STUDY HABITS AND THE PERFORMANCE OF BSCS STUDENTS IN COMPUTER PROGRAMMING-1

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Abstract - This study aimed to seek whether the study habits of the students affect the performance of the students in Computer Programming I. Specifically, it determined the profile of the students as to their IQ and performance in computer programming-1; the level of strengths and weaknesses of the student's study habits as to the time management, study environment, test taking as well as in note taking, reading, writing and math skills; and lastly the relationship between study habits and performance of the students in computer programming-1. Descriptive survey research design was employed in this study where questionnaire was the main instrument to gather data. Respondents consisted of 85freshmen students in the Ladderized education program which was obtained with the use of the Cochran's formula. The study found out: IQ and final grade are extremes as reflected in the standard deviation. Also, the respondents 65.9 % or 56 are female while the remaining 34.1% or 29are male. Students responded that they need help on the different criteria on the student habits except the criteria time management. Finally, the study showed that only mathematics skill is correlated positively and significantly to the performance of students.

Index Terms- Computer Programming-1, Computer Science/Information Technology, Study Habits, DMMMSU-SLUC, Agoo, La Union Philippines

I. INTRODUCTION

Study habits play a vital role to students of any age such study habits will determine student's success in their educational career.

According to Fielden (2004) good study habits help the student in critical reflection in skills outcomes such as selecting, analyzing, critiquing, and synthesizing. Nneji (2002) added that study habits are learning tendencies that enable students work independently.

On the other hand, Marcus Credé and Nathan R. Kuncel (2008) in their research at the University of Albany said that study habit, skill, and attitude inventories and constructs were found to rival standardized tests and previous grades as predictors of academic performance, yielding substantial incremental validity in predicting academic performance. The meta-analysis examined the construct validity and predictive validity of ten study skill constructs for college students. Study motivation and study skills exhibit the strongest relationships with both grade point average and grades in individual classes. They stressed that academic specific anxiety was found to be an important negative predictor of performance. In addition, scores on traditional study habit and attitude inventories are the most predictive of performance, whereas scores on inventories based on the popular depth-of-processing perspective are shown to be least predictive of the examined criteria. Overall, study habit and skill measures improve prediction of academic performance more than any other non-cognitive individual difference variable examined to date and should be regarded as the third pillar of academic success.

Furthermore, learning styles differ from student to student. Their study habits seem to show differences in how they become competent and of how serious they are in learning. Study habits are the ways that students have molded during the school years and it could either be good of bad ones. Good study habits are the practices that could improve students' concentration, remembering, organizing time, studying, listening and taking notes, taking tests and motivation.

This scenario inspired the researchers to flick through local investigation on the relationship between study habits and performance in the core subject areas of the students of the Don Mariano Marcos Memorial State University specifically in the College of Computer Science.

1.1 Framework of the Study

Henson and Eller, 1999 theorized that some mentors often deliver instruction as assumed all students think alike. But the researchers asserted that students perceive and learn in different ways. Students may have different learning styles. Some prefer to learn alone while others learn better in groups. Some also prefer to review lessons with music while others are not comfortable with this habit.

In accordance to the Oakton Community College (2008), study skills or habits are strategies that help us learn more efficiently. On the other hand the study of Kirkland and Hollandsworth (1979) on test anxiety, study skills and academic performance, is defined as a measure of effective test-taking skills and a measure of test anxiety contributed significantly to the prediction of grade point average. Furthermore, Ford (1991) on his study worked model program to improve study skills and academic performance of low achieving third grade students. He found that students targeted for the program demonstrated low learning readiness skills, which resulted in less desirable behavior, study skills and academic performance. In enhancing the performance, a 10- week program was implemented which include training teachers in discipline competencies, study skills enhancement plan and academic excellence growth plan. After10 weeks,

results indicated a decreased number of behavior problems, increased learning readiness skills and improved academic performance.

