 at $df=1$, the tabulated χ^2 is greater than $>$ the tabulated χ^2 . This means that the result is significant, we accept that there is a significant difference between urban and rural secondary in terms of students evaluation. The urban national high schools evaluated their students regularly. The urban national high schools evaluated their student evaluation. The urban national high schools evaluated their students

regularly. This is a clear indication that closes supervision and evaluation scheme are implemented by school administrators and that teachers are performing their job well.

4. Professional Growth. The fourth task function consist of our indicators as follows; (IV₂₅) participates in all required in service training; (IV₂₆) attends school faculty meeting, district meetings, seminars or workshop; (IV₂₇) earns at least nine units in relevant undergraduate/graduate/postgraduate courses provided all expenses are personal; and (IV₂₈) attends special courses relevant to his teaching assignment with an aggregate of at least 162 hours. The responses of both public and private schools are shown Table 17.

As for the total teachers who answered the distributed checklist, there were 56 who responded for always, while 24 responded for sometimes/ never from the urban school. While 33 responded always and 47 for sometimes or never from the rural school. For clear representation of the fourth function (the professional growth) see Table 17 for the summary frequency and percentage of responses for this task function

TABLE 18. Summary responses of both Urban and Rural School Teachers on Professional Growth

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Percentage		
Urban	56	70%	24	30%	80	100%
Rural	33	41%	47	59%	80	100%

TABLE 19. Frequency of Responses for Records-Reports Management

Indicator	URBAN		RURAL	
	Always	Sometimes/Never	Always	Sometimes/Never
V ₂₉	17	3	13	7
V ₃₀	18	2	15	5
V ₃₁	17	3	14	6
Total	52	8	42	18

TABLE 20. Summary of Responses for both Urban and Rural School Teachers on Records-Reports Management

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Percentage		
Urban	52	87%	8	13%	60	100%
Rural	42	70%	18	30%	60	100%

Table 18 presents the summary of responses which states that 56 teachers of urban school or 70% of the respondents responded always continue their professional growth and 24 or thirty percent responded sometimes continue their professional growth or never. Similarly 33 or 41 percent responded always for rural school and 47 or fifty nine percent 29% responded sometimes or never continue their professional growth.

With the use of the chi-square (X^2) formula, the arrived X^2 is equal to 13.3945, at $df=1$ and the tabulated X^2 is equal to 3.841 at .05 level of confidence. The arrived X^2 is greater than (>) the tabulated X^2 . This means that the result is significant and we can say that there is a significant difference between urban and rural secondary school in terms of professional growth. Both the urban and rural schools are continuing their further studies, however urban teachers are attending more seminars and upgrade, uplift their respective professional growth because of professional/degree competition.

5. Records-Reports Management the fifth task functions consisting of three indicators are as follows; (V₂₉) keeps complete, accurate, and up to date records; (V₃₀) submit, neat and accurate reports and forms before due date and; (V₃₁) collects/enters correct data on the time. The responses of both public and private schools are shown on Table 19.

The total responses of both urban and rural secondary schools are presented on table 19. There were 52 urban school teachers who responded always and keep records-reports and manage it well and 8 responded sometimes and never follow the task. On the other hand there were 42 teachers of the rural school who responded always and 18 responded sometimes or never keep and manage the records-reports well.

The summary of frequency and percentage of responses for the fifth task function (the Records/Report Management) is shown on Table 20.

The summary of responses states that 52 or 87 percent of the urban school teachers responded always keeping records-reports well and 8 or 13% responded sometimes or never keeps or manages records-reports well. On the other hand 42 rural secondary teachers or 70% responded always and 18 or 35% responded sometimes or never do the said fifth task function;

With the used of chi-square formula; $X^2=N(ad-bc)^2/klmn$ the arrived x^2 is equal to 4.9100, at $df=1$, the tabulated x^2 is

equal to 3.841 at .05 level of confidence. The arrived x^2 is greater than (>) the x^2 tabulated. This means that the result is significant, and we can accept that there is a significant difference between the urban and rural secondary school teacher's responses on Records/Report Management. It can be clearly observed on the table and on the table and on the previous task function that because of close are doing this task well. As evidence by their class records and submission of reports on time this task is well done by them.

