

## **BIBLIOGRAPHY**

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## **ABSTRACT**

This study was conducted to determine the odds on the decision of freshmen college students to pursue their enrolled course and to determine the variables that affect the decision of freshmen college students to pursue their enrolled course.

The data were obtained from randomly selected freshmen college students enrolled in degree programs of the Benguet State University with the aid of a questionnaire as guide. The Logistic Regression Analysis was used to determine the factors that affect freshmen college students whether to pursue or not to pursue their enrolled course.

Based on the result of the study, 78 percent of the students are decided to pursue their enrolled course as opposed to 22 percent students who are decided not to pursue their enrolled course. The variables that affect significantly in pursuing their course are: gender, family size, and scholarship.

With all the results obtained, further study on the decision of freshmen college students is recommended to identify other factors that influence freshmen college students to pursue or not to pursue their enrolled course.

## TABLE OF CONTENTS

	Pages
Bibliography.....	i
Abstract.....	i
Table of Contents.....	ii
INTRODUCTION	
Background of the Study .....	1
Objectives of the Study .....	3
Importance of the Problem .....	3
Scope and Delimitation of the Study .....	4
REVIEW OF RELATED LITERATURE.....	5
THEORETICAL FRAMEWORK .....	12
Definition of Terms .....	16
METHODOLOGY	
Respondents of the study.....	18
Data Collection.....	18
Data Gathered.....	18
Data Analysis.....	21
RESULTS AND DISCUSSION.....	22
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	33
LITERATURE CITED.....	36
APPENDICES.....	38

## **INTRODUCTION**

### Background of the Study

Going to college is one of the most important decisions a high school student can make. Contrary to popular belief, preparing for college is even more important than simply going to college. How a student prepares for college has a great influence whether or not the student will actually go to college. Many students and parents underestimate the importance of college preparation. Due to this miscalculation; students go to college without a clear choice of concentration and the right choice of college.

Choice of concentration or course required inquiry and reasoned judgement and some creative research on the part of students. Because choice of concentration is a complex decision, it is not surprising that a number of students change concentrations after first semester or after the first year of college.

Aside from choosing a course, choosing a college is one of the most difficult and important decisions/choices a student will ever have to make. It is important to select a college that first, has the major that is interests you and second, has a good program. Even if students are not sure what course to take, they must visit different colleges to have information on the courses offered.

According to a survey conducted at University of California, Los Angeles (UCLA), the percentage of freshmen choosing their college because of low tuition fee rose sharply to its second highest point ever, 31.3 percent compared to 27.7



percent in 1995. And those going elsewhere because they were not offered financial aid by their first college reached a high 5.7 percent up from 5.2 percent in 1989, when this question last was asked.

Benguet State University is one of the 81 State Universities and Colleges (SUC's) in the Philippines located at La Trinidad, Benguet where students, Filipinos or foreigners choose to study. It is known for its popularity as the center of excellence in agricultural education, offering high quality education and assessing low cost tuition.

The courses offered are Bachelor of Science in Agriculture (BSA), Bachelor of Science in Agricultural Engineering (BSAE), Bachelor of Science in Applied Statistics (BSAS), Bachelor of Science in Environmental Science (BSES), Bachelor of Science in Information Technology (BSIT), Bachelor of Science in Nursing (BSN), Doctor of Veterinary Medicine (DVM), Bachelor of Science in Elementary Education (BEE), Bachelor of Science in Home Economics (BSHE), Bachelor of Science in Nutrition Dietetics (BSND), Bachelor of Science in Forestry (BSF), Bachelor of Science in Agri-business (BSAB), Diploma in Agro-Forestry (DAF), and a 6 months Automotive Technology.

Choice of college and choice of concentration or course go together. Changing concentration and changing of college is a waste of time and money. To avoid this, it is important to study the factors that affect the decision of freshmen college students to pursue their enrolled course.



### Objectives of the Study

The main objective of this study is to determine the odds on the decision of freshmen college students to pursue their enrolled course. Specifically, it aims to determine the variables that affect freshmen college students in their decision to pursue their enrolled course.

### Importance of the Study

The result of this study would serve as a guideline to identify the factors that affect the decision of freshmen college students to pursue their enrolled course and provide insight on the importance of self - evaluation in making decisions in life. For high school students, it would serve as an enlightenment for them to take their studies seriously. It could also give information to parents in order for them to guide and support their children in their studies.

Furthermore, the result of the study could guide teachers, school administrators and guidance counselors in structuring programs or activities for the incoming freshmen college students to help them in choosing their course as well as choosing the college. It could also serve as basis or reference for future related studies.



### Scope and Delimitation of the Study

The study was conducted at the Benguet State University campus. The respondents were the freshmen college students and they were selected randomly from the different courses of Benguet State University.

The number of respondents was determined using stratified random sampling technique. The study was conducted from November 2007 to March 2008.



