

EFFECTS OF VALUES ON THE PERFORMANCE IN BIOLOGY OF COLLEGE STUDENTS

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ABSTRACT

Most often, students encounter situations in their classroom environment that make them confused to what should be their particular response to meet a variety of stimuli exposed to them. This poses difficulty in understanding as they are not yet exposed to situations like that. It is therefore of utmost importance for one's learning capacity to select only the most salient manifestation in their classroom environment to which one should attend. This study was conducted to determine the effects of values on the performance in biology of college students. The Pretest-Posttest Control Group Design was used with researcher-made questionnaire employed for values and performance. Cooperative learning was used as teaching technique for the experimental group while it was a traditional lecture-discussion method for the control group. The study revealed a variation in ranking both groups showing same response in terms of values during their pretest. However, on the performance level, a very satisfactory result from the experimental group came out, in contrast to the control group that needs improvement. There was significant difference on the performance in favour of the experimental group, with values showing significant effect on their performance. In terms of personal characteristics, occupation of mother and estimated monthly family income were significant predictors of values.

Keywords: Cooperative learning, lecture-discussion, performance, values.

INTRODUCTION

It is inspiring to note that the interaction of young learners with teachers whose understanding and insight are evident in their practice. There is a dynamic quality and aspiring effort in ways which facilitate and reinforce learning. To achieve a measure of it in one's relation with learners is every aspiring teacher's hope and source of intrinsic satisfaction. Values integration involves the development of the value system of the learner as part of the totality of his education. The learning process in biology covers the acquisition not only of concepts and skills but also of values. According to Little Soldier (1989), classrooms that respect, value, and include the contributions of all students will be more likely to attract some students who often express a sense of alienation in the traditional biology classroom. Furthermore, explicit teaching of values appeared to have a settling effect on the schools by providing a common language for students, staff and parents to talk about interpersonal behaviour. The focus on teaching and promoting values such as responsibility, cooperation and endeavour provided students with a mechanism for self-regulated behaviour and also provided teachers with a positive framework for addressing instances of 'inappropriate behaviour'. Knowing the values instilled upon the students will make it even more profound for the teachers to decide the teaching strategy that would yield the best effects to students.

Tjosvold and Kastelic (1976) pointed out that teachers must consider several conflicting issues in deciding how to act toward students. They must weigh and manage their own values and needs, the behavior and needs of the students, the values of their colleagues, and the

desires of the community. While early observation research considered that teacher behavior is the cause of classroom climate and student outcomes, it is now recognized that student behavior is likely to affect the teacher's behaviour inside the class. Furthermore, academic self-efficacy and optimism are strongly related to performance and adjustment, both directly on academic performance and indirectly through expectations and coping perceptions (challenge-threat evaluations) on classroom performance, stress, health, and overall satisfaction and commitment to remain in school (Martin, Li-tze, and Garcia, 2001).

Likewise, students with values instilled within their day to day life make the teaching learning experience a lot easier and more effective. As Lovat, et al. (2009), explicated, values education provides a common language for students, staff and parents to talk about interpersonal behaviour. The focus on teaching and promoting values such as responsibility, cooperation and endeavour, provides students with a mechanism for self-regulated behaviour and also provides teachers with a positive framework for addressing instances of 'inappropriate behavior'. Also, values education and quality teaching are better described, not as one having an impact on the other, but rather as the two of them being in harmony. A number of common effective elements, therefore, are necessary, such as integrating values education into the core curriculum, teacher modelling and scaffolding of values, school-wide practices and policies, real-world learning and strong leadership. And in view of this, there is also a need to look into the relationship of values and student performance to determine whether or not values are correlated with a students' academic standing.

OBJECTIVES OF THE STUDY

The primary purpose of the study was to determine the effects of values on the performance in Biology of college students at Capiz State University, Roxas City Campus, Roxas City for school year 2012-2013. Specifically, it sought to:

1. Describe the profile of the respondents;
2. Determine the values of the students in terms of leadership, diligence, resourcefulness, and cooperation;
3. Determine if there is a significant difference in the values of the experimental and the control groups in the pretest and posttest;
4. Determine the performance of the respondents in the experimental and the control groups in the pretest and posttest;
5. Determine if there is a significant difference in the performance of the respondents in the experimental and the control groups in the pretest and posttest?
6. Determine the effects of the values in terms of leadership, diligence, resourcefulness, cooperation, and sharing on the performance of the experimental group?
7. Find out which among the personal characteristics of the respondents are significant predictors of performance and values?