6. Community and Allied Services. The sixth task function (VI₃₂) Participates actively in school-community programs and fairs like PTA activities/projects, fiesta celebrations, community fairs and the like; (VI₃₃) Participates actively in information drives; (VI₃₄) Participates actively in Plebiscite/Referendum, Election, Alay Lakad, CSC, PRC Examinations, Red cross/MSSD relief operations and programs and projects of other agencies. See the frequency of responses for the sixth function on Table 21.

TABLE 21. Frequencies of responses for the Community and Allied Service

Indicator	URBAN		RURAL	
	Always	Sometime/Never	Always	Sometime/Never
V ₃₂	18	2	12	8
V ₃₃	5	15	6	14
V ₃₄	12	8	8	12
Total	35	25	26	34

As for the total teachers who responded for urban and rural schools, 35 urban school teachers responded always and 25 for sometimes/never involved themselves on community and allied services and 34 who responded sometimes or never do the task.

Table 22 shows the summary frequency and percentage of responses of the community and allied services.

Table 22 states that 35 or 58% of the respondents from the urban schools always participates in community and allied service and 25 or 42% for sometimes/never do the task. Similarly 26 or 43% of the rural school respondents always do the task and 34 or 57% responded sometimes or never do it. The chi-square formula; a $x^2 = X^2=N(ad-bc)^2/klmn$, was used in finding the arrived x^2 . After a quite long computation the arrived x^2 is equal to 2.7008. At $df=1$, the tabulated x^2 is equal to 3.841 at .05 level of confidence. The arrived x^2 is less (<)

than the χ^2 tabulated. This means that the result is not significant, and we can say that there is no significant, and we can say that there is no significant difference between the urban and rural secondary teachers, responses on community and

allied service. It was known and observed that both schools have participated-well in different community projects and allied services. Both schools showed helpful and good projects that helped the people in the vicinity of the school.

TABLE 22. Summary Responses of both Urban and Rural School Teachers on Community and Allied Services

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Percentage		
Urban	35	58%	25	42%	60	100%
Rural	26	43%	34	57%	60	100%

TABLE 23. Frequencies of responses On Punctuality and Attendance

Indicator	URBAN		RURAL	
	Always	Sometimes/Never	Always	Sometimes/Never
VII ₃₅	18	2	16	4
VII ₃₆	15	5	16	4
VII ₃₇	16	4	18	2
Total	49	11	50	10

TABLE 24. Summary Responses of both Urban and Rural Secondary Teachers on Punctuality and Attendance

Type of School	Always		Sometimes/Never		Total	Percentage
	Frequencies	Percentage	Frequencies	Frequencies		
Urban	49	82%	11	18%	60	100%
Rural	50	83%	10	17%	60	100%

1. Punctuality and Attendance. The seventh task function consist of three indicators as follows; (VII₃₅) Arrives in school or in place of activity at least 15 minutes before official time and leaves only after the end of the class or school activity; (VII₃₆) Renders voluntary services beyond official time whenever there is need for such services and (VII₃₇) Avoids absences, leaves, tardiness or under time, during the year, in class or other required school activities like meeting programs or assemblies Respondent responses are shown on Table 23.

Base on the responses shown on table 23, 49 of the urban secondary teachers always follow the 7th task functions on punctuality and attendance and 11 responded sometimes and never follow the task. There were 50 of the rural secondary teachers who responded always and ten (10) responded sometimes or never follow punctuality of schedules and attendance in many school and important programs/occasions.

The summary response of both urban and rural secondary teachers is shown on Table 24.

The summary responses states that 49 or 82% responded always maintain the attendance and their punctuality in school activities etc. and 11 or 18% responded sometimes or never of the urban school. Similarly 50 or 83% of the rural school teachers responded always and 10 or 17% responded sometimes or never concern on their attendance and being punctual on their job.