## **REVIEW OF RELATED LITERATURE**

### Application of Logistic Regression Analysis

Logistic regression analysis is a type of predictive model that can be used when the target variable is a categorical variable with two categories for example: live / die, has disease/doesn't have disease, purchase product / doesn't purchase, wins race / doesn't win, etc. A logistic regression model does not involve decision trees and is more a kin to nonlinear regression such as fitting a polynomial to a set of data values. Logistic regression can be used only with two types of target variables; 1) a categorical target variable that has exactly two categories (i.e. a binary or dichotomous variable) 2) a continuous target variable that has values in the range 0.0 to 1.0 representing probability values or proportions ([Http:www.dtrek.com/logistic.htm](http://www.dtrek.com/logistic.htm))

Logistic regression is a part of a categorical model called generalized linear models. This broad class of models includes ordinary regression and ANOVA, as well as Multivariate Statistical Technique like MANOVA, ANOVA and Loglinear regression. An excellent generalized model is presented by Agresti (1996).

The logistic regression model can be extended to more factorial designs. Graphical models can be used in checking the logistic regression and the local mean deviant plots are used for detecting the over all lack of fit mentioned by Elizon Rogel (1998).



Comparing logistic regression model and discriminant analysis, it was found that logistic regression model is more preferred because the simple model for  $P(X/Y)$  is ambiguous when the number of explanatory variables are moderate or large and that the parameters to be estimated are only in the conditional contributions of  $y$  given  $x$  in logistic regression as cited by Rubin (1984).

Logistic regression allows one to predict a discrete outcome such as group membership, from one set of variable that may be continuous, or a mix of any of these. Generally, the dependent or response variable is dichotomous, such as presence/absence or success/ failure. Discriminant Analysis is also used to predict group membership with only two groups. However, Discriminant Analysis can only be used with continuous independent variables. Thus, in instances where the independent variables are categorical or a mix of continuous and categorical, Logistic Regression is preferred.

Logistic Regression aims to correctly predict the category of outcome for individual cases using the most parsimonious model.

To accomplish this goal, a model is created that includes all predictor variables that are useful in predicting the response variable. Several different options are available during the model creation. Variables can be entered into the model specified by the researcher. The fitted model can be tested after each coefficient is added or deleted in the procedure called stepwise regression.





For the uses of logistic regression, this is used for the prediction of group membership. Since logistic regression calculates the probability of success over the probability of failure, the results of the analysis are in the form of odds ratio.

The logistic regression also provides knowledge of the relationship and strengths among the variables.

### Studies on Choosing and Enrolling a Course

Many students come to school uncertain about the field of study they wish to pursue. Some students have a variety of career interests and need time to make a decision regarding which college and major are most appropriate for them. Others have narrowed their choices to two or three options but want to explore these choices in greater depth before they make a firm commitment. Still other students have no idea what they want to major in or what career opportunities are available to them.

Understanding the development of matriculating students is essential to those seeking to make a difference in these student's lives. Vincent Tinto (1993) outlined three stages students move through: separation, transition and incorporation. Students first go through a separation stage in which they move away from their home environment. Although this can be quite traumatic for students, most eventually are able to move to the second stage, transition. During this stage students are torn between their old environment and the new one; they



may not feel they belong in their old environments but have yet to find their places in the new one. Finally, student's move into incorporation when they have achieved full membership into the social and academic communities of the institution.

Gardner and Siegel (2001) cite data gathered by American College Testing (ACT) indicating that 28 percent of students in public four year institutions fail to continue beyond their first year in college. Because of this, and other factors, interventions targeted to first year students have become important. Many institutions have adopted programs designed to provide a "rite of passage" in which students are welcomed, supported, celebrated, and eventually assimilated into the campus (Gardner, 1986).

Butner, B., et.al. (2001), qualitatively examined the college choice process for African American and Hispanic females at a large Southwestern University. Identified, through the voices of these women three major themes that support their decision to attend college: familial influences, the Quinter essential American dream and striving to overcome

Amilbahar (2003) conducted a study to determine: 1) the relative strength of the students across different intelligences; 2) if the socio-demographic characteristics of the students are significantly treated to their chosen course; 3) if the socio-demographic characteristics of the respondents influence their relative strength in different intelligence and 4) if the relative strength of the respondents



in different intelligence influence their choice of course enrolled by them. The study included a total of three hundred ninety three (393) first year college students of the University of Southern Mindanao. Data were gathered using questionnaire and the standardized Multiple Intelligence Checklist for Adults (MICA).

The students were strongest in intrapersonal intelligence, followed by naturalistic then interpersonal and linguistic intelligence. The last four where the students showed less competence were bodily-kinesthetic, musical, spatial and logical mathematical intelligence. Family monthly income has no significant relation with the relative strengths of the students in different intelligences. Age, gender, father's occupation and mother's occupation were found to have significant influence on the relative strengths of the students in different intelligences. Age, gender, family monthly income and parents' occupation showed significant relation with the chosen course at 5% level of significance. It was also found that the relative strength of the students in bodily-kinesthetic, intrapersonal, logical-mathematical and spatial intelligence influenced the choice of course in which they enrolled.

Bouse, G. A. and Hossler, D. (1991) conducted five-year study of the various choices students (n=4923) must make at each grade level in high school to make solid decisions about which college or university to attend. Findings



revealed that parents played important role in formation of students' educational aspirations and in decisions about saving for a post-secondary education.

