

# THE IMPACT OF THE SCIENCE WRITING HEURISTIC ON 10TH GRADE CHEMISTRY STUDENTS' ACHIEVEMENT AND ATTITUDE TOWARDS CHEMISTRY

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**Abstract\_** This study investigated the effect of the first implementation of the Science Writing Heuristic (SWH) in Saudi Arabia. The researcher taught one chemistry chapter: Properties and Changes, from 10th grade chemistry to measure the impact of the SWH on both academic achievement and scientific attitudes.

The researcher implemented a quasi-experimental approach, with pre- and post-test, where participants were assigned divided into two groups: control and experimental group female students. Two instruments were used to: a chemistry achievement test and an attitude towards chemistry test. Results of independent samples *t*-tests were as follows:

1. There were no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of experimental and control groups in the total academic achievement. Became clear in the detailed results of the first hypothesis:

- There was no statistically significant difference between the mean scores of experimental and control groups in the multiply choice (MCQ).

- There was statistically significant differences between the mean scores of experimental and control groups in essay questions in favor of the experimental group.

2. There was statistical significant differences at ( $\alpha = 0.05$ ) between the mean scores of experimental and control groups in attitudes towards Chemistry in favor of the experimental group.

In light these results, the researcher suggested the following recommendations:

1. Applying the SWH strategy to enhance forming students' positive attitudes towards chemistry.

2. Providing workshops and training sessions for science teachers on the SWH strategy to be able to help their future students to write SWH reports that reflect their scientific knowledge.

**KEYWORDS:** Write to learn, science writing heuristic, achievement, scientific attitudes.