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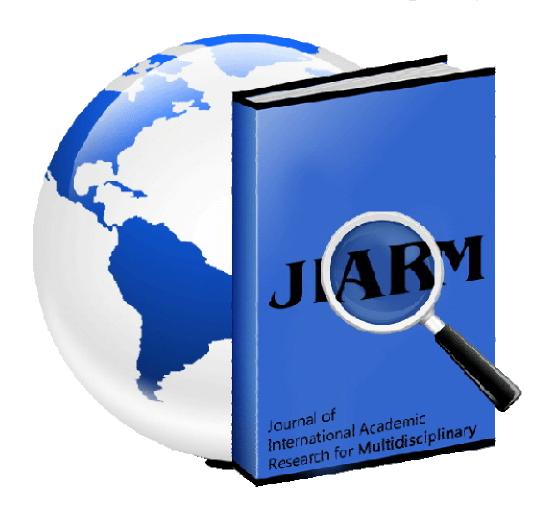## Academic Research for Multidisciplinary

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ACADEMIC PERFORMANCE OF FRESHMAN ENGINEERING STUDENTS BASED ON THEIR PERCEPTION AND ACTUAL FINAL GRADES

DR. JAKE M. LAGUADOR*

*Research Director, Lyceum of the Philippines University, Batangas City, Philippines

ABSTRACT

This study aimed to determine the perceived and actual academic performance of freshman engineering students. The descriptive survey type of research was utilized in the study. The respondents were First year Engineering students at Lyceum of the Philippines University in Batangas City. Part of the study is to determine the significant relationship between the students' grade perception and the actual academic performance as well as the significant difference in the actual academic performance of the students in terms of gender and program enrolled. Male students obtained higher grades in Chemistry Lecture and English + against their female counterpart while the rest of the subjects, female students obtained higher grades than male as well as in the average grade mean. Students who perceived with lower grades also received not too far from the actual grades after the semester and those who perceived higher grades also received higher actual academic performance. Male and female respondents received both higher and lower final grades in all subjects. General Engineering students performed significantly higher than Computer Engineering group in term of actual academic performance.

KEYWORDS: Academic Performance, Final Grades, Freshman Engineering, LPU

INTRODUCTION

Academic performance is an important result of all college co-curricular activities. Grades and other aspects of classroom assessment influence student motivation to learn and these provide students with information that they use in their learning (Brookhart, 2008). Many aspects of college education are included in the totality of this performance whether sports and cultural exercises of the university were also part of academic growth of all students. The valuable perception of students on how they perceived their grades at the end of semester is a partial overview of how they thought of their capability to perform and surpass all the challenges of the course for a certain period or semester. Students demonstrated a conceptualization of grading

where effort should be weighted comparably to actual performance in importance to the composition of a grade, with the expectation that grade allocation should reflect this perception (Tippin, 2012).

Muchera (2010) study showed that there were sex and grade differences in academic performance and most aspects of self-concept. Specifically, girls did better in math. Performance in English was not significantly different. Grade level differences showed a downward trend relative to norms in both math and English performance with the lower grade levels performing better. This trend possibly related to the changing standards by the teachers.

University students are also poor at estimating their own test-performance and over-estimate their predicted test score. However, females, white and working class students have less inflated view of themselves. Self-perception has limited impact on the expected probability of success and expected returns amongst these university students (Chevalier, 2007).

This study focuses on the perceived grades of the students at the beginning of the semester and later compares these to their actual grade at the end of the semester. Knowing their initial grades will provide the teachers the basic idea on how the students evaluate their own ability and how they set boundaries and limitations considering their recognized strength and weaknesses. Investigating students' perceptions of grades has the potential to address a gap in the literature and to reduce grading tension by providing insights for creating alternative grading rubrics (Strobino, Gravitz & Liddle, 2002).

This study aimed to determine the academic performance of freshman engineering students based on their perception and actual final grades during 1st Semester, SY 2011-2012. It is also determined the academic performance of the freshman Engineering students based on their actual final grades according to gender, if there is a significant relationship between the students' grade perception and actual academic performance and to determine if there is significant difference in the actual academic performance of the students in terms of gender; and program enrolled.

Materials and Methods

The descriptive survey type of research was utilized in the study. Descriptive survey method is appropriate for data derived from simple observational situations, whether these are actually physically observed or observed through the use of a

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questionnaire or poll techniques (Costales and Zulueta, 2003). The respondents of the study were First year BSCoE and General Engineering students enrolled during 1st Sem SY 2011-2012 at Lyceum of the Philippines University in Batangas City.

