


RELATIONSHIP OF INSTRUCTIONAL APPROACH TO ACADEMIC
PERFORMANCE IN CHEMISTRY I OF FIRST YEAR STUDENTS
OF DE LA SALLE UNIVERSITY-AGUINALDO SCHOOL
YEAR 1992-1993 AND 1993-1994



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Cristina E. Sayoto

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ABSTRACT

Author : Sayoto, Cristina Encabo
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Objectives of the Study:

This study attempted to investigate the relationship of instructional approaches to the academic performance of first year college students in Chemistry 1. Likewise, an attempt was made to find the relationship of the demographic factors, sex and performance in high school math and physics subjects and college entrance examinations of the respondents to their academic performance.

The descriptive survey method was used in this study. All the 1,169 first year college students from the College of Arts and Sciences. Specifically, Bachelor of Science in Nursing, composed the total population of this study.

Specifically, this study sought to answer the following questions:

1. What is the academic performance of the students in Chemistry 1 under instructional approach 1?
2. What is the academic performance of the students in Chemistry 1 under instructional approach 2?
3. Are there significant differences in the academic performance in Chemistry 1 under instructional approach 1 when the respondents are grouped according to sex, performance in high school math and physics subjects and De La Salle University-Aguinaldo college entrance examinations?
4. Are there significant differences in the academic performance in Chemistry 1 under instructional approach 2 when the respondents are grouped according to sex, performance in high school math and physics subjects and De La Salle University-Aguinaldo college entrance examinations?
5. Is there a significant difference in the academic performance in Chemistry 1 when the respondents are grouped according to instructional approaches?

Scope and Coverage:

A documentary analysis was conducted to get the data on sex, high school grades in math, physics and college

entrance examination.

The mean was used to determine the performance under two instructional approaches and standard deviation was used to establish whether the group was homogenous or heterogenous.

The t-test was used to determine the significance of differences in performance under the two approaches when they are grouped according to sex, high school grades in math, physics and college entrance examination.

The following findings resulted from this study.

1. The mean academic performance in Chemistry 1 of the respondents under instructional approach 1 was 1.94 which is described as good.

2. The mean academic performance in Chemistry 1 of the respondents under instructional approach 2 was 2.18 which is also described as good.

3. As regards to comparison of academic performance in Chemistry 1 under instructional approach, females and males differed in performance with a computed t-value of 3.35 against t-value of 1.645 which means female performed better than male respondents. High school grades in Math computed F-value of 20.1570 and science F-value of 21.2528 vs. t-value of 2.60 and college entrance examination computed F-ratio of 2.4200 vs. t.-

value of 2.37 is significant. High school math and science grades are highly related to Chemistry 1 performance while CEE is significantly related to performance in this subject.

4. As regards to comparison of academic performance of Chemistry 1 under instructional approach 2. Sex is related to Chemistry 1 performance as computed t-value of -2.29 against t-value of 1.645 which means female and male respondents had different levels of performance in this subject. High school math computed F-ratio of 13.3358 vs. t-value of 2.60 are significantly related to performance in Chemistry 1. The college entrance examination computed F-ratio of .9328 vs. t-value of 2.37 shows that the CEE is not significantly related to college performance in Chemistry 1 under instructional approach 2.

5. There is a significant difference between the mean performances in Chemistry 1 under two instructional approaches with a computed t-ratio of -5.84 compared to t-value of 1.645 in favor of the two-two approach.

In the light of the findings aforementioned the following conclusions were drawn.

1. The first year students of Pre-PT, Nursing, and B.S. Biology has good performance in Chemistry 1 under

instructional approach 1 or one-teacher approach.

2. Likewise, the respondents under instructional approach 2 or two-teacher approach had also good performance in Chemistry 1.

3. Under instructional approach 1, sex was related to Chemistry 1 performance, and variables high school math, physics and CEE were good predictors of Chemistry 1 performance. Those who got high scores in these variables also got good grades in Chemistry 1.

4. Likewise, under instructional approach 2. Sex was also related to Chemistry 1 performance and variables high school math, physics and CEE are positive predictors of performance in Chemistry 1. Those who performed well in their first year Chemistry 1 subject. However, under instructional approach 2 the CEE is not a good predictor of Chemistry 1 performance.

5. Significant differences in Chemistry 1 performance surfaced between the two approaches in favor of instructional approach 2 which means that first year students of Chemistry 1 learned better when they had separate teachers for lecture and laboratory than those under one teacher only for both lecture and laboratory.

Based on the findings and conclusions arrived at in this study, the following are strongly recommended.

1. High school students planning to enroll in science-related courses should strive to learn their math and science subjects very well so that they could get better performance in college level.

2. Both male and females could be encouraged to take up science-related courses since they both performed well in these courses although females did better in this study.

3. The DLSU-Aguinaldo CEE should be strengthened to raise its level of predictability of successful college performance for different colleges.

4. Both instructional approaches could be used in teaching Chemistry 1 with preference to the two-teacher approach.

5. Further study could be conducted to involve other demographic variables that may influence Chemistry 1 performance but which were not included in this investigation.