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Instructional materials used in teaching mathematics: Basis for enhancing mathematics program

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ABSTRACT: *This paper aimed to ascertain the instructional materials used in teaching Mathematics. Quantitative research method was used in identifying and finding the Mathematics teachers' profile, instructional materials used by the Mathematics teachers in teaching Mathematics, extent to which Mathematics teachers use instructional materials in their teaching, issues and concern in the utilization of instructional materials in teaching Mathematics and effectiveness of instructional materials in teaching Mathematics as assessed by the school heads, Mathematics teachers and students of four (4) public high schools in Sto. Nino, Piat and Tuao, Cagayan. Findings of the study showed that majority of the respondents perceived that instructional materials are very effective in teaching Mathematics. It is found out that there is no significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to their highest degree earned, number of years in teaching Mathematics and Mathematics subjects taught while there is a significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to their age, number of seminars attended for the past five years and awards received. Results further showed that the issues and concerns in the utilization of instructional materials in teaching Mathematics as revealed by the Mathematics teachers are the following. There is no wide array of guides, manuals and journals for use, lack of instructional materials in school, poor motivation on the use of instructional materials and lack of resource centers in the schools. Results further revealed that the three groups interviewed had commonality in the manner of how they look at the effectiveness of instructional materials in teaching Math. It was mentioned that instructional materials encourage participation of students in class discussion. Moreover, it makes learning real and permanent, promote longer retention and can concretize concepts for effective learning.*

Keywords: instructional material, mathematics teaching, enhanced performance

INTRODUCTION

Mathematics is a tool of the nation in its technological development. Its role cannot be underestimated because numbers are the basic of all things. The things normally considered as everyday necessities would be impossible without Mathematics. Mathematics therefore permeates all facets of man's life. The advances in technology which man experiences today brought forth changes that demand an ever-increasing need for a mathematics curriculum that develops not only basic computational

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skills but higher order thinking skills as well. Every school creates programs which cater to the development of higher order thinking skills. In order to realize these programs, a demand for mathematical skills and competence is much needed. Mathematics programs in schools have changed and appropriate resource materials are thus needed to help implement the change.

The aim of mathematics education is to see to it that mathematical knowledge functions well in the life of every Filipino learner in order to make him competent and productive. Thus, to achieve such aim, mathematics teachers should engage their students into more meaningful and worthwhile activities in order for them to learn best. As many educators say, "experience is the best teacher."

Agu (2011) espoused that in this light of globalization , teaching is becoming more complex. Moreover propounded by Abolade, (2009) the development in even cyberg technology has made available through using wide range in making instructional materials to add teachers' effort in teaching process.

More importantly, the curricula of the modern subjects call for extensively and frequently combined use of traditional with conventional materials in teaching-learning process. He pointed out the significance of a cheaper instructional materials to create and useful in teaching huge number of students without sacrificing the quality of the materials.

This implies that there is an active learning process in teaching Mathematics. Some Mathematics teachers, tend not to use instructional materials but rather use teaching abstractly. The unavailability of instructional materials can cause ineffectiveness of the teacher in performing his task. Moreover, the absence of teaching paraphernalia could affect learning abilities by the students since they are the first hand clients that need maximum quality education.

Olayinka (2016) offered students who were thought with instructional materials usually excel in class .

Meanwhile, Ifeaka (2005) also proffered that the production of instructional materials in Chemistry seemed reluctant.

This implies that Mathematics educators should adjust their teaching accordingly and ensure that Mathematics is taught and learned by doing. The implication of this is the improvisation of instructional materials especially when they are lacking. Improvised instructional materials are concrete materials such as geo board, grid board and many more. It has been observed that due to insufficiency of materials, Mathematics is not taught the way it should be. Recognizing this concern and considering the fact that the learning process can be made more meaningful when teachers are provided with sufficient instructional materials needed in the execution of their lessons and for the students to be given the opportunities for the best education they deserve, the researcher felt the need to determine the instructional materials in teaching Mathematics. Thus, this work is designed specifically to reveal what instructional materials are used by Mathematics teachers, the effectiveness and utilization of instructional materials in teaching Mathematics, the issues and concerns encountered and the factors that impact Mathematics teachers on the use of instructional materials.

It is for this reason that the fundamental purpose of the study is to determine the maximum use of instructional materials in teaching Mathermatics.

RESEARCH QUESTIONS

This study was undertaken to as determine the use of instructional materials in teaching Mathematics.

