# ENHANCING THE CONCEPT OF LEAST COMMON FACTOR AMONG VI STANDARD STUDENTS THROUGH ACTIVITY METHOD 

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## INTRODUCTION

"The formulation of a problem is often more essential than its solution, which may be merely a matter of mathematical or experimental skills"

## - Albert Einstein

To arouse and maintain the students' interest in mathematics is major problem for the teacher. He knows that loss of interest is one of the major causes of students' failure. Action and thought of an individual is related to his interests especially towards particular things. Different students have different ideas and their interest varies from subject to subject. Someone show more interest in learning mathematics while others have fearful thinking about mathematics considering as it is very subject. Teacher should try to locate the interest of the student. He should try to provide the situation and the contents of the subject matter according to their interest. One can be one a successful teacher if one has ability to motivate and arouse interest in learning specially mathematics which is general considered to be one of the dull and dry subjects in the school curriculum if the teacher is successful in locating and arousing interest of the student depending upon his mental level, he can help the student to a greater extent in gaining more and more knowledge effectively. So the investigator selected the activity method at upper primary stage for VI standard students and it will be develop the interest to students and enhanced their mathematics content particularly in LCM.

## NEED FOR THE STUDY

Mathematics subject is an abstract subject. It is a difficult for learning to compare to other subjects. Mathematics is a very tough subject and the learning of mathematics is boring and not interesting. Compulsory learning of such a subject can adversely affect the student's attitude towards schooling and performance in other subjects. The investigator visited the school for identified the problems for learning mathematics. The investigator gathered the difficulties of learning mathematics from VI standard students and concern mathematics teacher. The investigator identified the difficulties that most of VI standard students cannot able to finding the LCM value. The investigator believed that, overcome the difficulties of find the LCM value.

Therefore, the investigator had decided to provide the some activities to students for learning the concept of LCM.

## STATEMENT OF THE PROBLEM

The investigator visited school and observed the VI standard students; they confused about finding the LCM value. Most of the teachers used only lecture method in the classroom but not used strategy. Therefore, the investigator has entitled as "Enhancing the concept of Least Common Factor among VI standard students

## through Activity Method".

## OBJECTIVES

The present studies followed objectives:

- To conduct the pre-test in LCM concept after conventional (before activities).
- To develop the LCM activities for students.
- To execute the LCM activities in the classroom.
- To conduct the post-test in LCM concept after activities.
- To analyze the effect of activities through pre-test and post-test scores.


## HYPOTHESIS

The following null hypothesis was formulated;

* There is no significant difference between pre-test and post -test scores of students.


## SAMPLE

The investigator had selected the thirty-five VI standard students from Sakthi Sai Matriculation higher secondary school, Thangammapatty under Tamil Nadu samacheer kalvi syllabus in Dindigul District.

## METHODOLOGY

The investigator had adopted the single group experimental design and had proposed to use random sampling technique for selecting the sample in this study. The investigator exposed the find the LCM value through conventional method for this group within one day then conducted the pre-test and evaluated the answer sheets of students. After the investigator exposed the same content through some activities with worksheets with help of concern mathematics teacher within three days (daily one hour). Finally, the investigator conducted the post- test for students and evaluated the answer sheets.

## TOOLS USED

The investigator had prepared the pre-test and post-test of an achievement, which contain LCM concept. The questions contains 20 questions each one mark. All the 20 objective type questions were given to educational experts refining. After expert's opinion some questions were modified, some questions were
rearranged, and finally 20 questions were retained. The score given 20 questions each one mark to be given. The LCM activities developed by the investigator for the students.

## VARIABLES OF THE STUDY

In the study, teaching LCM concept by conventional and activities are identified as independent variable and achievement of students in LCM is identified as the dependent variable.

## STATISTICS TECHNIQUE USED

The mean, Median, ' $t$ '-test and graphical representation were used in this study.

## EXECUTION OF LCM ACTIVITIES

## Required materials: <br> 

Chard, Scissor, Scale and Colour sketch

## Activity:

The LCM (Least Common Factor) is very important for finding out the addition and subtraction of unlike fractions. The investigator displayed the multiples amount of any two numbers, some multiple numbers were coinciding. Then found out the least coincide multiple number of two numbers. That number is the LCM of two numbers. This activity is useful for learning LCM value of two numbers. The process of activity is given below.


