

# Use of Creative Models and Presentation to Encounter the Problems While Studying Chemistry in Diploma College

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**Abstract-** Students Academic performance in College is based on various parameters such as level of understanding, the mental ability of a student to learn their respective subject for study of which chemistry is one of the subject to be learned . As the department of chemistry aims to develop students who are experimental thinkers and researchers which is a point reflected by their academic performance. This study aimed to determine the problems the students encounter while studying Chemistry in Diploma College. the research used a field research method to know the problems the students encountered while studying chemistry and experimental method to know the changes after creative models and presentation were used for students of diploma. Results of the field research showed that the problems encountered were vocabulary, level of understanding, retention of topics in mind. The results obtained from experimental method were growth in academic performance after using creative models and presentation for teaching Chemistry.

**Index terms-** Vocabulary bank, Academic Performance, Creative Models and Presentation, Retention of Concept, Effectiveness

## 1. INTRODUCTION

Great number of research shows that the Academic performance of students can be improved through innovative teaching strategies and other kind of innovation. (Adunola, 2011; Ayeni, 2011). One of the main aim of the education system is to make sure that the students will learn the competencies prescribed in curriculum guide. However, it cannot be denied that these students who are having difficulties in learning these competencies as reflected in their academic performance. The no. of vocabularies a student knows will have impact on his academic performance. As students have limited vocabularies, Comprehension is being at risk. Individuals who have problems or weak Language Skills will often lead to limited education that a student may acquire.

Many Studies have long pointed that there is relationship between vocabulary bank and student's academic performance. (Coyne, Simmons & Kame'enui, 2004, Stahl & Nagy, 2006). Moreover, Beck & McKeon (2002) stated that a person's vocabulary level is viewed as means of opening, closing access to information & helps define the success of students in his academics. It only depicts that those who have limited vocabularies will have difficulties in improving their academic performance.

Based on the results of student's assessment in Gosavi Polytechnic College, there is a need to improve student's vocabulary bank. This issue of having limited Vocabularies is alarming. Creativity models and presentation helps to show learning benefits because of active learning components present in it.

It is well known that students really enjoy activities beyond normal classroom interaction. Students depend now on the innovative teaching strategies of the teacher, which is use of creative models and presentation.

It is in this light that the researcher decided to conduct a study on the effectiveness of engaging students through creative models, presentation on the academic performance of Diploma Students.

## Framework

This study is anchored in theory of Doug Lemov. In his theory he offers the essential tools of the teaching craft so that you can unlock the talent & skill waiting in your students, no matter how many previous classrooms, schools or teachers have been Unsuccessful.

This study is delimited on knowing the problems of students while studying Chemistry & measuring the effectiveness of engaging students through creative models, presentation on their Academic Performance.

## Statement of the Problem

Specificially, the researcher sought to answer the following questions:-

- 1) What are the problems that students face while studying Chemistry?
- 2) What is the academic performance of the Control group & Experimental Group before use of Creative models and presentation as reflected in their pre-test?
- 3) What is the academic performance of the Control group and Experimental group as reflected in their post-test?
- 4) Is there any Significant Difference?
- 5) Based on findings, what may be suggested?

## Hypothesis

There is no significant difference between academic performances of the Control group & Experimental group.

## II.METHODOLOGY

The researcher used field research approach to know the problems of students while studying chemistry. Questionnaires were distributed to both the groups. Then the researcher used Experimental approach in which experimental group & Control group would be part of the study. The Control group was exposed to normal classrooms interaction while Experimental group was exposed to Creative models, Presentation throughout one grading period to make sure that there would be enough & adequate for the exposure of creative models & Presentation. In this study the use of creative models and presentation to increase the student's academic performance is innovative strategy of researcher.

**Respondents**

The researcher collected the College records of the students & consolidated their grades & grouped the students heterogeneously to make sure that all sections are equally divided. As part of study, the researchers used Control & Experimental Group.

**Respondents of Study**

Table 1. Respondent's of the Study

Control Group			Experimental Group		
Male	Female	Total	Male	Female	Total
13	08	21	12	13	25
Academic Performance of both Groups-			Academic Performance of both Groups-		
60 to 75%			60 to 75%		

As shown above, Students are well distributed to have fairness in result of study.

**Instruments**

The researcher exposed the Experimental and Control group through Questionnaires for knowing the problems during studying Chemistry. Then the researcher exposed the Experimental group through Creative Models of Atomic Structure & Presentation. After exposure the effectiveness of it would be measured. In terms of assessment, standardized test was used in his study. In terms of assessment a test of questionnaires was put on atomic structure whose creative model & presentation was used.

**Data Analysis**

The data gathered through test were classified, organized, tallied & tabulated. They were compared with other groups by taking average.

**III.Results And Discussions**

The Researcher utilised the field research method on the control and experimental group to know the problems the students encountered while studying chemistry.

**Result**

The problems were vocabulary, couldnt understand topics easily and retention of topics in mind.

Then the researcher utilized experimental type of research using Experimental and Control group.

**Results of Pre-test were**

Group	Mean
Control	11.23
Experimental	11.32

Findings revealed that on administration of pre-test, the Control group gathered mean of 11.23, while Experimental group has mean of 11.32. Based on the result, there is difference of 0.09 on their mean. It is showed that there is no significant difference between their pretest, which made 2 groups qualified for the experimental research. The control group was subjected to normal classrooms and experimental group to creative models and presentation.

**Result of Post-test was:-**

Group	Mean
Control	11.23
Experimental	15.6

It is found that in terms of mean, control group has mean of 11.23, while experimental group has mean of 15.6. Considering the gap on their mean it shows that Experimental group has higher academic performance as reflected in their post-test.

**Conclusion and Recommendations**

The study used a Field Research Approach to know the problems of students encountered in Chemistry and Experimental approach with the Control group and Experimental group to measure the effectiveness of engaging students through creative models & presentation in their academic performance.

Findings reveal that after using creative models & presentation performance of the experimental group is higher than the control group.

Based on the findings following recommendations are formulated:

- 1) Use of Creative models and Presentation should be used to increase the performance of students.
- 2) College teachers should use innovative ways such as Creative models & Presentation to improve students' academic performance.
- 3) Learning and Teaching should be done with the help of observation and learning by himself method for retention of concept in mind.
- 4) Creativity Skills should be increased in teachers.
- 5) Further Research for this study should be conducted.

#### REFERENCES

- 1) Adunola; O.(2011), 'The impact of teachers, Teaching methods on the Academic Performance of Primary School Pupils in Ijebu-Ode Local cut Area of Ogun State, ' Ego Booster Books, Ogun State, Nigeria.
- 2) Ayeni,A.J.(2011), ' Teachers professional development & Quality Assurance in Nigerian Secondary Schools, ' World Journal of Education,1(2) :143-149
- 3) Beck, I.L. McKeon, M.G.& Kucan ,L.(2002).Bringing Words to Life, New York- The Guilford Press.
- 4) Coyne, M.D.Simmons, D.C., & Kames enui, E.J.(2004).Vocabulary Instruction for Young Children At- Risk of Experiencing Reading Difficulties .
- 5) Doug Lemov- ' Teach like a Champion: 49 Techniques that put Students on path to College.
- 6) Stahl, S.A., & Nagy, W.E. (2006),Teaching Word Meanings,Mahwah,NJ:Erlbaum Associates.

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