

Students Achievement in Chemistry at Engineering College Level

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Abstract: *This study examines the achievement of different types of students in learning chemistry at Engineering college level. In this study, the investigator applied Experimental Research as a method to describe and interpret what will exist in the future. A achievement test for the assessment of learning chemistry among Engineering college I year students was prepared with a sample of 30 students. The achievement test consists of 54 items. The achievement test was used for the achievement test. The male and female students have an average level of achievement in learning chemistry. The rural and urban students have an average level of achievement in learning chemistry. The male and female students do not differ significantly in their achievement in learning chemistry. The rural and urban students do not differ significantly in their achievement score in learning chemistry.*

Key words: *Achievement in Learning Chemistry, Gender and Locality of Students*

I. Introduction

Chemistry, is called the central science because it bridges other sciences like physics, geology and biology. Chemistry is a branch of physical science but distinct from physics. Chemical engineering is a branch of engineering that applies the natural or experimental sciences (e.g. chemistry and physics) and life sciences (e.g. biology, microbiology and biochemistry) together with mathematics and economics to produce, transform, transport, and properly use chemicals, materials and energy. It essentially deals with the engineering of chemicals, energy and the processes that create and/or convert them. Modern chemical engineers are concerned with processes that convert raw materials or cheap chemicals into more useful or valuable forms. They are also concerned with pioneering valuable materials and related techniques – which are often essential to related fields such as nanotechnology, fuel cells and bioengineering.

Objectives Of The Study

The investigator of the present study framed the following objectives:

1. To find out the level of achievement in learning chemistry among engineering college students.
2. To find out the significant difference between male and female students in their achievement in learning chemistry at engineering college level.
3. To find out the significant difference between rural and urban students in their achievement in learning chemistry at engineering college level.

Hypotheses Of The Study

The investigator of the present study framed the following hypotheses based on the above objectives:

1. The level of achievement in learning chemistry among Engineering college students is low.
2. There is no significant difference between male and female students in their achievement in learning chemistry at engineering college level.
3. There is no significant difference between rural and urban students in their achievement in learning chemistry at engineering college level.

The Method Of The Study

In the present study, the investigator applied experimental research method. This method studies, describes and interprets what will exist in the future.

Sample Of The Study

The present study consists of 30 students studying in the first year of MRK Institute of Engineering and Technology Kattumannarkoil in Cuddalore District of Tamilnadu state.

Percentile Norm

The norms have been worked out for the achievement test in I year Engineering chemistry subject. The percentile norm with respect to entire sample and its sub sample were computed for the achievement test. They

are given in the table 1.

Table-1 Percentile norm for achievement in Learning chemistry

Percentile	Score Range	Norms
Below P ₂₅	below 21	Low achievement
P ₂₅ to P ₇₅	21-36	Average achievement
Above P ₇₅	above 36	High achievement

Statistical Techniques Used

In this investigation the following Statistical techniques were used. Descriptive Analysis and Differential Analysis independent sample ‘t’ test.

Analysis And Interpretation Of Data

Hypothesis-1

The level of achievement in learning chemistry among Engineering college students is low.

Table -2: Mean and Standard Deviation score in achievement among Learning Chemistry at Engineering college students

S. No.	Variables	Sub Samples	N	Mean	SD
1	Gender	Male	16	33.50	7.69
		Female	14	28.14	7.70
2	Locality of the Students	Rural	13	31.00	7.14
		Urban	17	32.00	8.88
3	Total Sample		30	31.16	7.85

In order to find out the achievement level among students, the investigator calculated the mean and standard deviation. It is given in the Table 1. Male students are better achiever than female students in learning chemistry at engineering college level. Students located in urban places are found to be better achievers than their counterpart. The mean value of the total sample is found to be 31.16 and standard deviation is 7.85. The calculated mean value is higher than the percentile 25 and less than the percentile 75. Hence, it is inferred that achievement in learning chemistry of engineering college students are having average level.

Hypothesis-2

There is no significant difference between male and female students in their achievement in learning chemistry at engineering college level.

Table -3: Mean, Standard Deviation and ‘t’ values of Male and Female students Achievement in Learning Chemistry

Gender	N	Mean	SD	‘t’ value	Level of Significance at 0.05 level
Male	16	33.50	7.69	1.90	NS
Female	14	28.14	7.70		

In order find out the significant difference between the male and female students in their achievement in learning chemistry, the investigator calculated the ‘t’ value. It is given in the Table-3 and it is found to be $1.90 < 1.96$, which is not significant at 0.05 level. Hence, the framed null hypothesis 2 is accepted and it is concluded that male and female engineering college students differ significantly in their achievement in learning chemistry.

Hypothesis-3

There is no significant difference between rural and urban students in their achievement in learning chemistry at engineering college level.

Table -4: Mean, Standard Deviation and ‘t’ values of Rural and Urban students Achievement in Learning Chemistry

Locality of the Students	N	Mean	SD	‘t’ value	Level of Significance at 0.05 level
Rural	13	31.00	7.14	0.09	NS
Urban	17	32.00	8.88		

In order find out the significant difference between rural and urban students in their achievement in learning chemistry at Engineering college level, the investigator calculated the ‘t’ value. It is given in the Table-

3, and found to be $0.09 < 1.96$, which is not significant at 0.05 level. Hence, the framed null hypothesis 3 is accepted and it is concluded that rural and urban students do not differ significantly in their achievement in learning chemistry at Engineering college level.

Major Findings Of The Study

1. The level of achievement in learning chemistry at Engineering college students is average.
2. There is no significant difference between male and female students in their achievement in learning chemistry at engineering college level.
3. There is no significant difference between rural and urban students in their achievement in learning chemistry at engineering college level.

II. Conclusion

The achievement in learning chemistry among Engineering college students is average. Male and Female students Rural and Urban students do not differ significantly in their achievement scores in learning chemistry.

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