Tuckman (2008) in his research on educational psychology-based "study skills" program originally developed to teach learning and motivation strategies to college students and was modified for use by high school students. It involved teaching students for achievement strategies. The strategies were used to teach students to overcome procrastination, build self-confidence and responsibility, manage their lives, learn from lecture and text, and prepare for examinations. The training was provided as a course taught using a "blended" technology-based instructional model called Active Discovery and Participation through Technology (ADAPT).

As discovered by Sleight and Mavis (2006) who researched on medical students on study skills and academic performance. Found out that study habits were more similar than different when compared by examination performance. M ajority of the students used study aids as a memory aid or for review, but students who performed in the top third of the class were less likely to use them at all.

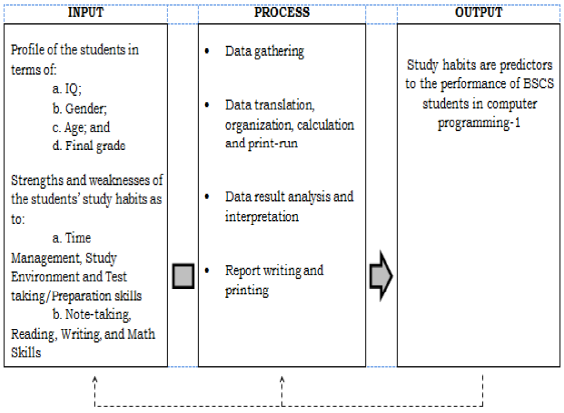


Figure 1: Paradigm of the study

However, Phan(2008) hypothesized that achievement goals on academic performance were direct and indirect through study strategies, effort and reflective thinking. The effects of study strategies on academic performance were direct and indirect through reflective thinking practice. Results showed that achievement goals had no direct effects on academic performance, whereas study strategies and reflective thinking directly influenced performance.

In line with those studies, the researchers added the following variables that would assimilate study habits that predict performance of BSCS students in computer programming-1. The research paradigm in IPO format as shown on the other page is used in the course of the study.

1.2 Statement of the Problem

This study sought answers the relationship between the study habits and the performance of BSCS students in computer programming-1 subject, specifically to:

1. What is the profile of the students in terms of:
   a. IQ; and
   b. Performance in Computer Programming-1?
2. What is the level of strengths and weaknesses of the students' study habits as to:

a. Time Management
b. Study Environment
c. Test taking
d. Preparation skills
e. Note-taking
f. Reading
g. Writing, and
h. Math Skills?

3. What is the relationship between study habits and performance of BSCS students in Computer Programming -1?

Ho: There is no significant relationship between study habits and performance of students in Computer Programming -1.

1.3 Definition of Terms

Study Habits. This refers to the different ways or learning styles how students cope with their lessons. These are divided into the different categories, namely; a) Time Management, Study Environment and Test taking/Preparation skills, and b) Note-taking, Reading, Writing, and Math Skills?

Performance of Students. It denotes the final grade of students in programming 1 and programming 2 subjects. Only students who have taken the subjects for the first time were considered.

Computer Programming-1. This is a core subject for the BSCS program and considered as a pre-requisite of all core and professional computer subjects. It is offered among the freshmen students during first semester.

Intelligent Quotient (IQ).An aptitude test result through College Admission Test, administered by the Guidance Office. The test was standardized and approved by the Board of Regents (BoR).

II. METHODOLOGY

2. 1 Research Design

This study is an attempt to assess the study habits and the performance of students in computer programming subjects, through descriptive survey research design which is the most appropriate to undertake this research. According to Shami & Hussain (2008) descriptive research is "a type of research used to depict present day condition, settings and events".

2.2 Data Sources

The study was a group of freshmen students from the College of Computer Science. These were the students who have just finished computer programming-1 from the ladderized education program. Furthermore, Cochran's formula was used in determining the sample size of the study.

2.3 Instrumentation and Data Collection

In the quest of the study, survey questionnaire was the main instrument used in gathering required data.