FINDINGS OF THE STUDY

Profiles of the Respondents

Majority of the respondents were females, aging 17 years old. Majority of the respondents' parents from the experimental group were college graduates. From the control group some of their fathers were high school graduates and others were college undergraduates, while the mothers of the respondents from the control group were mostly college undergraduates. Majority of the respondents' fathers from the experimental and the control groups were self-

employed and their mothers were unemployed. Respondents from both groups' estimated monthly family income was below P5,000.00.

Values of the Students in Terms of Leadership, Diligence, Resourcefulness, and Cooperation

The results of the study found that the respondents from the experimental and the control groups were not strongly committed to the five values identified: leadership, diligence, resourcefulness, sharing, and cooperation, as revealed by their pretest and posttest results indicating of no significance at all. For the respondents from the experimental group, cooperative learning used as a teaching technique had not further enhanced these identified values, however, on the bases of the mean scores, their pretest and posttest results showed positive effects in the values although the difference was not that significant. Both cooperative learning and the traditional method of learning were equally effective in promoting the values of the respondents. However, the results go against the findings of several ground-breaking studies (Astin, 1985; Tinto, 1993; Pascarella & Terenzini, 2005), which suggest that there is a positive correlation between student engagement and student learning and persistence. According to Astin, student learning is the result of the combination of the student's level of academic performance and his involvement in the environment at school. Tinto, meanwhile, posited that the students' willingness to share the values and norms of other individuals in the institution is correlated to their persistence in college. Furthermore, a study conducted by the Office of Institutional Research of the California State University in Sacramento (2011) found that active leadership in class had lasting impact and was a positive contributing factor in relation to student academic performance, especially with regard to facilitating graduation.

Significant Difference in the Values of the Experimental and the Control Groups in the Pretest and Posttest

The pretest performance of the respondents in the experimental and the control groups was verbally interpreted as "needs improvement." On the other hand the posttest result of the experimental group was interpreted as very satisfactory while that of the respondents from the control group needs improvement.

Performance of the Respondents in the Experimental and the Control Groups in the Pretest and Posttest

There was a significant difference in the performance of the experimental and the control groups in the pretest and posttest. The experimental group had higher mean score than the control group. Null hypothesis of no significant difference in the performance of the respondents from the experimental and the control groups was rejected. The difference in favour for the experimental group was not only attributed to the students' increased self-activity and group participation but also in cooperatively putting their heads together and by scouting solution to accomplish the tasks assigned to them, implying that cooperative learning as a teaching technique was more effective than the traditional method in learning Biology. For the control group, this does not mean that the traditional method of learning is not effective since the increase in the mean scores of the pretest and posttest implies that learning also takes place.

Significant Difference in the Performance of the Respondents in the Experimental and the Control Groups in the Pretest and Posttest

The values showed significant effects on the performance of the respondents in the experimental group, because with the five values identified as leadership, diligence, resourcefulness, cooperation, and sharing were within themselves already and they were actually practicing them, thus, they performed very satisfactorily and this performance was further enhanced by cooperative learning used to them as a teaching technique. Since the focus of building personality exists in the values which are infiltrated within the individual, within his essence, his self and mind, and although these values reside in the deepness, yet they may be exposed to social change which is a necessity for all communities. The factors of influence and modification affect the society, both the inside and the outside, and it must respond to that change, whether its response is quick or slow which means that attitudes should be modified and values should be reviewed to take new values that were not common before, and that what has been indicated by (Malhas & Subhi, 2002). Furthermore, Al-Zhoubi (2014) posits that the practicing degree of values of students shows consistency to their social values they were raised on, despite the fact that there is rapid change in globalization, which affect different life aspects, and influence the social values, particularly for those who are young and still imitating their parents' attitudes, and consequently the effect of globalization on them is still unclear. Also, the study of Kjellin, Mansson, and Vestment (2009) linked practical work at schools to students' understanding of the character of a desired classroom dialogue.