According to the study of Dr. Wafaa Guirgis (1998), all of the children of educated women were enrolled in school; 91 percent of low-literate respondent's children in small families were enrolled, and 72 percent of low-literate respondent's children in large families were enrolled. In these small families, 5 percent had both boys and girls not enrolled, 3 percent had boys only not enrolled, and 1 percent had girls only not enrolled. Sixteen percent of the large families reported boys and girls not enrolled, 5 percent boys not enrolled, and 7 percent girls not enrolled. Children were kept home because school was too expensive, they had failed school, or they were needed at home or at work.

Erdmann, D. G. (1983), surveyed high school graduating seniors (N=401) and guidance counselor, (N=536) concerning influences on college choice. Results showed that important factors included availability of specific programs, reputation, location and size, and counselor and parent recommendations.

Broekemier, G. M., (2002) surveyed adult college students regarding their motivation for attending college and the relative importance of college choice criteria. Getting better jobs, gaining general knowledge and enhancement of self-esteem were most frequently mentioned. Availability of desired programs, days / times of needed classes, locations of courses, cost and faculty reputations are the most important choice criteria.



A study of 740 first-year university students found a strong positive correlation between students' college choice, subsequent expectations of the institution and intent to stay at or leave the university. It is suggested that process occurring before matriculation are as significant as the college social and academic environment or external forces in student retention (Villella, E. F., & Hu, M., 1990).

Astin's Involvement theory (1985) emphasized that students learn and develop when they become active in the collegiate experience. Upcraft (1995) expanded on this theory when he stated "The greater the quantity and quality of involvement, the more likely the student will succeed in college"(p.18). College personnel can help students become active in a number of ways; two successful strategies are an activities carnival at the beginning of the year that introduces students to different campus organizations and scheduling freshman planning conference between students and their advisers.

Upcraft (1995) noted another common student development theory attributed to Scholssberg, Lynch and Chickering. This theory concentrates on students' needs to feel they matter and are appreciated. College personnel must realize that students need support form peers, faculty, staff and family if they are to succeed. Support networks must be in place no freshman can begin to make the important connections that will help them cope.



## THEORETICAL FRAMEWORK

### Logistic Regression Model

Binomial (binary) logistic regression model is a form of regression that is used when the dependent (Y) is a dichotomous variable and the independent variable (Xi) are continuous or categorical variables or both. The data consist of N vectors of joint observed values of the response variables and the explanatory variables for n cases.

For example logistic regression model states that

$$Y = 1 \text{ (P, if decided to pursue their enrolled course)}$$

$$Y = 0 \text{ (1 - P, if decided not to pursue their enrolled course)}$$

Cox (1970) introduced logistic regression to describe the dependency of binary variables on a set of continuous variable. Bioassay is a statistical model under logistic regression model, which was introduced by Brekson (1953) in connection with the analysis. The name of the model is derived from the fact that the log transformation of the probability of  $Y = 1$  is linear. The probability density function for Y has its form.

$$L = P(Y) = P_i^{y_i} (1 - P_i)^{1-y_i} \quad (1)$$

Where:  $i = 1, 2, 3, \dots, n$

$$P_i = \frac{e^{(B_0 + \sum B_i X_i)}}{1 + e^{(B_0 + \sum B_i X_i)}} \quad (2)$$

$$1 + e^{(B_0 + \sum B_i X_{ij})}$$

Where:  $j = 1, 2, 3, \dots, p$



### Wald Statistics

The Wald Statistics is the ratio of the unstandardized logit coefficient to its standard error. It is used to test the significance of individual logistic regression coefficients for each independent variable that is to test the null hypothesis in logistic regression that a particular logit (effect) coefficient is zero.

$$\text{Wald Statistic } (\chi^2) = b^2 / \text{ASE}_b^2 \quad (3)$$

Where:  $\text{ASE}_b^2$  = standard error of b

### Estimation of Odds Ratio

Logit can be converted easily into a statement simply by using exponential function (raising the natural “log e” to the  $b_1$  power). The original odd is multiplied by e to the both power, where b is the logistic regression coefficient, when the given independent variable increases one unit. The ratio of the Odd ratios of the independent is the ratio of the relative importance of the variables in terms of effect on the dependent variables odds.

$b_1 = \text{odds} (\pi / 1 - \pi) \times \exp (b_1)$  for any unit increased in  $X_1$

$$\text{For } X = X_j \quad (4)$$

$$\pi' (X_j) X_j) b_0 + b_1 (X_j + 1) (b) + b_1 (X_j + 1) (b) \quad (5)$$

$$\pi' = \log e (\pi / 1 - \pi)$$

$$\pi = 1 - e^{-(b_0 + b_1 x)}$$



Therefore

$$\Pi' = \log e ( e^{(b_0 + b_1x)} / 1 - e^{(b_0 + b_1x)} ) \quad (6)$$

$$\begin{aligned} B_1 &= \log e ( \Pi / 1 - \Pi ) \\ &= \log e ( \text{odds 2} ) \log e ( \text{odds 1} ) \end{aligned}$$

Where: odds 2 / odds 1 =  $e^{b_1}$

### Weighted Least Squares Estimation

We use the logistic function;

$$( Y ) = P = e^{(b_0 + b_1x)} / 1 + e^{(b_0 + b_1x)} \quad (10)$$

Assuming that when  $E ( Y )$  approach 0 and 1 gradually, and  $0 \leq 1$  ; where P is decided on the enrolled course. This function best describes the odds of the decision of Benguet State University freshmen college students in their enrolled course using logistic regression analysis.

