In light of the results, the study recommended the following

1-Concerning modern teaching strategies at all levels of education.

2-Designing curricula according to the cognitive modeling strategy.

3-Conducting courses to train teachers on modern teaching strategies, including the cognitive modeling strategy.

The research suggested the following research issues to be conducted:

1- The effect of using the five-year learning cycle and cognitive modeling in developing innovative and critical thinking among secondary school students.

2- The effect of using Dens strategy and cognitive modeling in acquiring engineering proof skills for preparatory school students

3- The researcher prepared the teacher's guide and included the educational situations in the light of the cognitive modeling strategy and the student's book and included (the student's worksheets) and presented them to a group of arbitrators and modified in the light of their opinions.

4-The researcher prepared the study tools, (the Mathematical Concepts Test), and the researcher made sure of the validity and reliability, then applied the tools to the two study groups before to make sure that the two groups were equal.

5-The researcher applied the research experiment on the experimental group and used the normal method on the control group, then applied the tools to the two groups afterwards.

6-The results were monitored, statistically processed and interpreted in the light of the research hypotheses

The research reached the following results:

1-There is a statistically significant difference at the level (0.01) between the mean scores of the experimental group students and the scores of the control group students in the post application to test mathematical concepts, and this difference is in favor of the experimental group's scores .

The research was limited to a sample of third year middle school students from Al-Tawfiq Preparatory School and Anas bin Malik Preparatory School, which are affiliated to the South Educational Directorate in Suez Governorate.

To achieve the objectives of the research, the researcher tested the validity of the following hypothesis:

There is a statistically significant difference between the mean scores of the two experimental groups in the post application of the Mathematical Concepts Test, in favor of the experimental group scores.

In this research, the researcher relied on the descriptive approach. It dealt with literature review and previous studies related to the current research and the quasi-experimental approach by dividing the research sample randomly into two groups, one experimental and the other controlling

The researcher performed a set of the following measures:

1-A review of educational literature and previous studies in the fields of (modeling - mathematical concepts).

2-Analysis of the content of the first and fourth units of the mathematics textbook for the third year of middle school (second semester.)

THE EFFECTIVENESS OF THE COGNITIVE MODELING STRATEGY ON DEVELOPING MATHEMATICAL CONCEPTS FOR PREPARATORY STUDENTS

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Abstract:

The problem of the study lies in the low level of preparatory school students in acquiring mathematical concepts, and this led to difficulties in learning mathematics, which prompted the researcher to know the effect of using the cognitive modeling strategy in developing mathematical concepts.

The researcher tried to answer the following main question:

How to build educational situations based on the cognitive modeling strategy to develop mathematical concepts for preparatory school students?

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