

***The Effect of Using the CAME Model in Mathematics Teaching on the
Development of Mathematical Representation Skills
and Critical Thinking for Primary
School Students***

Abstract:

The current study aimed at exploring the effect of using the CAME model in mathematics teaching on the development of mathematical representation skills and critical thinking for primary school students. The researcher prepared a teachers' guide to teach the (ratio and proportion) units to the sixth grade of the first semester according to the (CAME) model. In addition, the researcher prepared a test for mathematical representation and a test for critical thinking. The sample of the study consisted of (80) students of the sixth primary school in Beni Suef governorate. The sample of the study are divided into two classes, one as an experimental group with (40) students, and the other as a control group with (40) students. The researcher administered the study tools to gain pre-data, then taught the units to the experimental group according to the (CAME) model, 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 representation test as a whole and its sub-skills as well as to the critical thinking test as a whole and its sub-skills. The researcher attributed this to the teaching procedures used according to the CAME model, which helped to develop mathematical representation skills and critical thinking. The study results also yielded a positive significant correlation at 0.01 between the experimental group scores in the post administration of both mathematical representation test and their scores in the critical thinking test. The study recommended training teachers to use the CAME model as well as to use a range of teaching methods that help the learner to use the skills of mathematical representation and critical thinking.

Key Words : CAME Model, Mathematical Representation, Critical Thinking.