

## ABSTRACT

### Using the Jigsaw Strategy in Teaching Geometry in the Sixth Grade: A Case Study

By

Raid Shamasneh

Supervising Committee

Dr. Maher Al-Hashweh..... Major Advisor

Dr. Fateen Mas'ad

Dr. Salem Ewees

The study aimed to investigate the effects of using the jigsaw strategy on:

- 1) The pupils' interests and attitudes toward mathematics.
- 2) Learning concepts & basic skills in mathematics.
- 3) Social interaction between pupils in the classroom, and their participation in the teaching process.

ش

4) The difficulties which face the teacher when he changes from the use of the traditional method to the jigsaw strategy in teaching mathematics.

5) The changes in the teacher's perception about his role and the pupils' role in the classroom.

The geometry unit was chosen from the sixth grade mathematics curriculum in order to be taught by using the jigsaw strategy. The study was implemented on a sample that consisted of division 'B' of the sixth grade pupils in Al- Ama'ri Basic Boys School, which is U. N. R. W. A. school.

Six instruments were used in this study:

- 1- Teacher's preparation notes, and lesson plans.
- 2- Post achievement test.
- 3- A questionnaire which consisted of seven items.
- 4- Video taping.
- 5- Audiotaping.
- 6- Teacher and the six pupils, who were randomly chosen from three educational levels. These interviews were completed in three stages: before, during and after implementing the study.

To answer the study questions, results were analyzed by comparing pupils and teacher answers, and by identifying the changes that occurred in pupils' attitudes toward mathematics, and



their participation in the classroom, as well as, the changes in the styles of social interaction between the pupils. The teacher answers were compared in order to: Recognize the changes in his perception of his role, and the pupils' role in the classroom, and to identify the difficulties that happened when he used the jigsaw strategy in teaching.

Additionally pupils' answers on the achievement test, the researcher observation accounts, the audio taping, and the video records, were analyzed.

The study found the following results:

- 1- A positive change in the pupils' interests and attitudes toward mathematics were identified
- 2- The pupils' performance and academic achievement improved.
- 3- The implementation of the study created new types of social interaction between the pupils, and the developed raised their participation in the classroom.
- 4- The difficulties, which the teacher faced when he used this strategy, were identified.
- 5- Use of this strategy caused a change in the teacher's perspective about his role in the classroom, from the source of knowledge and the center of pupil's attention, to a guide of the teaching process.

ض

- 6- Use of this strategy changed the teacher's perspective about his pupils in the classroom. The teacher had originally considered that the pupils should listen to him all the time because he thought that they could not learn mathematics on their own. Finally the teacher acknowledged now that pupils have the abilities to understand mathematics on their own, if they are guided well, and if their mental and social abilities are correctly utilized.