### Goodness of Fit Test

Goodness of fit also known as Hosmer and Lemeshow's goodness, is an alternative to model chi – square ( $X^2$ ) for assessing the significance of a logistic regression model. Assuming that the test statistics  $B_0$  is thus goodness of fit tests statistics. The regression model is rejected as a description of the data if the level of significance,  $P = ( B_0 > B_0 )$ . Computed in an  $x^2$  distribution with  $I - ( P + 1 )$  degrees of freedom is sufficiently small. Determining its significance,





$$H_0 : E(Y) = e^{(b_0 + b_1x)} / 1 + e^{(b_0 + b_1x)}$$

Chi – square ( $\chi^2$ ) is used to test the statistics and it is in the form:

$$(\chi^2) = \sum \sum (O_{jk} - E_{jk})^2 / E_{jk}, \quad (7)$$

where:  $E_{jk} = \sum \prod_i = \prod (1 - \prod_i) = n_j - E_j$ , from these equation we

can test its statistic by

$$\chi^2 \sim \chi^2_{c-2} \quad (8)$$

where:  $c$  = number of classes



### Definition of Terms

Choice of Concentration . It is a particular course chosen by a student.

Degree Offering. Refers to the degree programs offered by the different colleges. at the Benguet State University. The different degree offerings are as follows: Bachelor of Science in Agriculture(BSA), Bachelor of Science in Agriculture Education(BSAE), Bachelor of Science in Agri – Business(BSAB), Bachelor of Science in Agricultural Engineering(BSAEng), Bachelor of Science in Forestry(BSF), Bachelor of Science in Nutrition Dietetics(BSND), Bachelor of Science in Home Economics(BSHE), Bachelor of Science in Elementary Education(BEE), Bachelor of Science in Secondary Education(BSE), Bachelor of Science in Nursing(BSN), Bachelor of Science in Applied Statistics(BSAS), Bachelor of Science in Environmental Science(BSES), Bachelor of Science in Information Technology(BSIT) and Doctor of Veterinary Medicine(DVM).

Factor. It is consist of a set of variables that are interrelated with one another.

Freshmen. The students on the first level of college.

Logistic. It is a popular choice for modeling a dichotomous regression variable

Odds Ratio. It is equal to exponential function of the slope.

Random. It is a process by which sampling is obtained without aiming for specific individual object or condition.



Regression. It refers to a function that yields the main value of a random variable under the condition that one or more independent variables have special values.

Regression Analysis. It is concerned with the study of the dependence of one variable, the dependent variable, on one or more other variables, the explanatory variables with a view to estimating and/or predicting the mean or average value of the former in terms of unknown of the fixed values of the latter.

Forward stepwise regression. It is a regression used in adding or deleting of independent variables depending on the marginal contribution of the said variables.

Variables. It is a characteristic of interest measurable and observable in every subject in the study.

Wald Statistics. It is commonly used to test the significance of individual logistics coefficients for each independent variable.



## **METHODOLOGY**

### Respondents of the Study

The respondents of the study college freshmen college students from the different degree programs offered at Benguet State University. This study was conducted at Benguet State University from November 2007 to March 2008.

### Data Collection

Data were gathered from the Benguet State University freshmen college students. A structural survey questionnaire was administered and floated to the respondents according to the number of enrollees per course. From the economic and demographic profile of the respondents, 10 variables were considered. The independent variables were as follows; gender, age, weekly allowance, average grade in high school, family monthly income, family size, number of siblings in the family that are college graduate, working vs. non-working student, with scholarship vs. without scholarship, financially dependent to parents vs. financially independent to parents. And the dependent variable is the decision of freshmen college students to pursue their enrolled course.

### Data Gathered

Table 1 shows the variables observed and measured in the study. The dependent variable was the decision of freshmen college students to pursue (1) or



not to pursue (0) their enrolled course. Independent variables included were the possible factors that may contribute to the respondents' decision to pursue or not to pursue their enrolled course which includes: gender, age, weekly allowance, average grade in high school, family monthly income, family size, number of siblings in the family who are college graduates, working vs. non-working student, with scholarship vs. without scholarship and financially dependent vs. financially independent to parents.