Data were collected using documentary analysis of their final grades in each subject and a survey regarding their perceived grade that they can possibly obtain at the end of the semester. Data were gathered two weeks after the opening of classes and after having their orientation with the teachers and having understood the nature of the subjects where they were enrolled.

The data were collected, classified, tabulated and coded for analysis. The following statistical tools were applied in interpreting the data obtained from the study, including the average, rank, t-test and Pearson product moment correlation coefficient.

Results and Discussion

Table 1 shows the academic performance of freshman Engineering students Based on their perception and actual final grades.

Table 1

Academic Performance of Freshman Engineering Students Based on Their Perception and Actual Final Grades

Subjects	Grade Perception				Actual Grade			
	CoE	GE	Total	Rank	CoE	GE	Total	Rank
Chem Lec	2.37	1.81	2.06	8	2.57	1.87	2.18	6
ChemLab	2.29	1.84	2.04	7	2.38	1.89	2.11	5
Algebra	2.20	1.79	1.97	5	2.66	2.59	2.62	8
Trigonometry	2.23	1.88	2.03	6	2.79	2.24	2.48	7
English +	2.20	1.70	1.92	3	2.48	1.50	1.88	2
Draw 1	2.17	1.76	1.94	4	2.44	1.80	2.08	4
PE 1	1.95	1.48	1.69	2	2.17	1.82	1.97	3
NSTP	1.87	1.48	1.65	1		1.40	1.40	1
Average	**2.17**	**1.72**	**1.92**		**2.53**	**1.89**	**2.17**	

NSTP obtained the highest rank with highest grade perception for both CoE

and GE and also highest rank in the actual grade only for GE due to late submission of grade for the NSTP subject of CoE during the semester. This signifies that the students perceived they can get high grades in NSTP from the start of the semester.

In the perceived grade of the students, PE 1 obtained the second rank and then it falls in third in the actual grade performance. But still, not too far from their expectation of the subject to receive high grades. English + was perceived to be in the third rank and fall in the second place in the actual grade performance while Draw 1 remains on the fourth place. Algebra was considered by the students at the beginning with moderate difficulty becomes the hardest among all their subjects where they obtained the lowest mean grade and Trigonometry they also believed harder than chemistry turns to be harder than what they have expected while the Chemistry subjects both Lecture and Laboratory which they considered two of the hardest subjects for them to get high grades turns to be in moderate difficulty.

Only in English + subject they received higher grade than what they had expected from the beginning while the rest of the subjects, they received lower than what they believed that they can achieve.

Table2 shows the academic performance of the freshman engineering students based on their actual final grades according to gender.

Table2

Academic Performance of Freshman Engineering Students Based on Their Actual Final grades according to Gender

Actual Grade	Gender		
	Male	**Female**	**Total**
Chem Lec	2.16	2.24	2.18
ChemLab	2.15	2.01	2.11
Algebra	2.66	2.54	2.62
Trigonometry	2.52	2.38	2.48
English +	1.82	1.98	1.88
Draw 1	2.09	2.06	2.08
PE 1	1.99	1.91	1.97
NSTP	1.43	1.33	1.40
Average	**2.20**	**2.11**	**2.17**

It can be noted that male students obtained higher grades in Chemistry Lec and English + against their female counterpart. But the rest of the subjects, female students obtained higher grades than male students as well as the average grade mean.

Table 3 reveals the significant relationship between perception and actual academic performance.

Table 3

Significant Relationship between Perception and Actual Academic Performance

Subjects	r-value	p-value	Remarks	Decision
Chem Lec	.634	.000	Significant	Reject
ChemLab	.587	.000	Significant	Reject
Algebra	.582	.000	Significant	Reject
Trigonometry	.673	.000	Significant	Reject
English +	.615	.000	Significant	Reject
Draw 1	.602	.000	Significant	Reject
PE 1	.480	.000	Significant	Reject
Average	.762	.000	Significant	Reject

** Correlation is significant at the 0.01 level (2-tailed).

All computed p-values were less than 0.01 level of significance, therefore, the null hypothesis of no significant relationship between the perception and actual academic performance of the freshman students is rejected. This implies that those students who perceived with lower grades also received not too far from the actual grades after the semester. Those who perceived higher grades also received higher actual academic performance. It means that they know what will happen to their final grades based on their perception. Because they are only limiting their abilities in what they believed they can only accomplish especially those with perceived lower grades. They are also honest enough in answering the survey based on how they acknowledge their capacity to think and perform academically.

