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## Introduction

Two dominant categories of teaching styles have surmised through research; the teacher-centered and the learner-centered. The former is described as the old school type ; the teacher is the sole source of information. He manipulates the discussion and there is no, if not minimal participation from his students. The teacher-centered approach is said to be content-based. Whatever is written in the course syllabus must be followed to the letter. The traditional teacher relies heavily on the lecture type of class.

On the other hand, the learner-centered type of teacher is one who allows modifications in the syllabus as the need arises. He varies the concepts and topics according to the peculiar needs of his students. Whereas the teacher-centered approach is more of the common and traditional way classes are conducted ; the learner-centered approach to the teaching zeroes in on the needs and learning styles/preferences of each individual student. In the learner-centered approach, the focus is not too much on the content but on outcomes or materials produced by students as an indicator of what they learned in one whole semester. Though the syllabus is still in place, the learner-centered teacher allows modifications or adjustments in the syllabus in consideration of the various needs of his learners.

From these two main categories of teaching styles, other teaching styles have come out through various researches. (Smith, 2000; Gallenstein, 2005; Haladyna \& Shaughnessey, 2001). Some of them are the following : direct teaching, peer teaching, problem solving, authoritarian, democratic, permissive, and the like. However, the present study will be primarily based on Anthony Grasha's teaching styles (1999). He categorized teachers into the following: 1) expert, 2) formal authority, 3) personal model, 4) facilitator, and 5) delegator.

Due to the dearth of researches pertaining to teaching styles and performance, the researcher decided to embark on the present study. The study purports to investigate if there is a direct relationship between teaching styles and teaching performance of the faculty members of the College of Science of the Bulacan State University.

## Statement of the Problem

The present study aimed to analyze the relationship between the teaching styles and performance of the Mathematics and Science faculty members of the College of Science of the Bulacan State University. Specifically, it sought answers to the following specific questions, to wit: 1) What is/are the predominant teaching style/s of the Mathematics and Science faculty members?; 2) What is the
level of performance of the Mathematics and Science faculty members?; and 3) Is there a significant relationship between the teaching styles and teaching performance of Mathematics and Science faculty members?

## Theoretical Framework

The present study was primarily based on Anthony Grashas' Teaching Styles which are described as: 1) expert, 2) formal authority, 3) personal model, 4) facilitator, and 5) delegator.

The conceptual model (Figure 1) illustrates the conceptual paradigm used in this study. On the first frame, the Teaching Styles can be found, which are further categorized as: expert, formal authority, personal model, facilitator, and delegator.


Figure 1. The Conceptual Paradigm of the Study
On the other hand, the second frame illustrates the teaching performance of the faculty members of the College of Science of Bulacan State University. Using the IV-DV Model, the paradigm presupposes that there is a direct relationship between the teaching styles and performance of the Mathematics and Science faculty members of the College of Science of the Bulacan State University.

## Methodology

This is a predictive study which utilized the descriptive method in comparing the teaching styles and teaching performance of Mathematics and Science faculty members of the College of Science the Bulacan State University.

The researcher also utilized content analysis of documentary
materials which are already existing and accessible, particularly the results of the Student Evaluation of Faculty for S.Y. 2013-2014

## Setting of the Study

The College of Science of the Bulacan State University served as the setting of the present study. It comprises two departments: Mathematics and Science. The study was conducted October, 2014.

## Respondents of the Study

The Mathematics and Science faculty members were the respondents of the study. From among the forty-two (42) Mathematics faculty members, thirty (30) were identified as respondents of the study. On the other hand, out of forty (40) faculty members from the Science Department, twenty-five (25) were chosen as respondents. The researcher used the rule of thumb in determining the respondents. From among the eightytwo faculty members, 55 were identified as the respondents of the said study, which accounts for $67.07 \%$ of the total population. Some faculty members were not included as respondents inasmuch as they were newly-hired faculty members, while others are on leave.