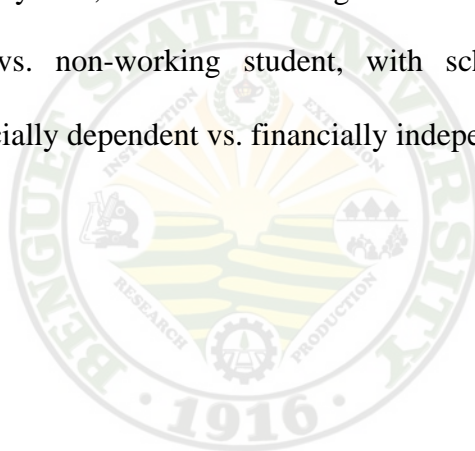
Table 1. The variables observed and measured in the study

Variable Description	Observed	Value
Decision	Decided to Pursue	1
	Decided not to Pursue	0
Gender	Male	1
	Female	0
Age		
Weekly Allowance		
Average Grade in High School		
Family Monthly Income	5,000 & below	1
	5,000-10,000	2
	10,000-20,000	3
	20,000 & above	4
Family Size		
	Number of siblings who are college graduate	
	None	0
	1-3	1
	4 & above	2
Working Student vs. Non-working Student	Working Student	1
	Non-working Student	2
With Scholarship vs. Without Scholarship	With Scholarship	1
	Without Scholarship	2
Financially Dependent vs. Financially Independent	Financially Dependent	1
	Financially Independent	2



### Data Analysis

The collected data were encoded in the computer and analyzed using Statistical Packages for Social Sciences (SPSS). Logistic regression techniques was employed on the data gathered from the respondents treating the decision of freshmen college students to pursue their enrolled course as the dependent variable and the socio-economic profile as the independent variables which include gender, age, weekly allowance, average grade in high school, family monthly income, family size, number of siblings in the family who are college graduates, working vs. non-working student, with scholarship vs. without scholarship and financially dependent vs. financially independent to parents.



## RESULTS AND DISCUSSION

The population of freshmen college students from the selected courses of Benguet State University school year 2007-2008 is shown in Table 2. Obviously, the population of freshmen college students during the first semester decreased during the second semester. This shows that some students were not able to continue their studies in the university. Some might have transferred in other universities, shifted to other course or dropped from school. With this, the study aims to determine the factors that affect freshmen college students to pursue their enrolled course.

### Decision of Freshmen College Students to Pursue Their Enrolled Course

Table 3 shows the descriptive statistics of the independent variables by the dependent variable and total number of respondents. Majority of the age groups are decided to pursue their enrolled course. Age ranging from 17-18 proves that half of the respondents are decided to pursue their enrolled course having a percentage of 45 percent. All male respondents are decided to pursue their enrolled course while 27.16 percent females are decided not to pursue their enrolled course. It also shows that more students have low weekly allowance and they have a higher frequency of deciding not to pursue their enrolled course. For the family monthly income, more students belong to low income families and





students from this families have a more frequency of deciding not to pursue their enrolled course.

Respondents from a family size of 9-11 have the highest percentage on the decision, not to pursue their enrolled course which is 36.36 percent and respondents having a family size of 3-5 have the lowest percentage on the decision, not to pursue their enrolled course. Therefore, students from a bigger family size have a lesser chance not to pursue their enrolled course compared to those students who belong to a smaller family size.

Half of the respondents have brothers or sisters who are college graduate and almost all of them are decided to pursue their enrolled course.95 percent of the respondents are non-working students and 20 of them are decided not to pursue their enrolled course. 63 percent have no scholarship and 50 of them are decided to pursue their enrolled course. 81 percent of the students are financially dependent to their parents and 14 are decided not to pursue their enrolled course, 19 are financially independent and 7 are decided not to pursue their enrolled course. From the total number of respondents, 78 percent are decided to pursue their enrolled course as opposed to 22 percent of the population who answered that they are decided not to pursue their enrolled course.



