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# A STUDY OF PROBLEMS IN LEARNING MANAGEMENT OF MATHEMATICS IN THE SECONDARY EDUCATIONAL SERVICE AREA 19

## Abstract:

This study is a survey research to study of problems in learning management of Mathematics and compairson of problems in learning management of Mathematics in the Secondary Educational Service Area 19, of 8 aspects; mathematics teachers, management administration, curriculum implementation, location and environment, teaching planning, learning management, instructional media, and assessment.

The samples in this study are 256 mathematics teachers, 50 of 52 schools in the Secondary Educational Service Area 19 of Loei and Nongbualamphu province.

The data analysis of the study was conducted as following: general information of respondents and opinions on the problems of learning management of mathematics, the data analysis using statistic of percentage, mean, Standard Deviation, t-test, and ANOVA test to compare the learning management of mathematics teachers in each side and using the statistical package SPSS. The results of the study

showed that, of this research, the researcher concluded and presented as follows:

- 1. The mathematics teachers at secondary level in the Secondary Educational Service Area 19, accounted for 47.5 percent are mostly female, the age between 36-40 years old accounted for 20.9 percent, educated undergraduate and graduate 38.2 percent, had experienced in teaching Mathematics at the secondary level for 11 years old or more accounted for 52.5 percent.
- 2. The comparison of learning management problems of the Mathematics teaching in the Secondary Educational Service Area 19, of 8 aspects according to their gender, age, educational background, teaching experiences no statistically significant differences.

When considered problems 8 aspects variable found that : 1) Sex : has 1 aspect, different aspect in statistically

- significance at the .05 level was mathematics teachers.
- 2) Age: have 4 aspects, different aspect in statistically
- significance at the .05 level were mathematics teachers, management administration, location and environment, curriculum implementation
- 3) Number of years teaching mathematic : have 3 aspects, different aspect in statistically significance at the .05 level were management administration, teaching planning, learning management

## **Keywords:**

Problems, Learning Management of Mathematics, Secondary

**JEL Classification:** 123

# Introduction

Problems of teaching mathematics at the above mentioned teachers need to teach math to be effective and consistent with the course. This standard requires that requisite classes And math skills as tools in the learning. Which is aimed at providing knowledge and experience to students as a means of livelihood for both communicate the reasoning calculation. And creativity as well as knowledge. And experience gained in learning to use the experience of other groups. And knowledge that students need. Of problems such as the research on teaching and learning mathematics. Teaching about teaching mathematics of Students Teacher Experience Training of Program Mathematics such as Specific Instructional Methodology And Management 1 course, Specific Instructional Methodology And Management 2 course and Analysis of School Mathematics Therefore it is necessary Study of Problems in Learning Management of Mathematics in the Secondary Educational Service Area 19 to apply to adjust instruction to students and to prepare students for professional practice. Mathematics for better performance and quality that can result in an improvement in the teachinglearning process that promotes the understanding, skills and attitudes towards these subjects twinkling beyond, and to the achievement of the skills of mathematics. higher goals and better. And benefit stakeholder

## **Objectives of Research**

- 1. study of problems in learning management of Mathematics
- 2. compairson of problems in learning management of Mathematics in the Secondary Educational Service Area 19

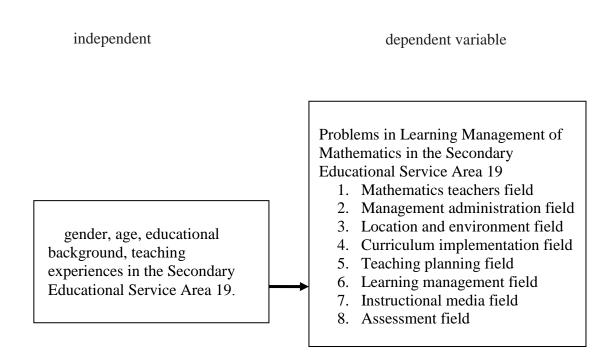
# Scope of the Research

The samples in this study are 256 mathematics teachers, 50 of 52 schools in the Secondary Educational Service Area 19 of Loei and Nongbualamphu province using Krejcie & Morgan scale (1970) to determine the sample size by comparing interpolates due to the population used in this study does not match to the numbers in the scale.

