

Awareness and Attitudes toward Nanotechnology among Arab Sector in Israel

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Abstract

A study investigates awareness and attitudes towards nanotechnology among teachers and students from the Arab sector in Israel. The research was based on distributing a questionnaire and semi-structured interview. The results revealed that both the teachers and students have a basic knowledge towards nanotechnology. Moreover, different variables including gender, grade, years of experience, and level of education, have revealed no effect, considering the fact that nanotechnology is not introduced as a subject in teaching curriculum in schools. Based on these finding, several activities were developed and applied for both teachers and students from the Arab sector in Israel in order to raise the awareness and knowledge about this an influential field of science

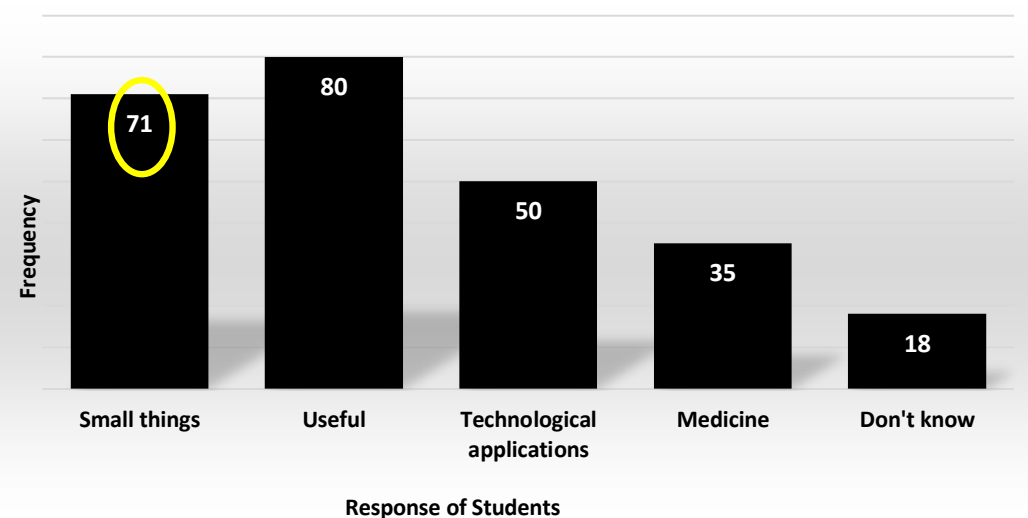
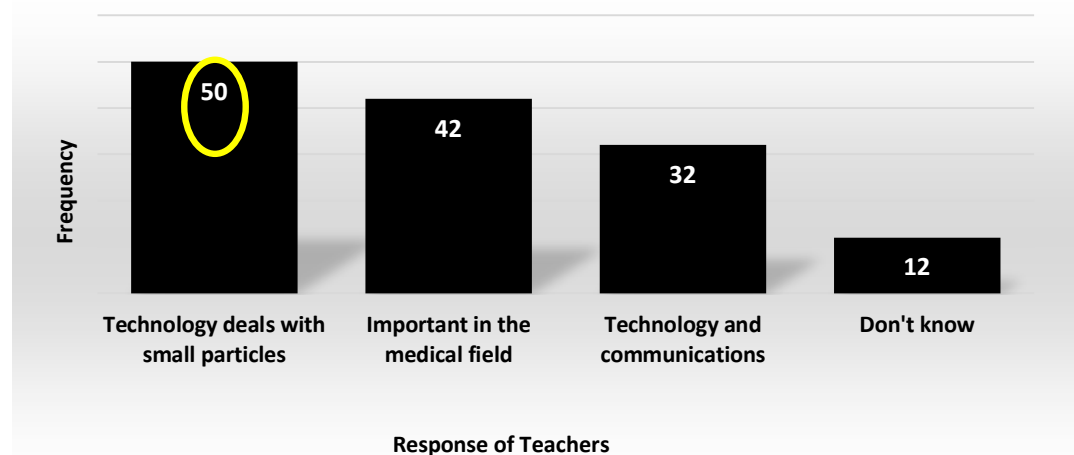
Participants

120 students from 10th, 11th, and 12th grades selected randomly from 5 local high schools in East Jerusalem, and 70 science teachers. The teachers were distributed as follows: 40 males, and 30 females, whereas students consist of 65 males, and 55 females.

Research Method

A questionnaire adapted from Norwegian Relevance of Science Education Project (ROSE) Squestionnaire (Sjøberg & chreiner, 2010). In addition to the questionnaire Semi-structured interviews were conducted (the qualitative part of the study) with randomly selected teachers and students

Question 1: Write what do you know about Nanotechnology?



Question 2: Describe examples of Nanotechnology used in life?

The majority of them aware about importance of nanotechnology for medical and technological applications, whereas, a lower frequency detected related to no answer, or don't know.

Attitudes of Teachers and Students toward Nanotechnology

Variable	n	\bar{X}	S	%
Attitude of the teachers' toward Nanotechnology	70	2.78	0.43	55.6%

Variable	n	\bar{X}	S	%
Attitude of the students toward Nanotechnology	120	2.55	0.36	51.0%

Their knowledge is considered as "medium" with n=70, 55.6%, \bar{X} =2.78 for teachers, and n=120, 51.0%, \bar{X} =2.55 for students.

This study investigated awareness and attitude toward nanotechnology among science teachers and secondary school students from the Arab sector in Israel. The results founded low awareness and positive attitudes.

It is very important to mention that teaching curriculum in Israel does not include the concept of nanotechnology, which proves the "poor" knowledge of teachers and students