This study aims to identify the students’ misconception about vectors and focusses its attention on investigating grade 11 student’s misconceptions on vectors and the importance of ICT in teaching physics. The study sample consists of 120 male students at the advanced 11th grade from X school in one of the cities in the UAE. To identify students’ misconceptions towards “vector quantities”, open-ended questions test is developed from Nguyen & Meltzer (2003) and Barniol & Zavala (2011). The test is organized to be suitable and comprehensible to students who have not previously studied vectors.

there is statistically significant difference according to the posttest for those who learned through ICT regarding to add vectors graphically and mathematically, multiply vectors by number and distinguish between vectors and scalars. However, there is no statistically significant difference between determine the vectors magnitude and direction posttest mean scores of students who received their learning and teaching through ICT and posttest mean scores of those who received their learning and teaching through traditional teaching aids.

Therefore, this study aims to shed lights on students' misconception in vectors and to explore the impact of Information and Computer Technology (ICT) in correcting misconceptions.

To achieve the previous mentioned aim, the current study attempts to investigate common difficulties encountered by Emirati students in Vector operations, also, the aim of this study is to explore the impact of ICT in correcting misconceptions related to the subject of vectors. The findings of this study are expected to add to literature concerning information about students’ difficulties in Vector operations and the extensive used of ICT in teaching physics. The sample of the study includes 120 students at the advanced 11th grade from one school in UAE.

To the best of the researcher's knowledge, there has been no study conducted in UAE on concerning student’s misconception of vectors in high school. Therefore, the present study focusses its attention on investigating grade 11 student’s misconceptions on vectors and the importance of ICT in teaching physics which are believed to influence their overall understanding of vectors quantities within the context of UAE schools.