This study was conducted to determine the instructional competencies of teachers and achievement of students in Chemistry of the different public secondary schools in Ilocos Norte.

The descriptive-correlational research design was used in this study. It was undertaken in all public secondary schools in the division of Ilocos Norte. Chemistry teachers and their students were utilized as respondents of the study.

A questionnaire after its validation was used to determine the demographic profile and instructional competencies of Chemistry teachers. The questionnaire was based on previous readings, 21st century core skills, and Competency-Based Performance Appraisal System for Teachers (CB-PAST). The data needed for the evaluation of the students’ achievement was also requested.

The statistical treatments used were frequency counts and average weighted mean interpreted against the arbitrary values in a 5-point Likert Scale to determine the level of achievement. In addition to that, correlation was used to determine the significant relationship among the variables. Regression analysis was also done to identify the variables needed to create an instructional model which would serve as a predictor for students’ achievement.

The respondents can communicate effectively. However, the assessment of learning outcome of Chemistry teachers needs to be improved and enhanced. In addition to this, Chemistry teachers in the division of Ilocos Norte have limited skills in using computer-aided instructional materials and in using contemporary modes of disseminating information. Moreover, Chemistry teachers are not deeply involved in research and research-related activities. The rank/position of Chemistry teachers affects their communication skills. Rank/position of Chemistry teachers and seminars attended related to Chemistry affect students’ achievement.
Good predictors of students’ achievement in Chemistry are rank/position and seminars attended related to Chemistry. Other predictors are degree, content-area knowledge, sex, and educational attainment.

In the light of the findings and conclusions drawn, the following recommendations are offered:

The use of computers in the different schools in the division of Ilocos Norte be strengthened. Teachers be exposed to the different computer-aided instructional materials and computer programs. Seminars particularly in teaching Chemistry through the use of computers be sponsored by the Department of Education.

Computers and computer-aided instructional materials/software be provided and given attention by the school administrators to cope with the dynamic society.