With the used of the chi-square formula; the arrived χ^2 resulted to 0.0577 at $df=1$. The tabulated χ^2 is equal to 3.841 at .05 level of confidence. The Tabulated χ^2 is less than (<) the arrived χ^2 and it is not significant. It means that there is no significant difference between the urban and rural school in terms of Punctuality and Attendance. Both schools are punctual and conscious on attendance in their jobs and other related activities in school and in all community. This is the impact of the Productivity Incentives given to teachers. If teachers fall short of their performance 50%, only of the productivity pay will be given.

Hypothesis 3. There is no relationship between Teacher’s Performance and Students achievement in Mathematics I.

There were 9 classes listed for student achievement in urban national high schools, and another 19 classes for rural high school making a total of 38 classes. In each class ten (10) percent of the students were randomly selected to take the achievement test in Mathematics I. A total of 408 students were given the 50-item test to test their performance in Mathematics I.

Table 25 shows the average the mean of urban and rural national high schools.

TABLE 25. Students Achievement by Schools

Type of School	No. of Student	Average Mean
Urban	222	22.96
Rural	186	18.42
Total	408	

The average mean of student’s achievement in Mathematics I for Urban School is 22.96 while that of rural schools is 18.42 there is a difference of 4.54. Using t-test of independent means with formula

$$t = \frac{\bar{X}_1 - \bar{X}_2}{SDX}$$

The arrived t values is 2.820 at 37 degree of freedom, and .05 level of confidence, the t critical is 2.042. This means that the result is significant which shows that there is a difference on the achievement between urban and rural high schools in Mathematics I. See the summary on table 26.

The resulted show that there is a significant difference on the achievement of student in Mathematics in both types of schools. This is supported by the fact that urban national high schools already trained under the Secondary Education Development Program or SEDP. Teachers in all public national high schools are4 being hired accordingly to specialization.

They were even trained, abroad like in Australia under the Program for Basic Education.

TABLE 26. Average Mean and Mean Difference of Urban and Rural High School Achievement in Mathematics I

School	Average Mean	Mean Difference	t-Test	.05
Urban	22.96	4.54	2.820	S
Rural	18.42			
df = 37 ; α .05 t-critical =2.042				

Regarding teachers performance, a summary was taken to see the difference between urban and rural secondary schools in teaching Mathematics I, see data on Table 27.

TABLE 27. Summary of Teachers Performance in Teaching Mathematics I By Type of Schools

School	Average Mean	Mean Difference	t-Test	.05
Urban	56.29	2.31	23.1	S
Rural	53.98			
df = 38 ; α .05 t-critical =2.042				

Using t-test, the arrived t value 23.1 is greater than the tabulated $t=2.042$ at 38 degree of freedom, and .05 level of significant. This means that there is a significant difference on the performance of teachers in teaching Mathematics I in both urban and rural high schools. This is due to the fact that urban and rural schools have administrators conducting regular

supervision. Teachers are doing their task/functions as shown on the New Performance Appraisal System.

The civil service policy requires new recruit teachers to be qualified and passers of the Licensure Examination for teachers (LET) given by the Philippine Regulations Commission (PRC). This is the very reason why the sampled teachers have difference on their performance for never do urban teachers be hired without passing the board examination.

Most of the urban high school teachers are with Masteral units in there are of specification.

To answer hypothesis 3 if no significant relationship between teacher’s performance and student’s achievement, data on Table 28 was analyzed using Two-factor analysis of Variance.

TABLE 28. Teachers Performance and Students Achievement in Urban and Rural High Schools

URBAN		
$\Sigma X = 1029.25$	$\Sigma X = 436.305$	1505.555
RURAL		
$\Sigma X = 1027.04$	$\Sigma X = 350.05$	1429.605
$\Sigma c = 2205.38$	$\Sigma c = 786.36$	2882.65

In this study, students were randomly selected from 22 national high schools. To see if teacher’s performance is related to student’s achievement, a two-actor analysis of variance was computed. The total sum of squares was 26822.63. Its sum square for between columns (SSc) was 25170.222. The sum of squares within the group was computed to be 1412.888. These data are entered into an ANOVA, table on Table 29.