Personal Characteristics and Values

Out of the five personal characteristics such as sex, age, educational attainment of parents, occupation of parents, and the estimated monthly family income, occupation of parents particularly the mothers and family income were significant predictors of values. The mean values of 3.8867 for self-employed, 3.6171 for unemployed, and 3.5667 for employed indicated that, mothers who are self-employed could still find time to keep their children company, to support, educate, and instruct them by good example, inculcating in them good values as values instilled on the children come from the family especially from the mother and not from anybody else. Family income on the other hand, as significant predictor of values indicates that earning an income from 5,999- 10,000 is not a hindrance for the children to strive harder on their studies in order to attain good education, especially if these children have a family who knows how to support and nurture their children, a family who knows how to transmit the ideals, beliefs and values of a society to the young minds of their children protecting them from bad company and in acquiring bad habits detrimental to their morals. It could never be argued that parents play a significant effect on their children, specifically on their children's academic performance. Aside from family income, parental warmth together with reasonable levels of control combines to produce positive child outcomes (Grusec and Danyliuk, 2014). As Desforges (2003) put it, parental involvement takes many forms including good parenting in the home, including the provision of a secure and stable environment, intellectual stimulation, parent-child discussion, good models of constructive social and educational values and high aspirations relating to personal fulfilment and good citizenship; contact with schools to share information; participation in school events; participation in the work of the school; and participation in school governance.

CONCLUSIONS

In this study, the values showed significant effects on the performance of the respondents from the experimental group through the use of cooperative learning as a teaching technique. Cooperative learning produces positive results on their very satisfactory performance. While no various in the result on values assessment in the pretest and posttest of the respondents from the experimental and the control groups, this does not mean that cooperative learning is not effective as a teaching technique for the respondents since the increase in the means of the pretest and posttest values implies the presence of the five identified values within themselves although the difference was not significant. For the respondents from the control group, they have similar values with the experimental group and they have them within themselves too. The use of cooperative learning as teaching technique in the experimental group improved performance to the maximum level. The technique provided students greater interaction like knowing and trusting one another as they accept and support one another and resolve conflicts constructively. Cooperative learning is concerned with framing student interaction in ways that are likely to raise positive interdependence and promotive interaction. Positive interdependence means that group members should perceive that the collective effort of the group is essential in order for the individual learners to achieve their goals (Johnson and Johnson, 2009). Furthermore, cooperative learning fosters individual accountability means that, in order to prevent social loafing, the students should be assessed by their individual learning outcomes. Thus, Herrmann (2013) posits that while working within a group, the student might still pursue individual goals and be assessed as an individual. Awarding individual grades to students does not conflict with cooperative learning as it enhances individual accountability.

Through group activity, individual participation is maximized because the members of the group discuss issues and concerns simultaneously. This means that all the respondents participate in the discussions which do not happen in the lecture/discussion method. Students were encouraged to present reports with illustrations and visual aids for more clarity to the subject matter assigned to each member. Students' dependence on teachers had decreased because they learned to be resourceful, sharing their ideas, so the atmosphere is more of student activity than teacher activity.

RECOMMENDATIONS

The administrators of Capiz State University, Roxas City Campus should take appropriate measures to further improve instruction and quality output of the college students by encouraging the faculty the use of cooperative learning as one of the teaching techniques. The study may be replicated using larger sample and longer time frame to investigate the possible effects of time and heterogeneity of samples in students' values and performance. Instructors should encourage a classroom atmosphere of openness, honesty, acceptance, and respect for the students to feel free to share their thoughts and feelings about issues other than values. Science instructors should encourage a laboratory and practical arts outputs of students be presented to class discussion, collaboration and evaluation towards the improvement of task function of the group.

Teachers should adopt the technique to improve students' sense of leadership, diligence, cooperation on how they function as a group to make their relationship with one another better while working on the assigned task. There should be a rigid monitoring in the use of

cooperative learning method in all subjects to strengthen the performance of the students and development of positive values.

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