The research examines the relationship between metacognitive thinking, forum activities and attitudes of students in an e-learning course. 270 students' messages were sent to the online forum. The content of these messages was analyzed according to Flavell’s metacognitive dimensions. Students with positive attitudes toward learning in the forum scored significantly higher on the examined metacognitive measures compared to those with negative attitudes. Moreover, students with high level of activity in the forum demonstrated a significant higher metacognitive level than did students whose activity level in the forum was low. Finally, a positive correlation was found between students' rate of activity and their positive attitudes toward the online forum. The relationship found between attitude and activity on one hand and metacognitive thinking on the other, signifies the importance of studying the cognitive contribution made by e-learning courses to learning and thinking.