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**Learning Innovation And Multimedia: Fraction To Mathematic Learning Result
Development Of Primary 4 Students In Sammoonak School Under The Office
Of Chaiyaphum Primary Educational Service Area 2**



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Abstract

This research aims to 1) To compare the mathematic learning result in fraction of Primary 4 students 2. To study the satisfaction in learning multimedia. The samples are 12 primary 4 students of Sammoonak school in academic year 2562 under the office of Chaiyaphum Primary Educational Service Area 2 with simple random sampling method. The research instruments is 2 set of fraction learning test. The statistic used in the research are mean, medium, and standard derivation. The research found the primary 4 students were encourage by fraction learning innovation and multimedia. The satisfaction is significantly high at 0.05 level.

1. Introduction

Learning in mathematic system : fraction has its own importance in primary level because fraction is the basis of learning math likewise decimal system, percentage and applied lesson or in the advanced contents. The aims of learning fraction is to encourage student conceptual framework in mathematic learning, Moreover, to set the paradigm of minus, plus, division, and multiplying system. In problem solving skill aims to help the students to have their own ability to solve the problems and to recognized to probability in answers(The institute for promotion of teaching science and technology , 2549 :137-138)

The most- found problem for teacher is the less of student conceptual framework about fractions and fractions procedures such as

1. Drawing fraction pictures , the students are always confused how to draw a picture to substitute the fractions
2. To minimize the value of fractions. The fractions cannot be divided by any numbers.

3. How to make the mixed amount to the odd. The student cannot transform the mixed amount to the odd in the right way.
4. The student is do the mathematic problem in fraction adding and subtracting in the common way
5. The complexity of fractions problems analyzing is always the big problem in learning math.

When the students is less of problem analyzing and conceptual framework, the students will not have

computing skills like the students cannot be able to compute or calculate the number of fractions, this is caused to the fractions problems solving, mixed amount, fraction multiplication skills and procedures. The students are not properly encouraged by books and documents.

From the problem above, The researcher has emphasize to conduct the research and research instrument in problem solving in fraction to encourage the students to be funny and entertained to gain more knowledge in mathematic learning process including mathematic learning results and to be ready of another tests in 2563.

2. Research objectives

1. To compare the mathematic learning result in fraction of primary 4 students
2. To study the satisfaction in using learning medias and innovations

3. Research hypothesis

1. The primary 4 students has higher learning result after using learning media and innovations
2. The primary 4 students has satisfaction toward using learning media and innovations

4. Conceptual Framework

Independent variable : fraction learning medias and innovation

Dependent variable : the fraction learning result of primary 4 students

5. Research methodology

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The research methodology were to

1. Conduct the test of fractions
 - 1.1 fraction test
2. Each of test contained by
 - 2.1 10 items of pre- test and post test
3. conduct 10 lesson plans in fraction

4. All test will be checked by 3 mathematic experts to find out the result of index of item objective congruence (IOC). This result must be in .50 – 1.00 level that can be able to use and validity must be in 0.62 level

5. The test will be sent to the samples in 10 hours.

6. conduct the questionnaire of satisfaction surveying toward the use of fraction learning media and innovation in rating scales 1-5 in 5 items

