

Teachers Professional Attributes and Development of College Students' Performance on Science in Selected Tertiary Institutions in Province of Laguna

Asnar L. Aloro

Laguna State Polytechnic University – San Pablo City Campus
San Pablo City, Laguna, Philippines

Abstract:- The level of development of students towards Science in terms of professional attributes out of all sub-indicators of all the performance were significantly related and affected and highly observed, while the remaining variables such as attitudinal conduct that focused on voluntarily offered help in doing school chores were interpreted as “observed”. However, there was a significant relationship on the time-on-task, and the level of development of students' performance on Science.

It is also found out that there was no significant difference with the perception of the college students on the professional attributes of the teachers who teaches Science to the students in two courses, while the Industrial Technology students had a significant difference of the perception on the professional attributes. Therefore, it depends on the students' capability from different courses on how they are adept in the Science subject based on the academic performance of the professional attributes of the teachers.

In view of the findings of the study, the following recommendation were given: Teacher may consider more and understands their students' needs, particularly their cognitive level depending on their courses. In addition, school administrators may consider the subjects may be given to faculty with mastery of the subject content or with the corresponding field of specialization or major to determine the quality of teaching and subsequent learning. They may conduct more research studies to determine the areas that need to improve and considering the huge contribution of technology in our society. Likewise, to keep abreast with new emerging trends in Science teaching and learning.

Keywords:- Professional Attribute, Student Development, Student Behavior, Science Teacher

I. INTRODUCTION

Teaching is an important part of the process of education inculcating moral values, abilities, skills by an experienced person to an inexperienced person in order to ensure positive change in behavior useful in developing oneself and the society. It shapes one's thought and action through giving instructions and performing practices that create learning new behavior and capacity.

In addition, it should be used as a process that led to change known as a learning, learning is not something done to students, but rather something students themselves do. It is direct result of how students interpret and respond to their experiences, while there are disciplinary differences in what students learn, it is daring to think the things that are important to make difference in the life someone else, it is also important to keep in mind that learning a different course in educational institution is given by the teachers. Thus, teachers are the most influential role models for developing students; they are responsible for more than just academic enrichment. A great teacher makes learning fun, as stimulating, engaging lessons are pivotal to a student academic success.

Moreover, behavior is an observable outcome of the teachers that affects the students' performance in different activities in the classroom. Teachers' behavior is believed to have a great impact on students' motivation and learning. As a result, students are more likely to participate actively in class and challenge themselves academically.

Every teacher has their own style of teaching, and some traditional teaching styles evolve with the advent of differentiated instruction. More teachers are adjusting their approach depending on their students' learning needs. They are the important role models for students which influence a big impact on helping, shaping, creating, support, and establish student strengths, goal and knowledge. Therefore, it is essential to be aware of the effective qualities, skills, and characteristics that one brings into the learning environment and how teachers' influence play a role.

A teacher's role is ever changing. Teaching should be responsive that counsels their students to use the knowledge they learn in school to become valuable members of the society, the advocate for being informed and productive citizens by educating about current events, political and social justices and cultural climate.

A key benchmark of the tertiary education teachers is the ongoing teaching of professional attributes. In addition, the goal of this study was to address the ability and interest of the students in Science core subject and also to determine the development of students' performance that may enhance the new trends in science curriculum, teaching and learning.

II. OBJECTIVES OF THE STUDY

The study aimed to determine the professional attributes of teachers and development of college student's behavior towards Science. Specifically, the following sub-problems were answered:

- Determine the perception of the student - respondents on the following professional attributes of teachers, as to:
 - Ability and Effort;
 - Time-on-task.
- Determine the level of development of student behavior on Science.
 - Ho 1: Is there significant difference in the perception of college students on the professional attributes of teacher according to course?
 - Ho 2: Are the professional attributes of teachers significantly related to the development college students behavior towards Science?

III. RESEARCH METHODOLOGY

The researcher is focused the study on professional attributes of teachers and development the college students'

Table 1. Chi-Squared Analysis of Perception of College Students on the Professional Attributes of Teachers According to Course

Variation	Chi-squared	Chi-Square Table value	Calculated p-value
Bachelor of Science in Hospitality Management	8.797	26.30	0.9215 ^{ns}
Bachelor of Science Industrial Technology	109.543	26.30	0.00001**
Bachelor of Science in Criminology	21.931	26.30	0.1454 ^{ns}

ns -- Not Significant at $\alpha = 0.05$ level of significance

**** -- Significant at $\alpha = 0.05$ level of significance

Table 1 reveals the result on the perception of college students on the professional attributes of teachers. These results show that the behavior of the students in different courses affected the studied Science subjects.

The result indicated that there was no significant difference with the perception of the college students on the professional attributes of the teachers who teaches science to Bachelor of Science in Hospitality Management students with a (p-value = 0.9215) and Bachelor of Science in Criminal Justice Education students with a (p-value = 0.1454), while the Bachelor of Science in Industrial Technology students has a significant difference of the perception on the professional attributes with (p-value = <0.0001) therefore, it depends on the students' capability from different courses on how they are adept in the science subject based on the academic performance of the professional attributes of the teachers.

The findings of the study were supported by the study of Hornsta, et al. (2015) that many of the students, depending on the course they take, are academically talented one while

performance on Science in selected tertiary institutions in province of Laguna.

