

## ABSTRACT

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**Title of Thesis:** TEACHING PRACTICES OF MATHEMATICS  
TEACHERS AT AGUSAN NATIONAL HIGH SCHOOL,  
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**Specialization** : Educational Management

### A. Objectives

This study aimed to determine the common Teaching Practices of Mathematics Teachers at Agusan National High School during the school year 2003-2004.

Specifically, the study sought to answer the following questions:

1. What is the socio-demographic profile of the mathematics teachers of Agusan National High School?

2. What are the common teaching practices of mathematics teachers at Agusan National High School as perceived by the mathematics teachers and the students?

3. Is there a significant difference between the perception of the mathematics teachers and the students on the different teaching strategies at Agusan National High School under the following:

a. Discussion

- b. Practical Work
- c. Practice and Consolidation
- d. Problem Solving
- e. Think, Pair, Share
- f. Group Mathematical Investigation?

## **B. Methodology**

This study used the survey approach of research specifically, the descriptive method. It utilized the said approach in as much as the main purpose of this research was to determine the teaching practices of mathematics teachers at Agusan National High School.

The respondents were the high school mathematics teachers of Agusan National High School and the 156 high school students randomly taken from all year levels during the school year 2003-2004.

The study was conducted in the city division of Butuan, particularly in Agusan National High School.

The research study used the purposive sampling technique. In determining the teaching practices of mathematics teachers, the researcher used questionnaire checklist with 5-point scale rating with descriptive rating

5 - (VO) - Very Often, 4 - (O) - Often, 3 - (S) - Sometimes, 2 - (N) - Never, 1 - (NA) - Not Applicable.

Simple random sampling was used through the questionnaire checklist with 5-point rating scale in determining the perception of the students on the teaching practices of the mathematics teachers.

The data gathering instruments used in this study were the following: a) Questionnaire Checklist form to establish the demographic profile of the respondents; b) Questionnaire Checklist to determine the teaching practices as perceived by teachers and students; c) The Video Coverage - to supplement the data that were gathered with the use of the questionnaire and to actualize further the perception of respondents regarding the teaching practices.

The procedure involved the following steps: a) Preliminary; b) Pilot testing; c) Second trial Run; d) Final Run; and e) Video Coverage of Actual Footage of the teaching done by the respondents.

Statistical treatments used were the following: a) Weighted Mean; b) Tally Percentage; and c) z-test.

## **Findings**

The main findings of the study were:

### **A. Teachers' Profile**

1. Half of the 26 mathematics teachers were 51-60 years old.

2. Twenty-three (23) of the mathematics teachers were married and perceived as matured and responsible.

3. Twenty-two (22) of the mathematics teachers were female.

4. Thirteen (13) of the mathematics teachers were Bachelor of Secondary Education-degree holders with Master of Arts units.

5. Ten (10) of the mathematics teachers had rendered service for 21 and more years in the public schools.

6. Thirteen (13) of the mathematics teachers occupied the rank of Secondary School Teacher-I.

7. All of the mathematics teachers teaching mathematics subjects were qualified teachers for they had all passed the qualifying examinations for teachers.

8. All of the mathematics teachers were equipped with the current teaching strategies after they had participated in seminars and workshops required by the Department of Education.

B. The Common Teaching Practices in Mathematics at Agusan National High School as Perceived by the Mathematics Teachers and Students were:

1. Teachers communicated very often in a manner easily understood by the students. Sometimes these teachers showed pictures, tables, graphs and other visual presentation in their classes.

2. Teachers evaluated very often the skills acquired by the students. They sometimes conducted outdoor activities where students could take and record measurements, do program computation, and discuss and illustrate findings. These teachers present often solutions containing errors; they spotted and corrected these errors.

3. Teachers presented often solutions containing errors; students would spot and correct these errors.

4. Teachers very often acquainted their students with the steps in solving word problems, while employing often the problem solving strategies.

5. The same teachers taught their students very often various mathematical conclusions and often discussed the relevance of the topics to real life situations.

6. The mathematics teachers often let each pair complete the table based on the discovered equation and

draw the graph while often letting each pair perform the drawing of different figures, measuring different figures, cutting figure forms and formulating conclusion.

7. The teachers often employed group games as teaching strategy in developing the lesson and sometimes prepared group puzzles to enhance manipulative skills of students.

