

***The Effect of Using 4MAT System for McCarthy in Teaching Mathematics on the Development of some Mathematical Thinking Skills and Habits of Mind for Preparatory School Students***

**Abstract:**

The current study aimed at exploring the effect of using 4MAT System for McCarthy in teaching mathematics on the development of some Mathematical thinking skills and habits of mind for preparatory school students. The researcher prepared teacher booklet for teaching the unit of "Geometry and Measurement" for first grade preparatory students , according to 4MAT System for McCarthy. The researcher also prepared Mathematical thinking skills test and habits of mind questionnaire . The study sample included 75 preparatory students from Fayoum governorate . It consists of two classes , includes 38 pupils as an experimental group , the other included 37 pupils represent the control group. the researcher administered the study tools to gain pre-data, then taught the units for the experimental group according to 4MAT System for McCarthy while teaching the control group according to traditional methods . Finally, the researcher administered the tools to gain post data.

The study results revealed that the experimental group performed better than the control one in the post administration of Mathematical thinking skills test and habits of mind questionnaire in every skill, and in the test as a whole . This was because the activities and the teaching strategies of the program that helped to develop Mathematical thinking skills and habits of mind . The results revealed also that there is a positive correlation, significant at (0.01) , between the experimental group scores in the post administration of both Mathematical thinking skills test and habits of mind questionnaire . The study recommended training teachers to use 4MAT System for McCarthy and using some of teaching styles that help the learner to use Mathematical thinking skills and habits of mind .

**Key Words :** 4MAT System for McCarthy , Mathematical Thinking , Habits of Mind