TABLE 29. Two-Factor Analysis of Variance

Source of Variation	SS	df	MS	f	P
Between					
Column	22577.85	1	22577.85		- >.05
Rows	217.131	1	217.131		- >.05
Interactions	8155006.6	1	-8155006.6	12.168	- <.05
Within	-876.1	72			
Total	-8176925.66	75			*Significant

$Df = 72 = \alpha.05 = 3.98$

$\alpha.01 = 7.01$
 $\alpha.01$

The F values are determined by dividing each of the mean squares for columns, rows and interaction by the mean square for within variance. The following is a decision model for these data;

DR: Reject Ho if F obs >3.98; otherwise do not reject
 DR: Reject Ho if F obs >7.01; otherwise do not reject

In the F table, it shows that 1.72 degree of freedom is 3.98 at .05 level of confidence. The obtained F values for teacher performance and students achievements by national high schools are significant (25.77 and 9308.30). The F value for urban and rural schools is not significant. The value for interaction between Teacher performance and students achievement was significant at .05 level of confidence (F value = 9308.30). It is reasonable to reject hypothesis 3 of no significant relationship between the two variables. This means that there is significant interaction or relationship of the identified variables; that student’s achievement is related to

teacher’s performance was satisfactory so it follows that student’s achievement was also satisfactory. The results confirm the study of Tuckman and Yates that student’s performance is an effective stimulus for change. Furthermore, the result affirms Tangs’ (1973) findings that the evaluation of teaching effectiveness includes the process of teaching and the product. The products referred to student’s performance.

IV. SUMMARY, CONCLUSION AND RECOMMENDATION

This study deals with the relationship of teacher’s performance to student’s achievement in Mathematics. The study was conducted to secondary urban and rural schools of Basilan Division during school year 1997-1998.

A teacher-made 50-item test in Mathematics was validated for the purpose. A questionnaire was utilized to gather information about teacher’s performance. The t-test, f-test and chi-square were employed statistically to treat the data.

For this study, specific questions were sought as follows;

1. Is there a significant difference in teacher's performance in teaching Mathematics I in terms of the following personal factors:

- a) Age
- b) Civil Status
- c) Income
- d) Eligibility
- e) Sex
- f) Teaching Experience
- g) Educational Qualification

2. Is there a significant difference between, Public and Private School Teacher's Performance in Mathematics teaching in terms of the seven task task/function.

- a) Development of National Consciousness and (desirable values and habits)
- b) Instructional Materials Development
- c) Students Evaluations
- d) Professional Growth
- e) Records-Report Management
- f) Community and Allied Services
- g) Punctuality and Attendance

3. Is there a relationship between Teacher's Performance and student's achievement in Mathematics I?

The study postulated the following hypotheses that:

1. There is no significant difference in teacher's performance in teaching Mathematics I in terms of the following personal factors:

- a) Age
- b) Civil Status
- c) Income
- d) Eligibility
- e) Sex
- f) Teaching Experience
- g) Educational Qualification

2. There is no significant difference between Urban and Rural Schools Teacher's Performance in Mathematics teaching in terms of the seven task/functions:

- a) Development of National Consciousness and (desirable values and habits)
- b) Instructional Materials Development
- c) Students Evaluations
- d) Professional Growth
- e) Records-Report Management
- f) Community and Allied Services
- g) Punctuality and Attendance

3. There is no relationship between teacher's performance and student's achievement in Mathematics I.

Summary of Findings

The finding of the study shows that;

1. Teachers of 40-50 age group have higher performance mean than younger ones.
2. Married teacher got better performance than the single group.
3. Teachers with higher salary got higher performance means than those belonging to the lower bracket groups.
4. All eligible teacher's performance were better than those none eligible. However no significant difference existed among the kinds of eligibilities.

5. Female teachers scored higher than male in their performance mean. However no significant difference was observed according to sex Comparison in terms of performance mean.

6. Teachers with 20 to 24 years in service got the highest score in performance than those lower than 5 years although satisfactory rating was the over-all performance of all samples.

7. Though the results have given no significant difference but ranking shows that the BSC/BSED teacher same performance mean.

8. There was a significant difference in teacher performance in terms of development of desirable values and habits among urban and rural secondary schools. Public schools were remarkably observed developing national consciousness as supported by a greater chi-square ($X^2=99.4520$) than the tabulated $X^2=3.841$.