# **Expected benefits**

- 1. For the benefit of education. And related agencies were aware
- **2.** Problems in Learning Management of Mathematics in the Secondary Educational Service Area 19. This will solutions Improve and develop better teaching.
- 3. To guide the study of the problem of managing the teaching of other subjects

## **Conceptual framework**



## **Research Methodology**

The researcher conducted the data collection steps as following: 1. Require the document letter from Loei Rajabhat University, to 50 school directors in the Secondary Educational Service Area 19 of Loei and Nongbualamphu province, for the permission on using query to collect data.

- 2. To collect data from query, the researcher performed of three combinations of methods:
- 2.1 The samples query was mailed and returned. For the placement where has not been returned or the information is not exhaustive, the researcher conducted following two ways:
- 2.1.1 The placement where received lack of exhaustive information, the researcher collected oneself and the third method which is the final choice is enumeration by telephone.

2.2.2 The questionnaires were sent totally 260, 256 were representing returned, accounted for 98.46 percent.

#### Tools used in the research

The researcher was conducted the data collection by using the questionnaires for the teachers which consists of two steps:

- Part 1 The information about the status of the respondents.
- Part 2 The reviews on issues of learning management of mathematics, 5 rating scales, of 8 aspects:
  - 1. Mathematics teachers field
  - 2. Management administration field
  - 3. Location and environment field
  - 4. Curriculum implementation field
  - 5. Teaching planning field
  - 6. Learning management field
  - 7. Instructional media field
  - 8. Assessment field

#### The statistics used for research

General information of respondents and opinions on the problems of learning management of mathematics, the data analysis using statistic of percentage, mean, Standard Deviation, t-test, and ANOVA test to compare the learning management of mathematics teachers in each side and using the statistical package SPSS.

## **Results of Data Analysis**

This study, the researcher summaries and presented as follows:

- 1. The mathematics teachers at secondary level in the Secondary Educational Service Area 19, accounted for 47.5 percent are mostly female.
- 2. The mathematics teachers at secondary level in the Secondary Educational Service Area 19 are the age between 36-40 years old accounted for 20.9 percent.
- 3. The mathematics teachers at secondary level in the Secondary Educational Service Area 19, educated undergraduate and graduate 38.2 percent.
- 4. The mathematics teachers at secondary level in the Secondary Educational Service Area 19, had experienced in teaching Mathematics at the secondary level for 11 years old or more accounted for 52.5 percent.
- 5. The mathematics teachers at secondary level in the Secondary Educational Service Area 19 mostly need for help in instructional and usage of media, accounted for 23.0 percent.

- 6. The mathematics teachers at secondary level in the Secondary Educational Service Area 19 mostly need for help in the form of related knowledge supervisors to supervision, accounted for 42.1 percent.
- 7. In the mathematics teachers' field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; economy and cost of living and a lot burdens of the teachers while the teachers have overwhelm of day classes, teachers do not have enough time for class preparation and review exercises then the teachers teach as lecture without a variety of teaching methods, the problem lies in the high level.
- 8. In the management administration field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; administrators of school encourages mathematics teachers held training and seminar while, a number of teaching hours per week, assigned special tasks other than teaching, and further education, the problem lies in the high level.
- 9. In the location and environment field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the low level, consideration particularizes found; atmosphere in the classroom conducive to teaching, the classroom is clean and tidy, the problem lies in the medium level.
- 10. In the curriculum implementation field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the low level, consideration particularizes found; the course content lacks of modernization, propriety of time, clear of the desired characteristics, lack of flexibility, appropriate to the learner, the problem lies in the low level.
- 11. In the teaching planning field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the no problem level, consideration particularizes found; lack of understanding about planning instruction, shortage guide textbooks and documentation, lack of expertise in analyze the student, propriety time, practical activities, content overarching, learner focusing, define proposing, before preparation each lesson plans. The lack of specialists in the plans assessment, clearly written, applicable, the problem lies in the no problem level.
- 12. In the teaching field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the no problem level, consideration particularizes found; selected teaching methods appropriate to the content, according to the plan, propriety time for class preparation, using encourage techniques to learners, prioritizes teaching; easy to difficult, surrounding to environ, questioning to encourage an idea, remedial classes for weak students, participation of the students, and reinforcement appropriately to learners, the problem lies in the no problem level.
- 13. In the instructional media field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; the damaged of media, lack of modern media technological, appropriately teaching of internet media, lack of media of encourage thinking processes; such as mathematics games, selected media appropriately, lack of time to produce own materials, and lack of expertise to media evaluate, the problem lies in the high level.

