

**THE EFFECT OF TEACHING OPTICS PHYSICS BASED ON DIRECTED  
INQUIRY STRATEGY ON THE TENTH GRADE STUDENTS ACHIEVEMENT  
AND THEIR  
ATTITUDES TOWARD THE SUBJECT**

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**ABSTRACT**

This study aimed to investigate the effect of a teaching Optics physics based on directed inquiry on the tenth grade female students' achievement and attitudes toward the optics as a branch of physics in Jordan .

To achieve this aim, a quasi-experimental approach with a pre/post- test, was designed to examine the effect of the independent variable (teaching strategy /ordinary method) on the dependent variables (scientific achievement and attitudes of students toward optics physics)..

The study used two Instruments for data collection, the first; Achievement test. This test included in the final version (30) items of multiple choice with four alternatives, Difficulty and discrimination coefficient of the test was calculated as well as the face and content validity and reliability was verified . And the second; was the scientific attitudes measure . This measure consisted of (25) items and a five-level Likert scale used to determine the degree of attitudes. Face and content validity and reliability of the measure was verified .

The results of the statistical analysis demonstrated that there was a statistically significant difference in favor of the experimental group for both dependent variables ( the achievement and the scientific attitudes ). These results mean that teaching according to the directed inquiry strategy caused a significant impact on improving the achievement levels and the attitudes of students toward the subject of Optics physics .

In light of the study results, the researchers recommended using the directed inquiry in teaching optics as it improves their work and promotes the positive attitudes of students .

**Key words : DIRECTED INQUIRY STRATEGY , ACHIEVEMENT , ATTITUDES , OPTICS PHYSICS**

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