Table 4 reveals the significant difference between male and female actual academic performance.

Table 4

Significant Difference between Male and Female Actual Academic Performance

Subjects	t-value	P-value	Remarks	Decision
Chem Lec	-.588	.559	Not Significant	Accept
ChemLab	1.293	.201	Not Significant	Accept
Algebra	.652	.517	Not Significant	Accept
Trigonometry	1.069	.289	Not Significant	Accept
English +	-.869	.389	Not Significant	Accept
Draw 1	.206	.838	Not Significant	Accept
PE 1	.661	.511	Not Significant	Accept
NSTP	1.693	.100	Not Significant	Accept

In terms of gender differences, both male and female respondents received both higher and lower final grades in all subjects, therefore the null hypothesis of no significant difference between male and female is accepted.

Table 5 reveals the significant difference between CpE and GE actual academic performance.

Table 5

Significant Difference between CpE and GE Actual Academic Performance

Subjects	t-value	P-value	Remarks	Decision
Chem Lec	-7.609	.000	Significant	Reject
ChemLab	-6.277	.000	Significant	Reject
Algebra	-.384	.703	Not Significant	Accept
Trigonometry	-4.993	.000	Significant	Reject
English +	-8.947	.000	Significant	Reject
Draw 1	-5.476	.000	Significant	Reject
PE 1	-3.268	.002	Significant	Reject

Differences in actual academic performance between Computer Engineering and General Engineering students were not only occur in Algebra subject because this is where they received both groups almost low grades because its difficulty. The rest

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of the subjects have significant differences between the two groups. Therefore the null hypothesis is rejected.

CONCLUSIONS AND RECOMMENDATION

Only in English+ subject they received higher grade than what they had expected from the beginning of the semester while the rest of the subjects, they received lower than what they had perceived. Male students obtained higher grades in Chemistry Lecture and English + against their female counterpart while the rest of the subjects, female students obtained higher grades than male as well as in the average grade mean. Students who perceived with lower grades also received not too far from the actual grades after the semester and those who perceived higher grades also received higher actual academic performance. Male and female respondents received both higher and lower final grades in all subjects. General Engineering students performed significantly higher than Computer Engineering group in term of actual academic performance.

Students must learn how to set higher goals to achieve at the end of the semester and try to reach these goals through hard work and dedication to studies. Male students must exert more effort in studying their lessons to do almost the same performance of what female students can achieve through perseverance. Students must appreciate and understand the importance of not only having good skills, behaviour and track records but also having good grades in the Transcript of Records. Teachers must provide the students clearer direction and objectives of the subject to better understand what to expect at the end of the course or even at the end of a project and to help them increase their enthusiasm to work and finish the activity. Everyone in the academic community of LPU must learn how to support the activities of the students to help them prepare for a better future.

REFERENCES

1. Brookhart, S. M. 2008. "Student Perceptions of Grades", Grading (2nd Edition), url: http://www.education.com/reference/article/student-perceptions-grades/?page=2, date retrieved: May 11, 2012

2. Chevalier, A., Gibbons, S., Thorpe, A., Snell, M., Hoskins, S. 2007. "Students' Academic Self-Perception", url: http://ftp.iza.org/dp3031.pdf, date retrieved: May 11, 2012.

3. Mucherah, Winnie, Dixon, F., Hartley, K., Hardin, T. 2010. Perceptions of self-concept and actual academic performance in Math and English among High School Students in Kenya, Educational Research, Vol. 1(8) pp. 263-275, url: http://www.interesjournals.org/ER, date retrieved May 11, 2012.

4. Strobino, Jane, Gravitz, K., Liddle, C. 2002. Student perceptions of grades: a systems perspective, Academic Exchange Quarterly, url: http://findarticles.com/p/articles/mi_hb3325/is_1_6/ai_n28914630/, date retrieved: May 11, 2012.

5. Tippin, Gregory K. (2012), "Student perception of academic grading: Personality, academic orientation, and effort", Active Learning in Higher Education, url: http://alh.sagepub.com/content/13/1/51.abstract, date retrieved: May 11, 2012