The multiples of 3 are: $\mathbf{3 , 6 , 9 , 1 2 , 1 5 , 1 8 , 2 1 , 2 4 , 2 7 , 3 0 , \ldots}$
The multiples of 4 are: $4,8,12,16,20,24,28,32,36,40 \ldots$
The common multiples of 3 and 4 are: 12, $2436, \ldots$
The least common multiple of 3 and 4 is 12 .

## Required materials:



LCM- Colouring
Chard, Tables (from 1 up to 100) Scissor, Scale and Colour sketch

## Activity:

The LCM (Least Common Factor) is very important for finding out the addition and subtraction of unlike fractions. The investigator displayed the table which contains starts from one up to 100 numbers and provided some instruction about shading multiple numbers of any two numbers. The students followed the instructions and shaded multiple numbers of those two numbers and some multiple numbers were coinciding.

Then found out the least coincide multiple number of two numbers. That number is the LCM of two numbers. This activity is useful for learning LCM value of two numbers. The process of activity is given below.
Example: LCM of 5 and 6

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 110 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 312 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 3 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 3 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | * |
| 91 | 92 | 93 | 94 | 95 | \% | 97 | 98 | 99 | 1100 |



## Details:

The multiples of 5 are: $5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80, \ldots$
The multiples of 6 are: $\mathbf{6 , 1 2 , 1 8 , 2 4 , 3 0 , 3 6 , 4 2 , 4 8 , 5 4 , 6 0 , 6 6 , 7 2 , 7 8 , 8 4 , 9 0 , \ldots}$
The common multiples of 5 and 6 are: $30,60,90, \ldots$
The least common multiple of 5 and 6 is $\mathbf{3 0}$.

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\begin{tabular}{|l|l} 
Activity - 3 & LCM - Concentration game
\end{tabular}
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## Required materials:

Chart, Cards (from 1 up to 100), Scissor, Scale and Colour sketch

## Activity:

One student starts the game by turning over two cards. If the cards are partners (numbers on one card and the LCM on the other), the student may keep the cards and take another turn. If the cards do not match, the student turns the cards back over and it is the next person's turn. The person with the most cards at the end of the game wins.




Figure. 1 Execute the activities in the classroom

## TESTING OF HYPOTHESIS

## Hypothesis

## There is no significant difference between pre-test and post-test scores of students

Table. 1
Testing of pre-test and post-test scores of students

| Test | N | Mean | S.D | Df | t-value | Result |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-test | 35 | 11.428 | 2.558 | 68 | 5.878 | Significant |
| Post-test | 35 | 14.857 | 2.315 |  |  |  |

The above table1 reveals that the calculated value 5.878 is greater than the table value $2.65(\mathrm{df}=68)$ at 0.01 level. Hence, there is significant difference between pre-test and post-test scores of students. The mean scores of executed through activity method (Mean=14.428) have better than taught through conventional method (Mean=11.428). The gain score of the study is 3.429. The graphical representation of pre-test, post-test and gain score are given in Figure 2.


Figure. 3 Pre-test, Post-test and Gain scores of students

## SUGGESTIONS

The investigator suggested the some points to improve the learning mathematics with real experiences. The points are given below:

- The implemented play way method could be more useful for the teaching of other units.
- The mathematics teachers should motivate the students to use the play way method in the classroom transactions.
- Continuous assessment must be made by the teachers to utilize the new play way method.
- Management should be conducting the computer basic course for mathematics teachers.
- Now a day, should be needed the ICT based teaching for students because it will be create the real experience in the classroom.
- Every mathematics teacher should be kept learning packages.


## CONCLUSION

The investigator implemented the new play way method in this study to help the students to develop the knowledge of found the LCM value. This instruction may encourage the students to draw visual models and making play way materials to their problem solving skills. The investigator suggests that activity method and ICT based learning method can be adopted for the betterment of the fractions and fractional operations.

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