Specifically, this study sought to answer the following questions:

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1. What is the profile of the Mathematics Teachers in terms of:
   1.1 Age
   1.2 Sex
   1.3 Highest Degree earned
   1.4 Number of years in teaching Mathematics
   1.5 Number of seminars attended for the past five years
   1.6 Awards received
   1.7 Mathematics subject taught
2. What are the instructional materials used by Mathematics teachers in teaching Mathematics?
3. To what extent do Mathematics teachers use instructional materials in their teachng?
4. What are the issues and concerns encountered by the Mathematics teachers in the utilization of instructional materials in teaching Mathematics?
5. How effective is the use of instructional materials in teaching Mathematics as assessed by school heads, Mathematics teachers and students?
6. What are the factors that impact Mathematics teachers on the use of instructional materials in teaching Mathematics?
7. Is there a significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to profile variables?
8. Is there a significant difference on the effectiveness of the use of instructional materials as assessed by the school heads, Mathematics teachers and students?

Research Hypotheses

1. There is no significant difference on the extent to which Mathematics teachers use instructional materials in teaching when grouped according to profile variables.
2. There is no significant difference on the effectiveness of the use of instructional materials as assessed by the school heads, Mathematics teachers and students.

METHODOLOGY

Research Design

The study utilized the descriptive research design in describing the profile of the respondents, instructional materials used, the extent to which the instructional materials are used in teaching Mathematics, the issues and concerns encountered by the respondents on the use of instructional materials in teaching Mathematics as well as the effectiveness of instructional materials in teaching Mathematics and the factors that impact the respondents on the use of instructional materials.

On the other hand, this research method determined the difference on the extent to which teachers use instructional materials in teaching Mathematics when grouped according to profile variables and likewise determined the difference on the effectiveness of the use of instructional materials when grouped according to profile variables.

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Locale of the Study

The study was conducted in four public High Schools at Sto. Niño, Piat and Tuao, Cagayan during the 4th quarter of the S.Y.2018-2019.

Respondents of the Study

Participants of the study were Mathematics teachers, School heads, and senior high school students of the schools surveyed. The total number of participants is 323 distributed as follows. Nineteen (19) Mathematics teachers, four (4) school heads and three hundred (300) senior high school students. For teacher and school head-respondents, total enumeration was used while for student- respondents, random sampling was used.

Research Instruments

The main instrument used for this study is a questionnaire patterned from the study of Tuddao (2018) "Assessment of Instructional Materials Used in Teaching Science among Secondary Schools in Enrile District".

Interview was likewise conducted to supplement data to be gathered from the questionnaire.

Data Gathering Procedures

The researcher sought permission from the Campus Executive Officer for the conduct of the study. Upon approval, the researcher sought permission from the School heads and the letter was shown to the Mathematics teachers for the conduct of the study.

A brief instruction regarding the purpose of the study was given to them before they started answering the questionnaires.

The respondents were given enough time in answering the questionnaires.

Statistical Tool

Data were tabulated and analyzed using frequency counts and percentage. The weighted mean were used to analyze the extent to which instructional materials are used in teaching Mathematics and the assessment of the three groups of respondents on the effectiveness of the use of instructional materials.

The ANOVA, and t- test were used to analyze the difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to profile variables and the same statistical tool were used in determining the difference on the effectiveness of the utilization of instructional materials as assessed by the school heads, Mathematics teachers and students.

The 3-point Likert Type was used to determine the extent of utilization of instructional materials by the participants in teaching Mathematics as follows:

3 – always

2 – sometimes

1 – never

To determine the effectiveness of the utilization of instructional materials, the following Likert Type was used:

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3 - very effective

2 – effective

1 – not effective

The data on effectiveness was analysed qualitatively and based on the responses given through the interview.

RESULTS AND DISCUSSION

Profile of the Mathematics Teachers

Table 1.1 shows the frequency and percentage distribution of the profile of the Mathematics teachers.

For the respondents' age, majority of them have age bracket 30-39. The table also shows that the respondents' mean age is 35.

The table also reveals that majority of the respondents are females.

In terms of the highest degree earned, there are more teachers whose highest degree earned are master's degree than those who finished a bachelor's degree.

In terms of the number of years in teaching Mathematics, the teachers have different lengths of experience. There are more teachers whose length of experience is more than 8 years.