- 14. In the assessment field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; evaluation tool usage as defined in the plan in its entirety and the results of evaluation are used to improve the learning management, the problem lies in the low level.
- 2. The comparison of learning management problems of the Mathematics teaching in the Secondary Educational Service Area 19, of 8 aspects according to their gender, age, educational background, teaching experiences no statistically significant differences.

When considered problems 8 aspects variable found that:

- 1) Sex: has 1 aspect, different aspect in statistically significance at the .05 level was mathematics teachers.
- 2) Age: have 4 aspects, different aspect in statistically significance at the .05 level were mathematics teachers, management administration, location and environment, curriculum implementation
- 3) Number of years teaching mathematic: have 3 aspects, different aspect in statistically significance at the .05 level were management administration, teaching planning, learning management

# **Problems and Suggestions**

- 1. Management administration field
  - Lack of purchasing budget for educational materials.
  - Fewer teachers while teaching many subjects responsible.
  - Encourage teachers to train on how to use produce the media.
  - Encourage teachers to training to develop their own.
  - Support of purchasing budget for educational materials.
  - The school clerk should be available.
  - Encourage study abroad.
- High school skilled teachers will be able to teach both secondary and high school.
  - The teaching assignment should be in the same class's level.
  - Provide teachers to fit needs.
- Administrators of school do not support activities and further education of teachers.
  - 2. Location and environment field
    - Arrange modern classroom.
    - Provide proper environment for students.
    - Laboratory available for teaching activities.

- Lack the outside learning classroom of mathematics field.
- Arrange location atmosphere for learning.
- Well common condition, damage of tables and chairs, crowed of students (50-56 students per room), rather not enough space for teacher to walk around.
- Building construction and repair, or landscape improvement during teaching deviate students out of classroom.
  - Arrange location atmosphere for mathematics learning.

# 3. Curriculum implementation field

- Focus on the education core curriculum.
- Lack knowledge of curriculum creates.
- Fewer selection subjects.
- Arrange appropriate curriculum to the learning development of learner.
- All associate participation.
- Course adjustment annually, such as adding the philosophy of Sufficient Economy or ASEAN as a task.
  - Adjust the lesser teaching hours.
  - Develop an application course.
  - Create appropriate content.

## 4. Teaching planning field

- Lack of planning time.
- Teaching is over time frame, because of lacking basic knowledge of students.
  - Apply technology into the teaching process.
  - Lack of appropriate personnel, cause of rearrangement.
  - Create placement curriculum.
  - Subject changed makes unfamiliar with the content.
  - Planning a variety of teaching.
  - Inflowing the lesson plan when teaching.

## 5. Learning management field

- Direct personnel to the subject.
- Lack of techniques and methods of teaching, and time of remedial class.
- Teaching revise needs, because of lacking basic knowledge of students.
  - Variety teaching arrangement to analytical thought processes.

- Lack of materials and media.
- Numerous of students in the class.
- Teachers handle a lot of task, cause of less hours of the teaching class, especially in the lower secondary.
  - Should be using variety techniques in teaching.

## 6. Instructional media field

- Apply a lot of ICT media in use.
- Apply material to use in teaching.
- Least of purchasing budget.
- Least of media gives lack tangible vision especially in higher secondary school.
  - Lack of modern media, uninteresting media.
  - Training needs on teaching media.
  - Teachers have not enough time to create teaching media.
  - Use a variety of teaching materials.
  - Lack of equipment such as a projector, games, or teaching materials.
  - Limit time to use materials.
  - Training needs on variety and appropriate of teaching media.

#### 7. Assessment field

- Efficiency assessment in used.
- Lack of experter in assessment.
- Lack of reliability.
- Apply variety of assessment.
- Assessment focusing on development
- Apply immediately and variety of assessment.

## 8. General suggestions

- Appropriate education needs from the newborn infant, preschool, kindergarten children.
  - Allocate sufficient budget to the development of education in schools.
  - Teaching will be more efficient with lesser of supervision.
  - Participated varieties of evaluation system waste much time.
  - Provide mathematics experter for consulting.
- Success or achievement of mathematics results are almost from the science classroom students.
- Modern classroom needs such as electronics board / computer for media production, and researching on the internet.

