

Abstract

This study aimed to explore the effect of a training program in the development of pedagogical content knowledge (PCK) of mathematics teachers, the training program was about the solid geometry assigned for tenth grade.

To achieve this aim, the study adopted a theoretical framework that was the model of (PCK) developed by Hashweh (Hashweh, 2005). It sought to answer the main question, in addition to a number of sub-questions arising from this question. The main question of the study was about the way in which the training program affect the development of pedagogical content knowledge (PCK) of mathematics teachers about the solid geometry assigned for tenth grade.

The study involved six participants of teachers (3 males and 3 females), these teachers are teaching tenth grade in Jerusalem suburbs, and They were a purposive sample.

It adopted three tools: Firstly, a questionnaire about the pedagogical content knowledge (PCK), of a solid geometry, which the teachers answered once before the training program and another time

after it. Secondly, reflections written by the teachers after each meeting of the program. Finally, classroom observations for two teachers (a male and a female), during their teaching of the solid geometry.

The data was analyzed quantitatively and qualitatively. The quantitative analysis tried to find general indicators about the development of pedagogical content knowledge of teachers after the training program. And the qualitative analysis examined in details the nature of changes that have occurred in teachers' knowledge.

The results showed that the training program positively affected the pedagogical content knowledge of teachers, and it was most apparent in the development of the content knowledge of mathematics teachers.