ABSTRACT

The Effect Of Educational Activities In Teaching Fractions` Unit On The Achievement Of Fourth Graders, in Jerusalem schools

By

Khlude Khalel Ftaiha

Supervising Committee

Dr. Khawla Shakhshir-Sabri.....Major Advisor

Dr. Hasan Yousef

Dr. Sanaa Abou-Daqqa

Interest in studying fractions in general has been explained by their use in real-life situations, their role in helping children expand their mental structures which are necessary for their intellectual development, and the need for the concepts and operations on fractions in forming a base upon which elementary algebraic concepts and operations are built. The aim of this study has been to compare two methods of teaching; traditional teaching, and experimental teaching in the context of achieving and enriching cognitive skills (high & low). For this study one unit of fourth graders has been chosen from the formal syllabus for the year 1998/1999. This unit is fractions.

The convenience sample chosen consisted of two sections from Jerusalem basic girls schools and boys schools. One of these sections

was chosen randomly as an experimental group and the other as a control group.

The study instrument was an achievement test that included 30 items for the unit. Nine null hypotheses were tested.

1- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit attributable to teaching method (experimental & traditional).

2- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit attributable to gender.

3- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit attributable to the interaction between gender and method of teaching.

4- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit in high cognitive levels attributable to teaching method.

5- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit in high cognitive levels attributable to gender.

6- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit in high cognitive levels attributable to the interaction between gender and method of teaching.

7- There are no statistically significant differences at $\alpha \leq 0.05$

between the mean achievement scores of the fourth graders in the fractions` unit in low cognitive levels attributable to teaching method.

8- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit in low cognitive levels attributable to gender.

9- There are no statistically significant differences at $\alpha \leq 0.05$ between the mean achievement scores of the fourth graders in the fractions` unit in low cognitive levels attributable to the interaction between gender and the method of teaching.

Two-way Analysis of Variance was used to test the nine null hypotheses.

The findings indicated statistically significant differences in students` achievement in general and in high and low cognitive levels in the fractions` unit. This difference was in favor of the method of teaching for the experimental group. However, there has been no effect for the gender except in low cognitive levels in the favor of males, and there has been no effect for the interaction between gender and mode of teaching.