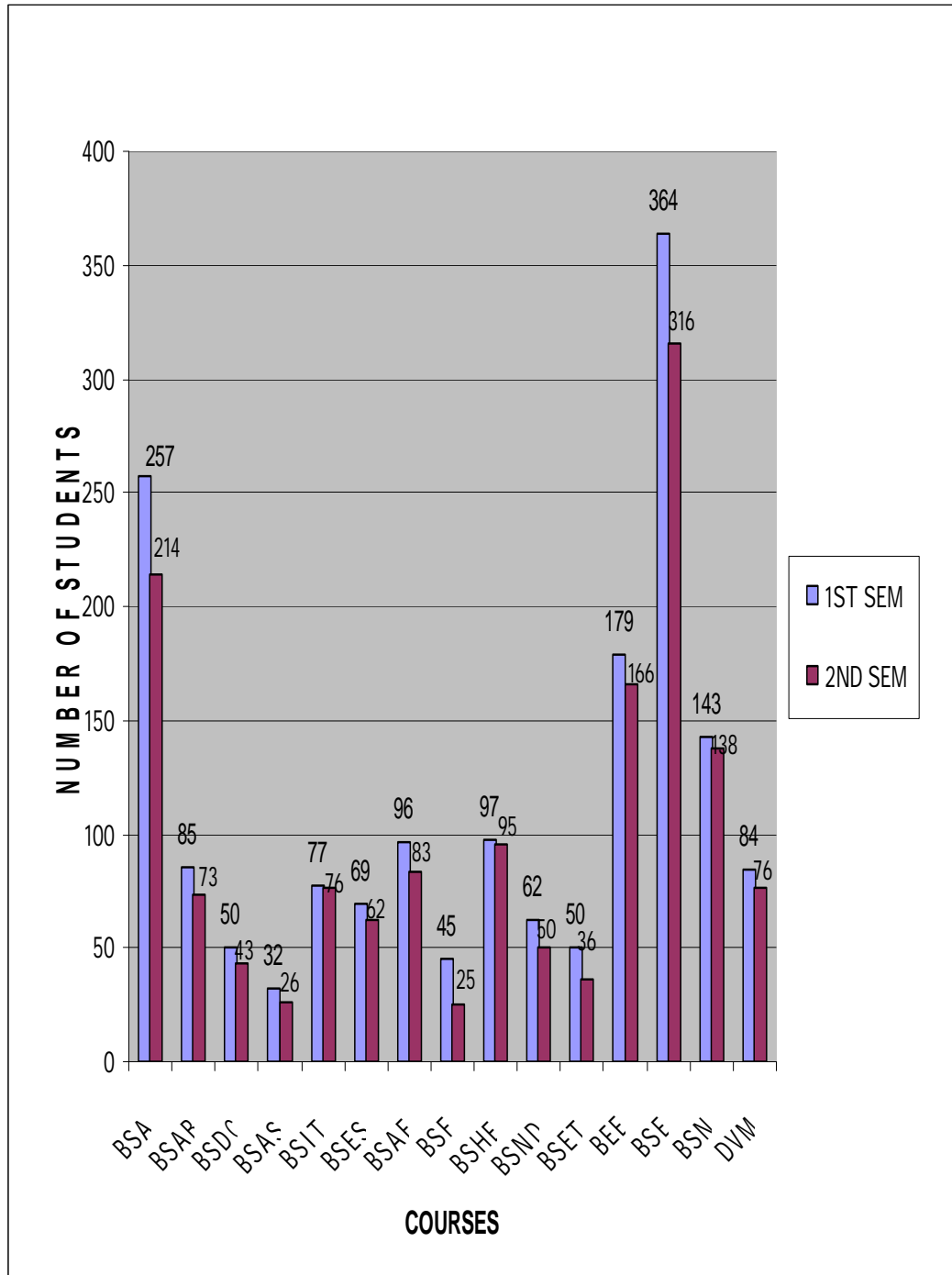


Figure 1. Enrollment of Freshmen College Students from Selected Courses of Benguet State University SY: 2007-2008



The first year of college is the most trying time for many students; new responsibilities and expectations can be overwhelming. For this reason, a large percentage of students do not make it to their sophomore year. Gardner and Siegel (2001) cite data gathered by American College Testing (ACT) indicating that 28 percent of students in public four year institutions fail to continue beyond their first year in college. Because of this, and other factors, interventions targeted to first year students have become important. Many institutions have adopted programs designed to provide a “rite of passage” in which students are welcomed, supported, celebrated, and eventually assimilated into the campus (Gardner, 1986).

Table 2. Summary of the Independent Variable by the Dependent Variable

Variables	Decided to pursue	Percentage (%)	Decided not to pursue	Percentage (%)	Total Frequency
Gender					
Male	19	100	0	0	19
Female	59	72.84	22	27.16	81
Age					
15-16	28	75.68	9	24.32	37
17-18	42	79.25	11	20.75	53
19-20	8	80	2	20	10
Weekly Allowance					
200 & below	25	64.10	14	35.90	39
201-300	18	90	2	10	20
301-400	14	77.78	4	22.22	18
401-500	15	93.75	1	6.25	16
501 & above	6	85.71	1	14.29	7



Continuation...

Average Grade	11	61.11	5	27.78	18
in High School	34	82.93	7	17.07	41
80 & below	24	70.59	10	29.41	34
81-85	7	100	0	0	7
86-90					
91 & above					
Family					
Monthly					
Income					
1	26	72.22	10	27.78	36
2	35	77.78	10	22.22	45
3	14	93.33	1	6	15
4	3	75	1	25	4
Family Size					
3-5	30	83.33	6	17.65	36
6-8	29	82.86	6	17.14	35
9-11	14	63.64	8	36.36	22
12 & above	5	71.43	2	28.57	7
No. of Sibling					
in the Family					
who are					
college					
graduate					
0	38	82.61	8	17.39	46
1	52	98.11	1	1.89	53
2	0	0	1	100	1
Working vs.					
Non-working					
Student					
1	3	60	2	40	5
2	75	78.95	20	21.05	95
With					
Scholarship vs.					
Without					
Scholarship					
1	26	70.27	9	24.32	37
2	50	79.37	13	20.63	63



Continuation...

Financially Dependent vs. Financially Independent	67 12	79.01 63.16	14 7	17.28 36.84	81 19
1					
2					
Total Number of Respondents	78		22		100



### Forward Stepwise Logistic Regression Result

In identifying the factors that contribute to the decision of freshmen college students to pursue their enrolled course, the data were analyzed prior to the application of forward stepwise logistic regression analysis. The response on the question, “are you decided to pursue your enrolled course” was used as the dependent variable, wherein 78 percent of the respondents answered “yes”.

The results were summarized in Table 3 in which there are two models identified.