9. Both urban and rural high school teachers showed no significant difference in the use of instructional materials in their teaching.

10. Urban and Rural School teachers evaluated their student's performance although urban school teachers always do the task by 29% while private schools evaluate their pupils by 15% only.

11. Thirty five (35) percent or the urban secondary Mathematics I teachers continue their professional growth and 21% of the rural sch001 teachers do this task. No significant result existed between these groups.

12. Both groups of secondary Mathematics teacher showed positive performance in record or management. Class records and other reports were done well by the samples.

13. There was no significant difference between the urban and rural school teacher's performance on community and allied services. All samples have participated well in different community projects and programs.

14. Both schools were punctual in attendance in their jobs and other related activities in school. 15. The average mean of student's achievement in Mathematics I for urban school was 23.08 while that of rural school was 18.36. There was no significant difference on the result between these groups of students.

16. The F value of 9308.30 ($df=1.72,05$) was significant for the interaction effect of teachers performance to student achievement.

Conclusions

Based on the summarized findings the following conclusions have been drawn:

1. Teachers' performance in teaching Mathematics I gave no significant difference in term of the personal factors like Age, Civil Status, Income, Eligibility, Sex, Teaching Experience, and Educational Qualifications.
2. Chi-square computation revealed that urban secondary teachers have better performance than the rural secondary teachers in the development of National consciousness, desirable values and habits as a task/function.
3. Both urban and rural secondary Mathematics teacher's performance did not significantly differ in terms of the other six task functions like; prepares instructional materials, evaluates students, attains professional growth, records/reports student achievement extends community and allied service, and being punctual in attendance.

4. A two-factor analysis of variance revealed a significant relationship that existed between teachers' performance and students in achievement Mathematics I.

Recommendation and Implications

1. As stated in the conclusion that teachers' performance do not vary according to some personal factors, It is therefore recommended that Mathematics teachers to be hired must meet the necessary qualifications, area of specialization and a board/licensure holder
2. In the pre-service education, teachers to be must be given the training in the seven task/functions development.
3. Tang (1973) concluded that the evaluation of teaching effectiveness includes the process of teaching and the product. The process of teaching is focused on teaching methodology while the products refer to student's performance. As follow-on this study which has a direct relevance to teacher's performance-student teachers and neophyte teachers must be provided with new teaching methodologies. New methods of teaching learned in pre-service education must be implemented and applied in new conditions. Never follow the easy track and least resistance methods.
4. There is a strong and significant relationship between teachers performance and students achievement. It is best that educators use students achievement as an indicator for teachers' performance rating.
5. Actual teachers performance should be a sound basis for decisions concerning faculty/teachers' promotions; salary increases and further training's and scholarship.

6. Teachers obtaining outstanding and excellent performance should be recommended for merit increases or step increment increases as an incentive or moral booster.

7. Newly trained scholars in Mathematics are requested to help train those national and private high schools in rural areas to improve their teaching performance.

Areas for Further Research

Here are suggestions for further research related to study:

1. Teacher's Performance: Its effect to student's achievements among urban and rural national high schools.
2. Teacher's Involvement in community and allied services.
3. Teacher's Performance, Instructional and Management styles of administrators in Secondary Schools of Basilan.

REFERENCES

- [1]. Bacu, L. Bustos, A. Lardizabal, A. Principle and Methods of Teaching. Third Edition. 927 Quezon Avenue City.16
- [2]. Bustos, Alicia S., et al. pp Introduction to Education. (Quezon City; Katha, 1982), pp.2-3
- [3]. Good, Carter V. ed. Dictionary of Education. Third edition. (New York; Mc Graw-Hill, 1973, pp/121
- [4]. Jon Jarolimek and Clifford D. Foster. Teaching and Learning in the Elementary School. (New York: Mac Millan, 1976)
- [5]. Tagade, Melba A. "Evaluation Pupil Progress, New Thrust in Philippine Education eds. B.B. Manuel et. Al Vol. I (Manila;Current Events Digest, 1974), pp127
- [6]. Downie, N.M., Health, Robert W. Basic Statistical Methods Fifth Edition.