#### Conclusion

The mathematics teachers are mostly female which consistent with Priyaporn (2535), the psychologist said "Female has sensitive skills, patience to work that requires skilled than male." The difficulty on learning management of the mathematics teachers of the aspects of the mathematics teachers, overall of the problem lies in the high level, consideration particularizes found: economy and cost of living and a lot burdens of the teachers while the teachers have overwhelm of day classes, teachers do not have enough time for class preparation and review exercises then the teachers teach as lecture without a variety of teaching methods, the problem lies in the high level. This is consistent with research Kannika Thongsamrit (2530) had studied on teacher feedback on the problems of teaching mathematics in the elementary years 5, Samutsongkram province found that the specified time in the application curriculum content, teachers spent a period of time to take the students understanding. Moreover. the research is also consistent with Chaweewan Kaweepikorn (2543) had summarized the problems with teaching mathematical that the major problem is that teachers have time to teach because the teachers in primary schools usually teach all subjects. Teachers act as a class teacher and other duties such as an academic, an administration, student activities, etc., enabling teachers work throughout the day. It is difficult to find time to relax and also no time to prepare to teach as much as.

In the management administration field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the high level, consideration particularizes found; administrators of school encourages mathematics teachers held training and seminar while, a number of teaching hours per week, assigned special tasks other than teaching, and further education, the problem lies in the highest level.

In the location and environment field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; atmosphere in the classroom conducive to teaching, the classroom is clean and tidy, the problem lies in the high level.

In the curriculum implementation field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the low level, consideration particularizes found; the course content lacks of modernization, propriety of time, clear of the desired characteristics, lack of flexibility, appropriate to the learner, the problem lies in the medium level.

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In the assessment field, the mathematics teachers have difficulty of learning management, overall of the problem lies in the medium level, consideration particularizes found; evaluation tool usage as defined in the plan in its entirety and the results of evaluation are used to improve the learning management, the problem lies in the medium level.

It is also consistent with the Yuphin Pipitkul (2533) concluded the problems with mathematics teaching that the load of teachers and the number of students are over of teachers' hands, and other special deals, teachers unable to checking exercises and enough time for teaching preparation.

#### References

- Amadalo Maurice Musasia, Shikuku Beatrice Nakhanu and Wasike Duncan Wekesa. 012. Investigation of Factors That Influence Syllabus Coverage in Secondary School Mathematics in Kenya. International Journal of Humanities and Social Science Vol. 2 No. 15; August 2012.
- Ministry of Education . (2551). The Basic Education Core Curriculum B.E. 2551 (A.D. 2008). Bangkok.
- Kanjanee Pimolsri. 2552. A Study of Operating Outcomes and Problem of Learning and Teaching Mathematics of the Class Interval Level 2 of Municipal Schools, Uttaradit Province. Master of Education (Educational Research and Evaluation). Uttaradit Rajabhat University.
- Kalaya Ampushineewan. 2546. A Study of Status and Problems of Child Center Oriented Teaching Management of Mathematics Teachers in Secondary Schools under the Department of general Education in Chonburi province. Burapha University. Chonburi (Thailand). Graduate School.
- Songwut Thauparong. 2551. Classrom action research for improving the quality of teaching and learning Mathermatics for Prathom Suksa 5 and 6 of Bann Lungka School, Chiang Rai Educational Service Area Office 2. Master of Education (Research and Statisitics in Education). Chaingmai University.
- Yuphin Pipitkul. (2545). Teaching mathematics education reform. Faculty of Education, Chulalongkorn University.
- Poj Sueram. 2552. Problems of Teachers in Teaching the Mathematics Strand in Schools Under the Supervision of the Buri Ram Educational Service Area Office 2. Educational Research. Master of Education. Ramkhamhaeng University.
- Waraporn Nuntadee. 2548. Organizing mathematics substance learning processes for grade level 2 of schools affiliated to Lamphun Educational Service Area 2. Master of Education (Curriculum and Instruction). Chaingmai University.
- Sukanya Lamtal. 2554. Developing mathematics communication skill in the speaking of Mathayom Suksa 1 students through guiding strategy. Master of Education (Mathematics Education). Chaingmai University