The Effect of Teaching Methods on the Understanding of Basic Concepts in Chemistry Among Students

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Objective:

Most science teachers in middle schools in the Arab sector in Israel have a problem with research and prefer using traditional frontal methods when teaching. This reduces students motivation to learn science. As a result, fewer students, especially among Arabs, chose to learn sciences in universities and higher education institutions. The objective of the current study was to test how teaching methods could affect the understanding of of basic chemistry concepts among students.

Methodology:

As a partner in the ARTIST project, our goal was improving the teaching process of basic concepts in chemistry at the Mahmoud Darwesh middle school located at Majd El Kurum in order to affect ninth graders' understanding of basic concepts in chemistry. The current status was evaluated and student's difficulties in understanding basic concepts in chemistry were defined.

Results:

Based on the results of our study, teaching by learning through games, cooperative learning and laboratory experience were recommended and adapted.

Analysis of the interviews and questionnaires revealed that teachers had been stimulated by this action research. In addition, they were systematically happy to explore how their students learnt basic concepts in chemistry.

Conclusions:

Our program helped the

- Students to understand basic chemistry concepts.
- Teachers to develop necessary social abilities and leadership skills by becoming independent of their peers when developing their professional abilities and research interests in the school.