

SUMMARY OF THE STUDY

Introduction :-

The problem solving behaviour is affected by a number of factors. Some of them are related ^{to} with the learner himself such as his apptitudes, abilities and ~~and~~ attitudes. Others are related ^{to} with the learning situation such as the learning method, the nature of the problem that are facing him and the classroom atmosphere. The present study is concerned with looking for the effect of the interaction among the learning method, the learning style and the reasoning ability from the mathematical and general problem solving learning behaviour .

Purpose of the study :-

The present study aims at searching about the effect of learning method interaction with learning style and the reasoning from the mathematical and general problem solving learning behaviour.

Previous Studies :-

The previous studies are classified into four dimensions:

- 1- Studies dealing with training on problem solving method.
- 2- Studies dealing with learning styles.
- 3- Studies dealing with the reasoning ability.
- 4- Studies about some of the study variables.

Sample of the study :-

The sample of this study consists of students (boys and girls) at the second Secondary stage. The initial sample includes 187 from El-Amar secondary school and Beltan secondary school at tukh educational zone, Kalubia Governorate.

Tools of the study :-

The present study includes the following tools :

1- Learning style measurement :

This was originally prepared by ^{Re}Kolb. It was arabized and modified by the researcher to suit the Egyptian environment

2- Reasoning ability tests: The researcher depends on French's battery and his friends (1976) Factorial cognitive testes Battery four tests were chosen.

3- A teacher's Guide : Prepared by the researcher.

4- Mathematical problem solving test: Prepared by the researcher.

5- General problem Solving Test: Prepared by Soheir Maghfouz.

Statistical Methods :-

1- Variance analysis having factorial design $2 \times 4 \times 2$.

2- Factor analysis.

3- Multiple regression.

Results of The Study

- 1- There are significant statistical difference at level , 0.01 in the performance of the general- mathematical problem solving tests - as a measurement of learning the behaviour of problem solving btween the experimental and the control groups. The differences are in favour of the experimental group.
- 2- There are significant statistical difference at level 0.01 in the performance of the general- mathematical problem solving tests - as a measurement of learning the behaviour of problem solving among learning styles students (divergant. Convregant assimilator accom- modator). These differences are in favour of students having thw assimilator style in solving mathematical problems. Whereas, the differences are in favour of the divergant students in solving general broblems.
- 3- There are significant statistical differences at level, 0.01 in the performance of the, general- mathematical problem solving tests - as a measurement of learning the behaviour of problem solving between high reasoning abiltiy students and the low ones in favour of the first ones.

- 4- There is not a significant difference for the interaction between learning method and learning style in learning mathematical and general problem solving behaviour.
- 5- There is not a significant difference for the interaction between learning method and the reasoning ability in learning mathematical and general problem solving behaviour.
- 6- There is not a significant difference for the interaction between learning styles and the reasoning ability in learning mathematical and general problem solving behaviour.
- 7- There is not a significant difference for the interaction among learning method, learning style and the reasoning ability in learning Mathematical and general mathematical problem solving behaviour.

Interpretation of Results :-

Results were interpreted in the light of the theoretical analysis for the main study concepts and the results of the previous studies.