The Effectiveness of a Suggested Training Program of Interactive Geometry Softwares on Developing Conceptual Understanding and Imaginative Thinking for Student – Teachers of Mathematics

Abstract:

The current study aimed at exploring the effectiveness of a suggested training program of interactive geometry softwares on developing conceptual understanding and imaginative thinking for student – teachers of mathematics . The two researchers prepared a training program of interactive geometry softwares , conceptual understanding test and imaginative thinking test . the study sample consisted of (30) third year mathematics and computer students at fayoum education faculty . the researched administered the study tools to gain pre-data , then trained the experimental group on using geometry softwares which are 3 D Cabri , Geogabra , Geometer's Sketch Pad (G.S.P) . Finally the two researchers administered the tools to gain post data .The study results revealed that the performance of the experimental group was developed in the post administration of conceptual understanding test and self imaginative thinking test in every skill, and in the test as a whole . the results revealed also that there is significant positive correlation between the experimental group scores of both conceptual understanding test and imaginative thinking test . the study recommended training mathematics teachers on using interactive geometry softwares in teaching mathematics , how to design them for educational lessons and including topics that address conceptual understanding and imaginative thinking skills in mathematics curricula at education faculty .

Key Words : Training Program , Interactive Geometry Softwares , Conceptual Understanding , Imaginative Thinking , Student – Teachers of Mathematics .