The researcher conducted this study in the selected tertiary institution in Laguna offering Bachelor of Science in Hospitality Management, Bachelor of Science in Criminal Justice Education and Bachelor of Science in Industrial Technology.

In addition, this research utilized the correlational design, which is one type of descriptive method. Survey questionnaires were used to determine relationship between professional attributes of teachers and development of student behavior on Science. This refers to the gathering of data from relatively large case at a particular time mainly through the use of questionnaire. Descriptive – correlational is collected without making any changes to the study subject.

IV. RESULTS AND DISCUSSION

➤ Professional Attributes of Teachers

This chapter presents the data gathered which were statistically treated, presented, analyzed in table and interpreted in relation to the problem specified in the study.

some understand less than is thought they do. In addition, Fagella (2017), emphasized that Science is thought equally important that student should learn that is why the teachers should be the one to motivate the student and on how they teach different approach or strategies based on the ability or course of the students.

From the result of their study, Eccles & Roeser (2011) supported that one of the factors on the effective learners is by increasing the learning environment in explaining students' motivation for school and their learning outcomes, wherein, the teacher is the key factor who shapes the learning environment to enhance and sustain students' motivation and engage students' learning.

Furthermore, Prof. Mehnaz Kaushar (2013) highlighted that the development of the students, especially in college have not had to manage their time efficiently which can affect their performance, and some give focus on their respective major subject to accomplish tasks within the stipulated time frame only, while some minor subjects like science is not given priority.

➤ *Development of Student Behavior on Science***Table 2.** Chi-Squared Analysis of Professional Attributes of Teachers with Development of Students' Behavior in Science

Variation	Chi-squared	Chi-square table value	p-value
Ability and Effort	4.354	26.3	0.998 ^{ns}
Time on Task	185.13	9.49	0.00001 ^{**}
Development of Students Behavior in Science	24.163	26.3	0.086 ^{ns}

ns -- Not Significant at $\alpha = 0.05$ level of significance

**** -- Significant at $\alpha = 0.05$ level of significance

Table 2 presents the analysis of chi squared-test for the professional attributes of teachers with development of students' behavior in Science. It showed that there was a significant difference in time on task with (p-value = <0.00001) while for the development of student behavior in Science with (p-value = 0.086) and the ability and effort with a (p-value = 0.028) means there was no significant difference. Therefore, a good teacher may be able to show the different attributes and work attitude in their teaching profession in spite of being faced with the conflict factors such as the attitude towards students. The teachers' positive attitude and attributes can enhance their professional performance and teaching expertise.

The result corroborated with the study which stated that the teacher encourages students for an active learning and concerns themselves with promoting intellectual capability. Dayle (2019) stated that as a teacher one must adapt his or her communication style to the needs of different students depending on their learning style in order to inform, influence, and learn from one another. Sharma (2018) added that students also need brainpower and sharp memory to become successful or to adapt the lesson and to achieve the criteria of the teachers.

Furthermore, to support of the result, Apodaca (2019) posits that an interpersonal relationship is also one of the strong association or acquainted many students in order to learn a lot from the brief one to any complex context situation. Straker (2016) also claims that teaching skills thru instruction is the ability to impart knowledge at the minimum teaching of basic functional skills, showing them on how to do something, giving a suitable stimulus to be able to reproduce an effective response.

In the reality of Science, it can be said that the good mentor seeks to help students optimize an educational experience, to assist the student's socialization into disciplinary culture, and to help students to find suitable employment.

V. CONCLUSION & RECOMMENDATION

The following conclusions are drawn from the findings of the study:

It is revealed that there is significant relationship between the perception of college students on the professional attributes of the teacher according to course. The null hypothesis is supported by the evidence hence, it is rejected. Therefore, the learning of the students is dependent also on the course they taking up and how the teacher handles the subject.

It is also found out that there is a significant relationship between the professional attributes of teachers to the development of college students' behavior towards science specifically on the time-on-task. However, there is no significant relationship on the ability and effort, and the level of development of students' behavior towards science. Therefore, the null hypothesis is partially sustained. It can then be concluded that the development of students towards science relies heavily on the teacher's professional attributes, meaning they learn more if the teacher is well rounded and is manifested on their performance on time-on-task. It can also be concluded that the ability and effort is not the only determinant in the level of development of students' behavior towards science.

In view of the findings and the conclusion of the study, the following recommendation is given: 1) Teacher may consider more and understands their students' needs. Students; cognitive level differs depending on their courses, so much so that the teachers may conduct their lessons that will best fit the students' cognitive level. 2) To be successful and to provide the most meaningful experience to students, School administrator may consider the subjects that will be given to faculty with mastery of the subject content or with the corresponding field of specialization or major to determine the quality of teaching and subsequent learning. Likewise, teachers with good knowledge and mastery of what they are teaching may meet the standard in meaningful ways. 3) The department may also consider the limiting the distribution of the subjects to be taught by teacher for maximum mastery of the subject. Likewise, it is also recommended that the teacher may be assigned to one particular college expressed their way of teaching. 4) Conduct more research studies to determine the areas that need to improved. Likewise, to keep abreast with new emerging trends in science teaching and learning. 5) In the digital world, teachers may adopt and consider the huge

contribution of technology in our society. It is one way of fast delivering the knowledge to our students.

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