C. Over-all Frequency of Common Teaching Practices of the Mathematics Teachers was "Often".

D. Perception on the Teaching Strategies practiced by the Mathematics Teachers as perceived by students are the following:

1. Teachers asked their students very often to discuss solutions or to write answers on the board. They sometimes encouraged students to give their own solutions instead of depending only on teacher's solution.

2. Students very often were given worksheets or activities to solve after discussion. Sometimes outdoor activities were conducted where students could take measurements, record measurements, perform computation and discuss and illustrate findings.

3. Students evaluated very often the skills or concepts learned while they were often given opportunities to make their own generalization.

4. Students employed often the problem solving strategies.

5. Students discussed very often the relevance of the topic to real life situation and were often made to define important mathematical terms in their own words.

6. Students were often asked by teachers to solve the "think of this" problem on the textbook.

7. Students employed often group games as learning strategy and often made to undergo research by groups on a certain topics to formulate and to make their own problem.

**E.** Over-All Teaching Strategies practiced by the mathematics teachers as perceived by the students was "Often".

**F.** Perception of mathematics teachers and students on the teaching strategies is described as "often" as seen and transcribed on the actual footage of demonstration teaching of mathematics teachers at Agusan National High School.

**G.** No significant differences were observed between the perceptions of the mathematics teachers and students

on the implementation of the discussion, practical work, problem solving, and exposition as teaching strategies used in mathematics. However, there were significant differences between the mathematics teachers' and students' perceptions on the implementation of practice & consolidation; think, pair, share; and group mathematical investigation as teaching strategies practiced by the mathematics teachers.

### **Conclusions**

In view of the findings, the following conclusions were drawn:

1. Mathematics teachers of Agusan National High School, SY 2003-2004 are married and responsible. Majority of them are female teachers who fall under the bracket of 51-60 years old.

2. Ten (10) of the mathematics teachers had rendered services for 21 and above years and are, therefore, experienced in teaching.

3. Thirteen (13) of the mathematics teachers occupied the teaching position as secondary school teacher I.

4. Sixteen (16) of the mathematics teachers rendered a teaching load of 30 hours and above per week.

5. The mathematics teachers are considered qualified teachers for they all passed the qualifying examinations for teachers.

6. All of the mathematics teachers are equipped with the current teaching strategies, seminars and workshops by the Department of Education.

7. The over-all teaching strategies practiced by the mathematics teachers falls on the descriptive rating of "Often" for both the teachers and the students.

8. The mathematics teachers and students had similar perceptions on the implementation of discussion, practical work, problem solving, and exposition as teaching strategies used by the mathematics teachers. On the other hand, the mathematics teachers and students differ significantly in their perception of implementation of practice and consolidation; think, pair, share; and group mathematical investigation as teaching strategies used by the mathematics teachers.

9. The teaching strategies as seen on the actual footage of demonstration teaching of mathematics teachers

at Agusan National High School fall on the descriptive rating of "Often".

### **Recommendations**

On the basis of the foregoing findings and conclusions, the researcher offers the following recommendations:

1. The administrators of school should give scholarship grants for teachers in mathematics to help these teachers upgrade their competencies in teaching.

2. Teachers may implement Higher Order Thinking Skills Learning Strategies in order to be able to render a meaningful and effective teaching-learning experience in mathematics. They can:

2.1 Show pictures, tables, graphs and other visual presentations as motivational strategy during discussion. Teachers shall encourage students to give their own solution.

2.2 Conduct outdoor activities where students can:

- a. take measurements
- b. record measurements
- c. perform computation
- d. discuss and illustrate

2.3 Let the class prove certain theorems, present solutions containing errors, spot and correct them.

2.4 Make discussions on the relevance of the topic to real life situations.

2.5 Mathematics teachers should use frequently the Think, Pair, Share as a teaching strategy.

2.6 To enhance the manipulative skills of the students, mathematics teachers can prepare instructional materials for students to work on and with time limit.

2.7 Let each group do research on a certain topic, formulate and make their own problem.

2.8 Give students opportunities to make own generalization.

2.9 Let students define important mathematical terms in their own word.

3. Administrators should conduct seminar-workshops on teaching strategies with more emphasis on the HOTS Learning Strategies.

4. Future researchers may dwell on the comparative study on the HOTS Learning Strategies to the achievement performance result of students.

5. Teachers should encourage parents to help their children by making follow-up of their children's school activities, particularly in mathematics.