In terms of the number of seminars attended for the past five years (Mathematics related), majority of the teachers attended at least one seminar.

Also, it shows that only few teachers received awards. The teacher who received 2 awards include MTAP- DEPED Math Challenge, Third Place (District Elimination) and MTAP- DEPED Math Challenge Division Orals, Fifth Place which are both in mathematics.

Table 1.1 Frequency and Percentage Distribution of the Mathematics Teacher's Profile in terms of their Age, Sex, Highest Degree Earned, Number of years in teaching Mathematics, and Number of Seminars Attended for the past five years and Awards Received

PROFILE	FREQUENCY	PERCENTAGE
Age		
50-59	2	11%
40-49	2	11%
30-39	9	47%
20-29	6	31%
TOTAL	19	100%
Mean Age: 35		

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Sex		
Male	6	32%
Female	13	68%
Total	19	100%
Highest Degree Earned		
Master's Degree	11	57%
Bachelor's Degree	8	43%
Total	19	100%
Number of Years in Teaching Mathematics		
24-31	1	5%
16-23	5	26%
8-15	5	26%
0-7	8	43%
Total	19	100%
Number of Seminars Attended for the Past Five Years (Mathematics related)		
2-3	5	26%
0-1	14	74%
Total	19	100%
Number of Awards Received		
1	3	16%
0	16	84%
Total	19	100%

Table 1.2 shows the frequency counts of the profile of the Mathematics teachers in terms of the Mathematics subject taught.

As gleaned from the table most of the teachers teach at most 4 mathematics subjects and all of them are teaching Algebra. Only one of the teachers teach Calculus.

Table 1.2 Frequency Counts of the Mathematics Teacher's Profile in terms of the Mathematics Subject taught

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Mathematics Subject Taught	Frequency
Geometry	9
Statistics	7
Probability	6
Calculus	1
Algebra	19
Trigonometry	8

B. Instructional Materials Used by the Mathematics Teacher

Table 2 shows the frequency of the instructional materials used by the Mathematics teachers.

The table shows that all the Mathematics teachers are using chalk, chalkboard, and power point presentations in teaching Mathematics. While more than half of the Mathematics teachers are using grid board, cut-outs, flashcards, graphs, flowcharts, diagrams, measuring instruments, video and modules.

As revealed in the table, all the mathematics teachers are using variety of instructional materials in teaching Mathematics.

Table 2.Instructional Materials Used by the Mathematics Teachers

INSTRUCTIONAL MATERIALS	FREQUENCY
1. Grid board	12
2. Chalk	19
3. Chalkboard	19
4. Cut outs	12
5. Flashcards	10
6. Graphs	12
7. Flowchart	11
8. Diagrams	10
9. Handouts	6
10. Manipulative	6
11. Measuring instruments	10
12. Pictures	10
13. Power point presentation	19
14. Video	15
15.Modules	14

C. Extent to which Mathematics Teachers Use Instructional Materials in their Teaching

Table 3 shows the weighted mean, over all weighted mean and descriptive value of the extent to which Mathematics teachers use instructional materials in their teaching.

The table shows that the Mathematics teachers are always using chalk, chalkboard, and power point presentation in teaching Mathematics while they sometimes use grid board, cut-outs, flashcards, graphs, flowchart, diagrams, handouts, manipulative, measuring instruments, pictures, video and modules in their Mathematics classroom.

The overall weighted mean is 2.06 which imply that the Mathematics teachers are sometimes using Instructional Materials in teaching Mathematics.

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Finding of the study is strongly supported by the study of of Nyawira (2015) in which he found out that the conventional instructional resources like the chalkboard, geometric equipment and calculators were used to a very large extent with 92%, 90% and 88% response rates respectively. Improvised instructional materials like models, pictures, charts and diagrams were used to a small extent.