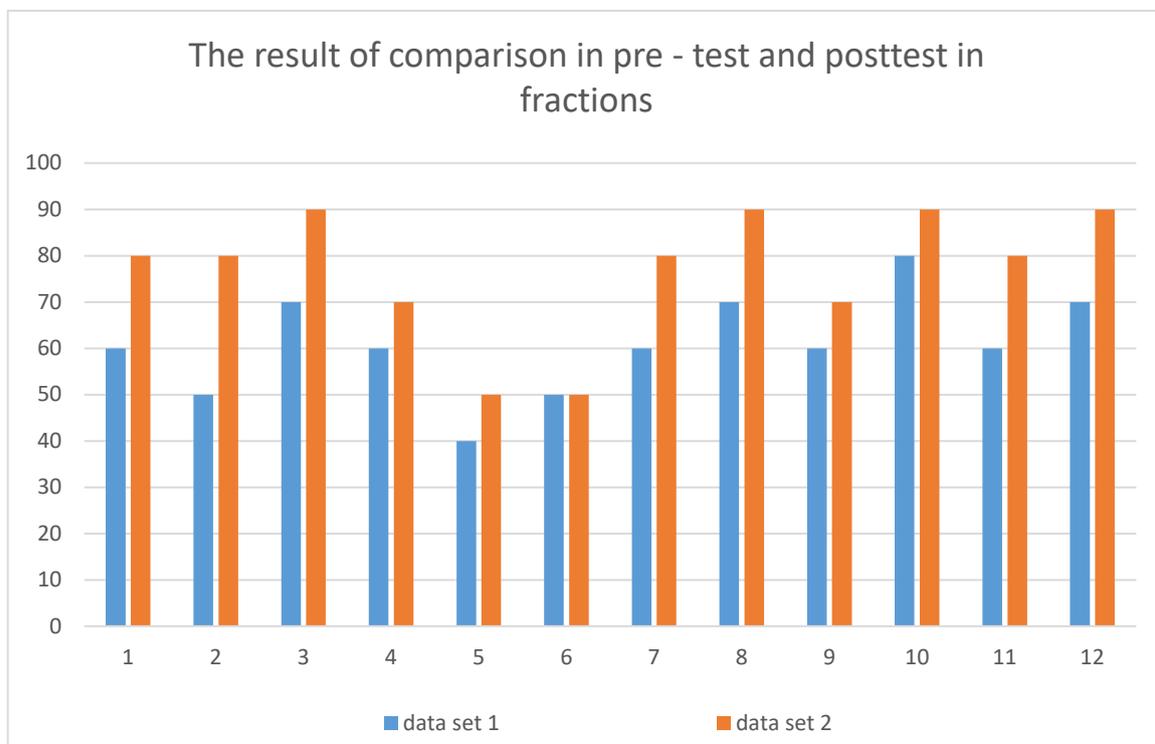
The research results

1. To compare the mathematic learning result in fraction of primary 4 students. The researcher has operate fraction using in primary 4 students of Bansammoonak school in academic year 2562 in number 12 by comparing the learning result as following

Table 1: The result of comparison of mathematic learning result in fraction by using learning media and innovation

instrument	Students amount	Score	\bar{x}	S.D.	t	p
Pre - test	12	100	64.23	3.57	19.21	.000
Post test	12	100	83.44	1.38		

The first table has shown that the result of comparing learning result in posttest has the average ($\bar{X} = 83.44$) standard derivation (S.D. = 1.38 and the posttest result is average ($\bar{X} = 64.23$) standard derivation (S.D. =3.57) Significantly in 0.05 level



The result of students’ satisfaction towards fraction learning medias and innovation

Table 2: The result of satisfaction evaluating of students towards fraction learning medias and innovation

list	\bar{x}	S.D.	Comment level
1. student can be better in reading fraction	4.00	0.2	Good
2. students can be able to add, subtract, multiply and divide the fraction	4.28	0.14	Very good
3. students can understand the principle of fraction addition, subtraction, multiplication and division	4.18	0.16	Very good
4. students can be better in problem solving	4.76	0.84	Very good
5. students have fun with using learning multimedia	4.52	0.49	Very good
	4.35	0.37	Very good

