

ABSTRACT

Science faculty's views of Nature Of Science (NOS) at Birzeit University

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The aim of this research is to explore the science faculty's views of Nature Of Science (NOS) at Birzeit University compared with the informed views, and to compare these views on their fields (Biology, Physics, and Chemistry). Two hypotheses were formed, the first is that there is no difference between the Birzeit University science faculty's views compared with the informed one, and the second is that there is no difference between their views on the field's factor.

The research community consisted of 35 science faculty members (10 Biology, 13 Physics, and 12 Chemistry), but the sample consisted of 26th members (8 Biology, 11 Physics, and 7 Chemistry), that's 74% of the community.

The instrument used for achieving the goals of this research included fifteen questions about: defining science, the differences between observations and inference, bias in observations and inference, scientific models, evolution and revolution of scientific knowledge, absolutistic and relativistic of science, empiricism of scientific knowledge, the relation between scientific laws and theories, creativity of scientific knowledge, the effect of the socio-cultural context on scientists, the myth of scientific method, the causality and the role of super power on science, the simplicity of scientific laws and theories, the scientists' differences in explaining the scientific ideas, and the bias in science and scientific work.

The validity of the instrument was achieved, and a pilot sample (17%) was chosen to achieve the reliability. Then interviews were held with the research sample.

This research is an analytical one, so the participants' answers were judged to be one of the three categories: informed, partially informed, and naïve views. The validity of analysis was achieved by comparing the researcher's analysis and an expert's one.

The results show that there is a difference between the faculty members' views and the formed one, and there is a difference between their views on the factor of the field. The Chemists were the best, then the Physicists, then the Biologists. That means that the two hypothesis of this research were rejected.

The results were discussed due to literature, the background of this research, and the socio-cultural context in Palestine.

Recommendations were categorized into five categories: general, academic practice, the research instrument, the interviews, and future studies.