Model 1 contains the variable gender having a Wald statistics of 0.129, which was significant at 5 percent level of significance. The model has a goodness of fit with step chi-square as well as the model chi-square and block chi-square of 10.632. This model accounted for 78 percent correct percentage prediction with Nagelkerke ( $R^2$ ) of 15.5 percent of the explained variation on students’ decision to pursue their enrolled course. The odds ratio of 0.000 indicates the probability of students who are decided to pursue their enrolled course over the probability of students who are decided not to pursue their enrolled course.

Butner, B., et.al. (2001), qualitatively examined the college choice process for African American and Hispanic females at a large Southwestern University. Identified, through the voices of these women three major themes that support



their decision to attend college: familial influences, the Quinter essential American dream and striving to overcome.

Broekemier, G. M., & Seshadri, S. (1999), compared the importance ratings of various college choice criteria by 395 college bound high school seniors and their parents. Identified significant variables are student/ parent and student gender differences. Safety and academic issues were more important to females than males. Students identified social life, friends attending and athletic programs as more important than did parents.

Model 2 includes both gender and family size of respondents. It had a Wald statistics of 0.142, which was significant at 5 percent level of significance. The goodness of fit of this model slightly increased, the step chi-square decreased to 6.231 with model and block chi-square of 16.864. This model accounts 79 percent correct prediction by Nagelkerke ( $R^2$ ) of 23.8 percent explained variation on the students' decision in pursuing their enrolled course. The odds ratio of 0.786 indicates the proportionate change in the odds after the first step and before the second step. It means that the odds of students who are decided to pursue their enrolled course is 0.786 times greater than for students who are decided not to pursue their enrolled course.

According to the study of Dr. Wafaa Guirgis (1998), all of the children of educated women were enrolled in school; 91 percent of low-literate respondent's children in small families were enrolled, and 72 percent of low-literate



respondent's children in large families were enrolled. In these small families, 5 percent had both boys and girls not enrolled, 3 percent had boys only not enrolled, and 1 percent had girls only not enrolled. Sixteen percent of the large families reported boys and girls not enrolled, 5 percent boys not enrolled, and 7 percent girls not enrolled. Children were kept home because school was too expensive, they had failed school, or they were needed at home or at work.

Table 3. Factors affecting the decision of freshmen college students

VARIABLES	MODEL 1			MODEL2		
	Coef (S.E.)	Wald Stat Sig.	Odds Ratio	Coef (S.E.)	Wald Stat Sig.	Odds Ratio
Constant	9.203	22.857		11.046	0.251	
Gender	-8.216	0.129	0.000	-8.300	0.142	0.000
Family size				-0.241	5.784	0.786
Step- Chi-square[df]	10.632 [1]			6.231 [1]		
Model Chi-square	10.632 [1]			16.864 [2]		
Block Chi-square	10.632 [1]			16.864 [2]		
% Correct Percentage	78.0			79.0		
Nagelkerke (R <sup>2</sup> )	0.155			0.238		

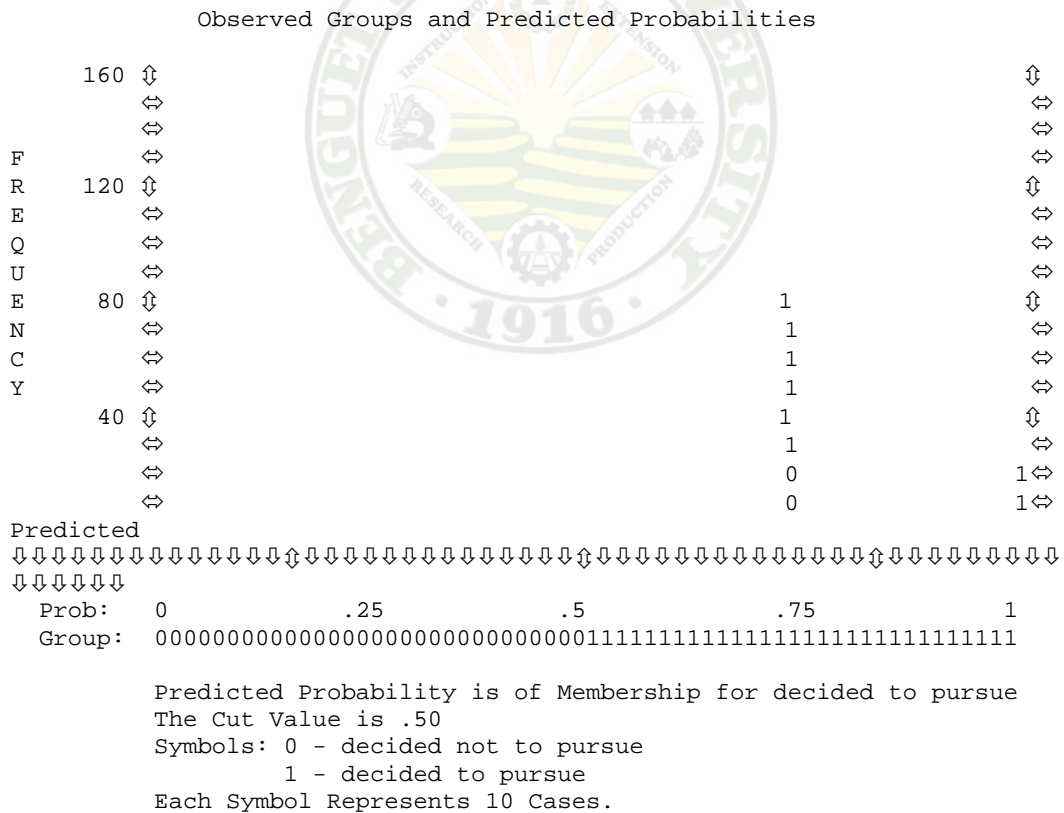




Classification plot-results

Figure 2 displays the histogram of the model 1 which contains the variable, gender. This shows the predicted probability of a students' decision to pursue or not to pursue their enrolled course. Gender is dichotomous and so there are only two columns of cases on the plot. All the students who are decided to pursue their enrolled course are on the right side and there are only two misclassified cases.