Table 3. Extent to which Mathematics Teachers use Instructional Materials in their Teaching

INSTRUCTIONAL MATERIALS	WEIGHTED MEAN	DESCRIPTIVE VALUE
1.Grid board	2.16	Sometimes
2.Chalk	3.00	Always
3.Chalkboard	3.00	Always
4.Cut outs	2.11	Sometimes
5.Flashcards	2.0	Sometimes
6.Graphs	2. 21	Sometimes
7.Flowchart	1.68	Sometimes
8.Diagrams	1.79	Sometimes
9.Handouts	1.89	Sometimes
10.Manipulative	1.79	Sometimes
11.Measuring instruments	2.18	Sometimes
12.Pictures	2.29	Sometimes
13.Power point presentation	2.42	Always
14.Video	2.16	Sometimes
15.Modules	2.21	Sometimes
OVERALL WEIGHTED MEAN	2.06	Sometimes

LEGEND:

3-point	Scale	Descriptive Value
3	2.34 - 3.00	Always
2	1.67 - 2.33	Sometimes
1	1.00 - 1.66	Never

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D. Issues and Concerns in the Utilization of Instructional Materials in Teaching Mathematics

The issues and concerns in the utilization of instructional materials were generated through the conduct of interview among teachers teaching mathematics. Basically, teaching can be enhanced through the use of instructional materials, but as revealed by four of the nineteen Mathematics teachers, there is no wide array of guides, manuals and journals for use. This was corroborated by the other two teachers who mentioned the absence of guides and manuals for use. On the other hand, seven of the teachers likewise revealed that they are not given the proper motivation on the use of materials despite their efforts to make teaching-learning very effective.

The lack of instructional materials in school is also an issue pointed by nine of the nineteen teachers. Moreover, the lack of resource centers in school is another issue pointed out by thirteen of the nineteen teachers. On the question asked "Why do they consider this an issue", it was clearly explained that resource centers could serve as the depot of instructional materials so that when needed, they can readily access the materials and the absence of it would mean that instructional materials are just placed anywhere and may get loss or destroyed anytime.

Effectiveness of Instructional Materials in Teaching Mathematics

Table 4 shows the weighted mean, over all weighted mean and descriptive value of the effectiveness of instructional materials used by the Mathematics teachers in teaching Mathematics.

The computed overall weighted mean of the effectiveness of instructional materials in teaching Mathematics as assessed by School heads, Mathematics teachers and students are 2.82, 2.80 and 2.44 respectively. This means that the statements on the use of instructional materials are very effective to them. It is strongly supported in the study of Soria (1995) on Proposed Instructional Materials for the Teaching of Mathematics III at the Quezon High School, Quezon, Isabela concluded that a) The proposed instructional materials serve as a motivation to the learners which arouse and uphold self-interest to study the subject, hence it enhances better performance in the students; b) The proposed instructional materials are useful in classroom management; c) The proposed instructional materials provide time for the teacher to supervise and assist the students to perform better in the subject; d) Instructional materials that are well organized make the teaching-learning process more meaningful, relevant and systematic. They hasten teaching-learning process too; e) The proposed instructional materials are aid to the students to enhance self-learning ability and to master the subject.

Table 4.Effectiveness of Instructional Materials in Teaching Mathematics as Assessed by School Heads, Mathematics Teachers and Students

Statements	School heads		Mathematics Teachers		Students	
	Weighted Mean	Descriptive Value	Weighted Mean	Descriptive Value	Weighted Mean	Descriptive Value
1.Students learn faster when instructional materials are used in teaching	2.33	Effective	2.89	Very Effective	2.61	Very Effective
2.Instructional materials improve upon student's interest in Mathematics lesson	3	Very Effective	2.89	Very Effective	2.37	Very Effective
3. It help in the transfer of information to concretize learning	3	Very Effective	2.89	Very Effective	2.29	Effective

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4.Instructional materials make mathematics lesson more lively and interesting	2.67	Very Effective	2.58	Very Effective	2.54	Very Effective
5. Use of instructional materials encourage students participation in class	3	Very Effective	2.89	Very Effective	2.50	Very Effective
6. Instructional materials reduces abstractions mathematics teaching	2.67	Very Effective	2.79	Very Effective	2.18	Effective
7. Instructional materials suit the different ways that students learn	3	Very Effective	2.89	Very Effective	2.32	Effective
8. Instructional materials make learning real and permanent	2.67	Very Effective	2.79	Very Effective	2.41	Very Effective
9. Instructional materials make learning lesson interesting and faster	3	Very Effective	2.89	Very Effective	2.61	Very Effective
10.Instructional materials promote retention	2.67	Very Effective	2.84	Very Effective	2.17	Effective
11. Help the learners to remember important information	3	Very Effective	2.84	Very Effective	2.56	Very Effective
12. When properly used , they help gain and hold the attention of the learners	3	Very Effective	2.63	Very Effective	2.51	Very Effective
13. They can be very useful in supporting a topic	3	Very Effective	2.63	Very Effective	2.59	Very Effective
14. They clarify the relationships between materials objects and concepts	3	Very Effective	2.58	Very Effective	2.41	Very Effective
15. Good instructional materials can help solve certain language barrier problem	2.33	Effective	2.95	Very Effective	2.49	Very Effective