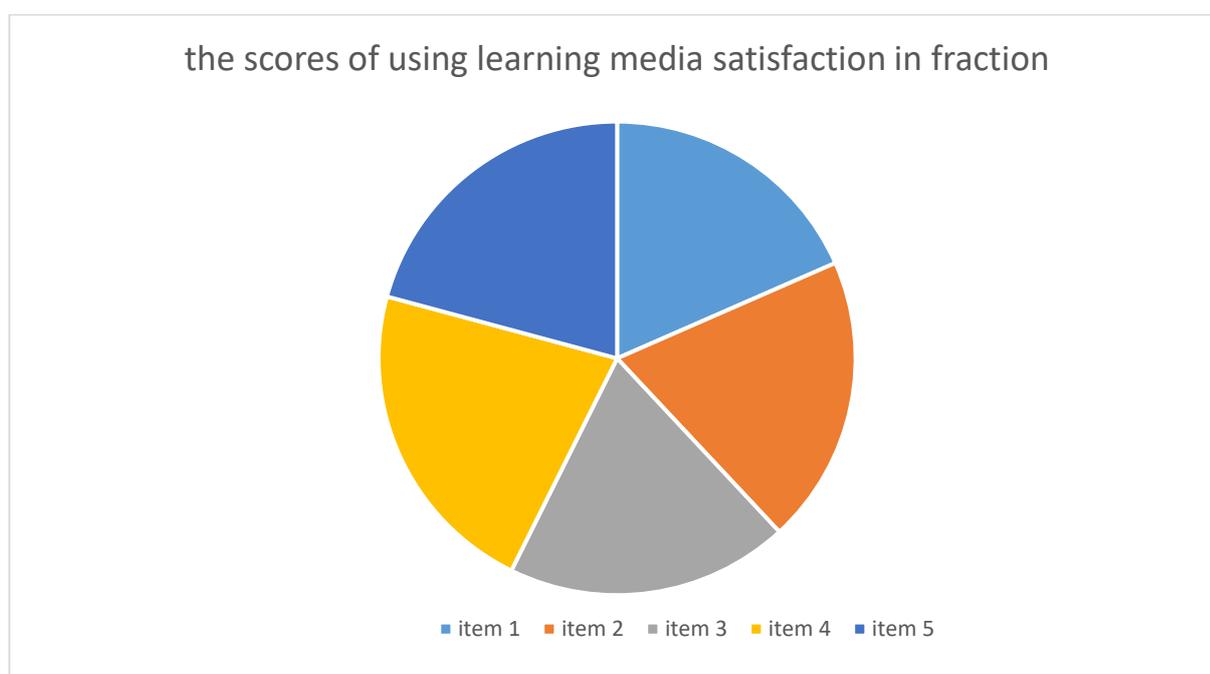


Table 2 shows that the result of students ‘satisfaction evaluating in using learning media in fraction found that the satisfaction level is in good level in the total ($\bar{X} = 4.35$, S.D. = 0.37) as item average 1. student can be better in reading fraction ($\bar{X} = 4.00$, S.D. = 0.2) 2. students can be able to add, subtract, multiply and divide the fraction ($\bar{X} = 4.28$, S.D. = 0.14) 3. students can understand the principle of fraction addition, subtraction, multiplication ($\bar{X} = 4.18$, S.D. = 0.16) 4. students can be better in problem solving ($\bar{X} = 4.76$, S.D. = 0.84) 5. students have fun with using learning multimedia ($\bar{X} = 4.52$, S.D. = 0.49)

6. Research Explanation

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The research can be explained that

1. The result of comparison in mathematic learning result in fraction issue by using learning medias and innovations has the average ($\bar{X} = 60.88$) and standard derivation(S.D. = 0.49) and found that the posttest result has higher result in statistic significantly 0.05

Yuppadee Kachawong and others (2551: 22-26) has compared the learning result in mathematic in multiplication and division of student in primary 4 level by using learning test and self – conducted test found that the ability in problem solving of experimental group and controlled group is significantly different in 0.01 level and the ability in problem solving is significantly different in 0.05 level

Chongdee Kiwcharoen (2552) has study how to conduct teaching medias in mathematic learning focused on the skill of multiplication of primary 3 level students in Municipality 1 school (Tang –on padermwittaya) the research found that teaching medias in mathematic learning focused on the skill of multiplication of primary 3 level students in Municipality 1 school (Tang –on padermwittaya) has proficiency 92.85/85.71 which is higher than the standard

Arun Somchai (2522:51) has study about the comparison of mathematic learning result of primary 5 level students which taught by mixed media and common teaching method. The research found that the result of learning math of primary 5 level students with mixed media is higher than common method teaching with statistic significantly 0.5

2. The satisfaction evaluating towards students' using learning medias and innovation in fractions found that the satisfaction level is in good level with average ($\bar{X} = 4.34$, S.D. = 0.57) as the items list 1. student can be better in reading fraction ($\bar{X} = 4.00$, S.D. = 0.81) 2. Students can be able to add, subtract, multiply and divide the fraction ($\bar{X} = 4.12$, S.D. = 0.44) 3. 3. students can understand the principle of fraction addition, subtraction, multiplication($\bar{X} = 4.72$, S.D. = 0.61) 4. students can be better in problem solving($\bar{X} = 4.80$, S.D. = 0.50) 5. students have fun with using learning multimedia ($\bar{X} = 4.08$, S.D. = 0.51)

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