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Abstract:

The current study aimed at exploring The Effectiveness of a Suggested Training Program of Computerized Mind Mapping on Developing Mathematical Connections and Visual Thinking for Student – Teachers of Mathematics . The researcher prepared A Training Program of Computerized Mind Mapping using XMind program . The researcher also prepared mathematical connection test and visual thinking test . The study sample consisted of (20) fourth year mathematics and computer students at Fayoum education faculty . It consisted of (12) students as an experimental group , and (8) students as a control group . The researched administered the study tools to gain Pre–data , then trained the experimental group on using XMind program for drawing computerized mind maps while not training the control one , 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 connection test in every skill, and in the test as a whole without mathematical topics connection skill this was because that traditional styles and mental maps equally contribute to recognize connections between mathematical topics with each other . In addition , the experimental group performed better than the control one in visual thinking test in every skill, and in the test as a whole without visual pattern skill this was because that mind maps training didn't concentrate enough on recognizing visual patterns , deducing them and using them in drawing mind maps . The results revealed also that there is no significant positive correlation between the experimental group scores in the post administration of both mathematical connection test and visual thinking test as they are independent variables and doesn't affect each other . The study recommended training mathematics teachers on using manual and computerized mind maps , how to design them for educational lessons and including topics that address mathematical connection and visual thinking skills in mathematics curricula at education faculty .

Key Words: Training Program , Computerized Mind Mapping , Mathematical Connections , Visual Thinking , Student – Teachers of Mathematics .