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Overall Weighted Mean	2.82	Very Effective	2.80	Very Effective	2.44	Very Effective

LEGEND:

3-point	Scale	Descriptive Value
3	2.34 - 3.00	Very effective
2	1.67 - 2.33	Effective
1	1.00 - 1.66	Not effective

F. Factors that Impact Mathematics Teachers on the Use of Instructional Materials in Teaching Mathematics

Table 5 shows the frequency counts of the factors that impact Mathematics teachers on the use of instructional materials in teaching Mathematics.

The table shows that the factors that impact Mathematics teachers on the use of instructional materials in teaching Mathematics are availability of school learning resource centers, adequacy of school instructional materials and availability of LCD and computers, social status influence the use of instructional materials and the presence of instructional communications technology.

This finding is strongly supported by the study of Omariba, A., et.al (2016), that the use of instructional materials and its availability in the school would determine the readiness and even the intellectual capacity of the students. More available resources and maximized teaching tare more valuable in learning process.

Table 5. Factors that Impact Mathematics Teachers on the Use of Instructional Materials in Teaching Mathematics

Factors that Impact Mathematics Teachers on the Use of Instructional Materials in Teaching Mathematics	FREQUENCY
1. Available school learning resource centers	11
2. Good condition of services	15
3. Adequacy of school instructional materials	13
4. Presence of instructional communications technology	17
5. Availability of LCD and computers	16

G. Significant Difference on the Extent to which Mathematics Teachers use Instructional Materials in their Teaching When Grouped According to their Profile Variables

Table 6 shows the significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their age.

The table shows that the computed F-value is 96.94 with degrees of freedom 3, 56 and a critical value of 2.77 at 5% level of significance. Since the computed F- value of 96.94 is greater than the critical value of 2.77, then there is a significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their age. This further implies that the extent to which teachers use instructional materials is significantly influenced by their age.

Table 6. Significant Difference on the Extent of Utilization of Instructional Materials in teaching Mathematics When Grouped According to their Age

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SOURCE OF VARIATION	SS	Df	MS	F-value	CRITICAL VALUE AT 0.05 LEVEL	REMARKS
Between	148.32	3	49.44	96.94	2.77	Significant
Within	28.66	56	0.51			
Total	176.98	59				

Table 7 shows the significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to their highest degree earned.

The table shows that the computed t-value is 0.460 with degrees of freedom 17 and a critical value of 1.740 at 5% level of significance. Since the t- value is less than the critical value, then there is no significant difference on the extent to which the Mathematics Teachers use instructional materials in their teaching when grouped according to their highest degree earned. This further implies that the extent of use of instructional materials by the teachers is not influenced by their highest degree earned.

Table 7. Significant Difference on the Extent to which Mathematics Teachers Use Instructional Materials in their Teaching when Grouped According to their Highest Degree Earned

VARIABLE	t- VALUE	DEGREES OF FREEDOM	CRITICAL VALUE AT 5% LEVEL OF SIGNIFICANCE	REMARKS
Highest Degree Earned	0.460	17	1.740	not significant

Table 8 shows the significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to their number of years in teaching Mathematics.

The table shows that the computed F- value is 1.52 with degrees of freedom 3, 56 and a critical value of 2.77 at 5% level of significance. Since the computed F- value is less than the critical value, then there is no significant difference on the extent to which Mathematics Teachers use instructional materials in their teaching when grouped according to their number of years in teaching Mathematics. This further implies that the extent of use of instructional materials by the teachers is not influenced by their number of years in teaching Mathematics.

Table 8. Significant Difference on the Extent to which Mathematics Teachers use Instructional Materials in their teaching When Grouped According to their Number of Years in Teaching Mathematics

SOURCE OF VARIATION	SS	Df	MS	F-value	CRITICAL VALUE AT 0.05 LEVEL	REMARKS
Between	2.18	3	0.73	1.52	2.77	not significant
Within	26.8	56	0.48			
Total	28.98	59				

Table 9 shows the significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their number of seminars attended for the past five years.

