

## ملخص الدّراسة بالغة الانجليزية

### Abstract

#### **The Impact of Utilizing Relevant Video Clips on Eighth Graders' Conceptual Change and Achievement in the Topic of Living Organisms' Differentiation and Classification**

This research aimed to study the impact of utilizing relevant video clips on Eighth Graders' conceptual change and achievement in the topic of living organisms' differentiation and classification, in comparison to a traditionally designed teaching.

The importance of this study stems from the fact that the use of multimedia in teaching is an important topic that is based on several major educational theories, and is one of the hot and authentic topics in science education. Moreover, studies that combine conceptual change and multimedia are almost rare especially in biology.

The study tried to answer three key questions; what are the alternative conceptions of 8<sup>th</sup> grade students about living organisms' differentiation and classification? What's the impact of the use of relevant video clips on inducing conceptual change in living organisms' differentiation and classification? What is the impact of

the use of relevant video clips on 8<sup>th</sup> grade students' achievement in living organisms' differentiation and classification topic?

In order to answer these questions, relevant video clips were used in this study, according to a model in conceptual change that integrates all of Hashweh's model of cognitive conflict (Hashweh, 1986), Posner, Strike, Hewson and Gertzog's model (Posner, Strike, Hewson, & Gertzog, 1982; Strike & Posner, 1992) and Driver's model (Driver, 1988).

To achieve this goal a quantitative methodology utilizing a quasi-experimental design was employed, The sample was chosen to be represented, it consisted of (524) of 8<sup>th</sup> grade students from eight school in Ramallah and Al Bireh, experimental group (128 students) and control group (396 students). Relevant activities, video clips, alternative conceptions and achievement test, were designed. A pilot study was applied on 30 students. Validity and reliability of the test were investigated; the value of reliability coefficient using a test-retest method was (0.82). The experimental group was taught using relevant videos, while the control group was taught by a traditional method.

The study data analysis results showed statistically significant differences in achievement between the experimental and control groups related to the employed teaching method, in favor of the

experimental group, and statistically significant differences in alternative conceptions test between the experimental and control groups related to teaching method, in favor of the experimental group. The conceptual change was obvious in the alternative concepts related to mammals. The data analysis revealed the existence of conceptual frameworks, or a network of alternative concepts in the topic of living organisms' differentiation and classification.

In light of its results the study offered some recommendations for educational policy makers, to be aware of alternative conceptions carried by teachers and try to treat them. Other recommendations were offered to researchers in the field to focus particularly on conceptual change in various biology topics, and to study of the role of teachers in the conceptual change process, and research at the impact of the use of the video clips in conceptual change in various science topics.