The questionnaire was divided into two parts. Part one is the profile of the respondents which comprises respondent's IQ, and grades in programming-1 subject. Part two includes the strengths and weaknesses of the students' study habits as to time management, study environment, test taking/preparation skills, note taking skills, reading skills, writing skills and math skills. Furthermore, the questionnaire was adapted from Virginia Gordon's University "Survey: A Guidebook and Readings for New Students" likewise, in the interpretations of result.

Variables	Observations	Mean	Std. Dev.
IQ	85	45.435	9.314
Final Grade	85	81.376	5.827

The questionnaire was administered at random to the 85 student-respondent.

2.3 Statistical Tool

Data gathered was tallied and treated utilizing SPSS-17. After encoding the data, descriptive statistics was used to describe the profile of the respondents.

Means of each criterion was obtained and interpreted. Moreover, a non-parametric statistics for correlation, specifically Kendall's and spearman rank correlation was applied to test the significant relationship between the study habits and performance of BSCS students in programming-1.

2.4 Categorization of Data

Data was categorized by an independent and dependent variables. Independents variables are IQ and study habits. IQ serves as the moderating variable and study habits as the factor variable. On the other hand, dependent variable was the performance of students in computer programming-1.

Subsequently, both variables were evaluated descriptively and then cross tabulated to test their significant relationships.

III. RESULTS AND DISCUSSIONS

3.1 Profile of the students in terms of: age; Gender; IQ; and Performance in Computer Programing-1

There are 85 respondents however, few of them missed to answer some questions in the questionnaire. Two of the variables namely, IQ and final grade are extremes as exhibited by the standard deviations and supported by the highest and lowest scores and grades of students in their IQ and final grade.

3. 2 Strengths and weaknesses of the students' study habits

Table 1. The Study Habits of the respondents

Indicators	Mean	Descriptive Rating
Time Management	2.5	OK but improvement needed
Study Environment	1.8	Need Help
Test Taking and Preparation skills	1.7	Need Help
Note taking skills	1.2	Need Help
Reading skills	0.6	Need Help
Writing skills	1.2	Need Help
Math skills	1.2	Need Help
Total	1.4	Need Help

The study habits found it to be "need help" though, time management is "ok but improvement needed". Thus, BSCS-LEP students have fair study habits.

3.2 The relationship between study habits and performance of BSCS students in Computer Programming -1.

Table 2.Test of relationship between study habits and performance of students

			Mathematics Skills
Kendall's tau_b	Final Grade	Correlation Coefficient	.234**
		Sig. (2-tailed)	.003
		N	85
Spearman's rho	Final Grade	Correlation Coefficient	.323**
		Sig. (2-tailed)	.003
		N	85

Table 2 revealed that only mathematics skill is correlated positively and significant to the performance of students as manifested by Kendall's tau_b and Spearman's rho correlations. Results conveys with the study of Fletcher in 1984, that procedural programming, math skills and several cognitive abilities such as general reasoning and analytic processing have positive correlation. Likewise, visual programming course have significant correlations with math course grades (Taylor and Moundifled, 1991).

IV. SUMMARY

Results revealed that in the 85 respondents, few of them missed to answer some questions in the questionnaire. Besides, two of the variables, IQ and final grade are extremes as reflected n the standard deviations and supported by the highest and lowest scores and grades of students in their IQ and final grade.

From the 85total numbers of student-respondents, 65.9% or 56 among them are female, while 34.1 % or 29 are male.

Moreover, the study habits found it to be "need help" for almost of the criteria except time management is "ok but improvement needed".

Finally, study showed that only mathematics skill is correlated positively and significantly to the performance of students as manifested by kendall's tau_b and spearman's rho correlations.

CONCLUSIONS

Students of the College of Computer Science has god study habits as per standard of Viginia Gordon's University having the rating of "ok, but improvement needed.

Study habits are predictors to the performance of students in computer programming-1.

RECOMMEDATIONS

The adoption of utilized questionnaire is encouraged to be used by the researchers in similar field of study.

Study habits could be the basis in preparing training design on teaching methodology and in designing course syllabi in computer subjects.

Continuing study is encouraged to further see the effect of study habits in other computer professional subjects.

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