Figure2: Step number: 1





## **SUMMARY, CONCLUSION AND RECOMMENDATION**

### Summary

Some students don't have a clear vision regarding their reason for being in college. Perhaps they are here at their parent's insistence while not feeling that they are doing what they really want to do with their life. Sometimes courses and majors are chosen to please others, but have little or no relationship to the student's true interests. Many students just aren't sure about what they really want to do in their future career. It takes a fairly clear purpose to motivate a student to successfully engage in the lengthy and difficult process of higher education. The objective of this study was to determine the odds on the decision of freshmen college students to pursue their enrolled course, and to determine the factors that affect freshmen college students to pursue their enrolled course using logistic regression analysis. Questionnaires had been floated to the respondents for the data gathering.

### Conclusions

Based on the result of the study, using the statistical tool called logistic regression, the researchers found out that 78 percent of the students are decided to pursue their enrolled course and 22 percent are decided not to pursue their enrolled course. The variables considered that were assumed to affect the decision of freshmen college students to pursue their enrolled course are: age, gender,



weekly allowance, average grade, family monthly income, family size, number of siblings in the family who are college graduate, present residence, working student or nonworking student, with or without scholarship and financially dependent or financially dependent to parents. From the 10 independent variables, the result showed that only the variables gender, family size and scholarship have a significant effect on the decision of freshmen college students to pursue their enrolled course.

### Recommendations

It is therefore recommended that;

1. Parents must guide and support their children in every action or decision they make.
2. The Benguet State University should implement lectures on college and course choice to incoming freshmen college students who are interested in studying at the institution before or after the Entrance Qualifying Examination for freshmen students.
3. Other organizations of the Benguet State University should be united and have a common stand of students' welfare especially in their decision to pursue a course.
4. Students must evaluate or examine their selves on what field of specialization they are interested in before entering college.



5. The result of this study maybe a great help to Benguet State University guidance and counseling unit and other government and non-government organization. It maybe of help in counseling and fostering students awareness on having a direction to achieve success in the future. This would guide them in structuring activities or programs to divert students' attention to things that would enhance their personalities and their decision making for their future. With all the results obtained, further study on the decision of freshmen college students is recommended.



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Appendix A: The Questionnaire

Benguet State University  
College of Arts and Sciences  
Math - Physics – Statistics Department  
La Trinidad, Benguet

Dear Respondent,

As a requirement of the course, Bachelor of Science in Applied Statistics, we are conducting our thesis; a research entitled **“LOGISTIC REGRESSION ANALYSIS ON THE DECISION OF FRESHMEN COLLEGE STUDENTS TO PURSUE THEIR ENROLLED COURSE”**. In this connection, we would like to solicit your cooperation & assistance by answering the questionnaires completely and honestly. The researchers assure that your answers will be kept and treated with outmost confidentiality.

Thank you very much and more power.

Truly yours,

Juliet N. Carias  
Researcher

Meldrid A. Luisito  
Researcher

Noted by:

CRISTINA B. OCDEN  
Adviser





## QUESTIONNAIRE

Direction: Please check or write on the blank that corresponds to your answers.

Name: (Optional) \_\_\_\_\_ Gender: \_\_\_\_\_ Civil Status: \_\_\_\_\_

Age: \_\_\_\_\_

Average Grade in High school: \_\_\_\_\_

Number of Family members living (Family size): \_\_\_\_\_

Number of brothers/sisters who graduated in college: \_\_\_\_\_

Weekly allowance (please indicate): \_\_\_\_\_

Income of Both Parents (monthly):

\_\_\_\_\_ 1. Less than Php5, 000.00 \_\_\_\_\_ 3. Php10, 000-20,000

\_\_\_\_\_ 2. Php5, 000-10,000 \_\_\_\_\_ 4. Above Php20, 000

Present Residence:

\_\_\_\_\_ 1. Dormitory \_\_\_\_\_ 3. With family/parents

\_\_\_\_\_ 2. Boarding house \_\_\_\_\_ 4. With relatives

Working student (1): \_\_\_\_\_ Non-working student (2): \_\_\_\_\_

With scholarship (1): \_\_\_\_\_ Without scholarship (2): \_\_\_\_\_

Financially dependent to parents (1): \_\_\_\_\_

Financially independent to parents (2): \_\_\_\_\_

Are you determined to pursue your enrolled course?

( \_\_\_\_\_ ) YES

( \_\_\_\_\_ ) NO