## Research Instrument

With reference to the research instrument, the researcher referred to Grasha's Teaching Styles Inventory, which consists of a forty (40) item inventory of the different teaching styles of the teacherrespondents. The respondents were given statements which corresponds to a respective teaching style which were described as : 1) expert ; 2) formal authority ; 3) personal model ; 4) facilitator, and 5) delegator. . The researcher asked the respondents to answer the said instrument as honestly as possible since the results gathered will be used to determine their respective teaching styles.

Also, the Student Evaluation of Faculty for S.Y.2013-2014 was used by researcher to analyze the performance of Mathematics and Science faculty members. The said instrument was obtained from the Research and Development Office (RDO).

## Results and Discussion

Table 1. Descriptive Measures of Teaching Styles of Mathematics and Science Faculty Members

| Mathematics | Science |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teaching Styles | $\bar{x}$ | SD | $\begin{array}{c}\text { V.I. }\end{array}$ | $\bar{x}$ | SD | V.I. |
| Expert | $\begin{array}{c}4.3 \\ 8\end{array}$ | $\begin{array}{c}0.3 \\ 2\end{array}$ | $\begin{array}{c}\text { Above } \\ \text { Averag }\end{array}$ | 4.6 | 0.3 |  |
| e |  |  |  |  |  |  |$)$

Table 1 illustrates the descriptive measures of Mathematics and Science Faculty Members with respect to their teaching styles.

It can be surmised from Table 1 that all the five teaching styles of Mathematics faculty members got a verbal interpretation of
Above Average. Expert got the highest mean of 4.38 with standard deviation of 0.32, followed by Formal Authority with a mean of 4.36 . However, it can also be noticed that there is a very slight difference with reference to the mean scores of the other categories of teaching styles.

For the Science faculty members, two teaching styles obtained a

Table 3 illustrates the Analysis of Variance (ANOVA) of the teaching styles of the Mathematics and Science faculty members of the College of Sciences vis-r-vis their teaching performance. Since the computed F-value is 0.636 , which is greater than .01 , meaning, there is no significant relationship between teaching styles and teaching performance of Mathematics and Science faculty members of the College of Science.

The ANOVA revealed that no significant relationship exists between the teaching styles and performance of both mathematics and science faculty members of the College of Science of the Bulacan State University. This can be attributed to the fact that there is an interplay of several factors in terms of student evaluation of the performance of their teachers like personal traits, ability to establish rapport with the students, and many other factors.

This finds support in with the study of Gill (2013), stating that there is "no one best teaching style" but is actually more of an "integrated approach" which also considers the teacher's distinct personality and attitudes. Grasha (1999) meanwhile noted that teaching styles should not be boxed as to which is the best approach but in reality, teachers often employ a combination of several approaches, depending on the nature of the subject matter being discussed. At the end of the day, what teachers should focus is the realization of their learning goals and objectives, and be "all things to all students."

Indeed, awareness of one's teaching styles is very important since it will enable the teacher to assess whether the methods and strategies being employed in the classroom is indeed relevant and effective. By doing so, appropriate adjustments and modifications may be made so that authentic learning will take place.

## Conclusions

Based on the foregoing findings, the following conclusions were derived by the researcher. 1) majority of the Mathematics and Science faculty members of the College of Science regard themselves as experts with reference to their teaching styles ; 2) majority of the teaching performance of the Mathematics and Science faculty members got a rating of Very Satisfactory; and ; 3) there is no significant relationship between the teaching styles and teaching performance of Mathematics and Science faculty member of the College of Science.

## Recommendation

Since the study found out that no significant relationship exists between teaching styles and teaching performance of Mathematics and Science faculty members, it is recommended that the criteria for Student Evaluation of Faculty Members be revised in order for the same to be aligned with authentic performance of the faculty members. Also, the Administration might devise other ways of assessing the performance of their teachers. Qualitative methods such as in-depth interviews, focus group discussions with students, and many others could be utilized in order to authentically assess the performance of faculty members.

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