

Abstract

This study aimed at examining the Biology teachers' pedagogical content knowledge (PCK) of two science teachers while teaching "From Gene to Protein " unit. This unit was specifically selected because it is believed that there are many difficulties and misconceptions among learners and teachers. Additionally, this research introduces an exemplar model for science teachers since there is a critical need in the field about concrete examples regarding the PCK. The study aims at answering the main question: How could we describe PCK in teaching "From Gene to Protein" for Biology teachers?

It depended on Hashweh's Model that focuses on seven components: content knowledge, beliefs and objectives, students characteristics, teaching strategies, curriculum, learning resources and context (Hashweh, 2005).

The researcher used the qualitative methodology to answer the study's main and sub questions.

In addition to interviewing the two participant teachers, the researcher observed relevant classes. She employed the triangulation method (interview, class observation, test investigation beliefs for teachers' knowledge) for data collection and analyses. The consistency factor, which was found through cross comparison method with another colleague, was around 73%.

Final results show that the teachers' pedagogical content knowledge (PCK) of the two teachers was not similar . For example, the female teacher has shown more sophisticated PCK than her male colleague in all components: content knowledge, beliefs about teaching and learning and learners' characteristics, teaching strategies, contextual knowledge, teaching resources and curriculum. However, the two participants were almost similar in terms of identifying the learning objectives of this unit.

Finally, many significant recommendations and implications were resulted from this research.