The table shows that the computed F- value is 14.24 with degrees of freedom 2,42 and a critical value of 3.22 at 5% level of significance. Since the computed F- value is greater than the critical value, then there is a significant difference

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on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their number of seminars attended for the past five years. This further implies that the extent of use of instructional materials by the teachers is influenced by their number of seminars attended for the past five years.

Table 9. Significant Difference on the Extent of Utilization of Instructional Materials in teaching Mathematics When Grouped According to their Number of Seminars Attended for the Past Five Years

SOURCE OF VARIATION	SS	Df	MS	F-value	CRITICAL VALUE AT 0.05 LEVEL	REMARKS
Between	21.64	2	10.82	14.24	3.22	significant
Within	32	42	0.76			
Total	53.64	44				

Table 10 shows the significant difference on the extent of utilization of instructional materials in teaching Mathematics when grouped according to their awards received.

The table shows that the computed t-value is /2.702/ with degrees of freedom 17 and a critical value of 2.110 at 5% level of significance. Since the computed t- value is greater than the critical value, and then there is a significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to the number of awards they received. This further implies that the extent of use of instructional materials by the teachers is influenced by the number of awards they received.

Table 10. Significant Difference on the Extent of Utilization of Instructional Materials in teaching Mathematics When Grouped According to the Number of Awards they received

VARIABLE	t- value	DEGREES OF FREEDOM	CRITICAL VALUE AT 5% LEVEL OF SIGNIFICANCE	REMARKS
Awards Received	2.702	17	2.110	Significant

Table 11 shows the significant difference on the effectiveness of instructional materials in teaching Mathematics as perceived by the school heads, Mathematics teachers and students.The table shows that the computed F- value is 7.77 with degrees of freedom 2, 305 and a critical value of 3.03 at 5% level of significance. Since the computed F- value is greater than the critical value, then there is a significant difference on the effectiveness of instructional materials in teaching Mathematics as perceived by the school heads, Mathematics teachers and students.

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Table 11. Significant Difference on the Effectiveness of Instructional Materials in Teaching Mathematics as Perceived by the School Heads, Mathematics Teachers and Students

SOURCE OF VARIATION	SS	Df	MS	F-value	CRITICAL VALUE AT 0.05 LEVEL	REMARKS
Between	324.63	2	162.32	7.77	3.03	Significant
Within	6369.8	305	20.88			
Total	6694.43	307				

Summary of Findings

On respondents' profile, majority of them have age bracket 30-39 and their mean age is 35. Majority of the respondents are females. There are more teachers whose highest degree earned are master's degree than those who finished a bachelor's degree. The teachers have different lengths of experience. There are more teachers whose length of experience is more than 8 years. Majority of the teachers attended at least one seminar and there are more teachers who didn't receive any awards than those who received. Most of the teachers teach at most 4 mathematics subjects and all of them are teaching Algebra.

All the mathematics teachers are using variety of instructional materials in teaching Mathematics.

Mathematics teachers are sometimes using Instructional Materials in teaching Mathematics.

The factors that impact Mathematics teachers on the use of instructional materials in teaching Mathematics are availability of school learning resource centers, good condition of services, adequacy of school instructional materials and availability of LCD and computers, social status influence the use of instructional materials and the presence of instructional communications technology.

Majority of the Mathematics teachers stated that instructional materials are very effective in teaching Mathematics.

There is no significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their highest degree earned, and number of years in teaching Mathematics while there is a significant difference on the extent to which Mathematics teachers use instructional materials in their teaching when grouped according to their age, number of seminars attended for the past five years and awards received.

There is a significant difference on the effectiveness of the use of instructional materials in teaching Mathematics as assessed by the School heads, Mathematics teachers and students.

Conclusion

Based on the result of the study, it can be concluded that instructional materials are very effective in teaching Mathematics. They enable the students to learn faster, improve students' interest and participation and concretize learning and reduce abstractions making learning interesting. When properly used, they help promote longer retention; thus, making learning real and permanent.

Recommendations

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

1. Mathematics teachers may also use should always use instructional materials in their classes that may improve the academic performance of the students.

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2. Mathematics teachers should be aware on the issues and concerns being encountered in the utilization of instructional materials in teaching Mathematics.
3. Mathematics teachers may be aware of the factors that would maneuver the use of instructional materials.
4. School heads and administrators may allow Mathematics teachers to innovate different and useful instructional materials.
5. Researchers have to conduct a similar study to verify the result of this investigation especially with college students in the teacher education institutions.

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