

TRACER STUDY ON BACHELOR OF SCIENCE IN APPLIED STATISTICS GRADUATES (1987-2006)

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ABSTRACT

A tracer study on the graduates of Bachelor of Science in Applied Statistics (BSAS) was conducted by the Math-Physics-Statistics (MPS) Department of the College of Arts and Sciences in Benguet State University. The Department had produced a total of 90 graduates from 1987 to 2006.

After two decades of existence, the researchers decided to undertake a tracer study to determine the extent of the graduates' employability.

The study showed that 79% had been employed in various types of jobs but only 76% had jobs that were in line or related to their degree.

On the extent of "match" of BSAS graduates' academic preparation with their job. This indicates that the match between academic preparation and their job description was moderate.

On the factors and the extent of their contribution to the employability of BSAS graduates, personality, communication skills and academic performance were rated as having a big contribution to their employability. The prestige of being a BSU graduate, the socio-cultural exposure at BSU, and ethnic affiliation had moderate contribution while high school graduated from and political backing were considered as having little contribution to their employability.

Lastly, the respondents considered that big improvement was needed for Library facilities, Physical facilities, Instruction, and BSAS curriculum.



INTRODUCTION

Background of the Study

The Bachelor of Science in Applied Statistics (BSAS) degree program was proposed to be offered at Benguet State University under the College of Arts and Sciences in 1983. However, it was only in 1986 that the approval was granted with Board Resolution No. 78, s. 1986.

Before the approval of the BSAS degree program, the Math-Physics-Statistics (MPS) Department had been handling major subjects in Statistics for the College of Agriculture in the Bachelor of Science in Agriculture (major in Statistics) program. Eventually, some students from this course shifted to the BSAS program.

The BSAS program aimed to cater to students who were interested in pursuing careers as Statisticians in the academe, in government line agencies, in private agencies and even for private practice. At its infant stage, only a few students enrolled in the course because many were unfamiliar with the BSAS program. However, through the years, the number of enrollees had increased. The efforts of the MPS Department to “advertise” the BSAS course during Career Orientation programs for high school graduating students and through the distribution of brochures to high schools must have paid off. The Department had produced a total of 90 graduates from 1987 to 2006.

In 2002, the MPS Department conducted a research entitled BSAS Graduates Tracer Study. It aimed to trace the performance of BSAS graduates up to 2002. Specifically, the study tried to determine the effect of the university’s training on instruction, research, extension and production on the students’ professional development; the college’s preparation of these students for responsible leadership, as well as for creative and useful membership in the society; the department’s training in the mathematical and physical sciences and information technology; and, the employability of the BSAS graduates.

Within the last four years, the Department has produced 77% of the total number of BSAS graduates. Having only 10 graduates among all the 21 BSAS respondents in the previous study, the researchers decided to undertake another tracer study to include the bigger portion of the graduates.

The main objective of the study was to investigate the extent of employability of the BSAS graduates. Specifically, the study aimed to

determine:

1. the employment, if any, and the match between the job and the trainings/academic preparations of the graduate;
2. the factors contributing to the graduate's employability; and
3. the areas in the degree program which need improvement in order to enhance the employability of the graduates.

Scope and Limitation of the Study

All BSAS graduates from 1987 to 2006 were considered as the population of the study.

Significance of the Study

A tracer study of BSAS graduates had been conducted by the MPS Department in 2002 with 21 respondents. However, only 10 of these respondents were actual graduates while the other 11 were graduating students of the program. Moreover, four years after the conduct of the study, the number of graduates had increased to a total of 90. This remarkable 800% increase in four years time is something worth looking into, particularly, about its implication to the employability of BSAS graduates.

The present tracer study would also facilitate in the assessment of the BSAS degree program, through the view-points of its graduates. After being recently granted the Third Level accreditation status by the Accrediting Agency for Chartered Colleges and Universities of the Philippines, Incorporated (AACUP, Inc.), the BSAS degree program still needs to be looked into for other areas which might need improvement, through this tracer study.

MATERIALS AND METHODS

Non-probability sampling was used in this study: all ninety BSAS graduates from 1987 to 2006 were "tracked down" and were asked to participate. A letter explaining the purpose, need and importance of the study and a questionnaire were mailed and/or distributed to the BSAS graduates. Even with this approach, however, only 29 graduates (or 32 percent) responded.

Frequency count, percentage, average and coefficient of variation were computed to answer the various problems of the study.



RESULTS AND DISCUSSION

Profile of the BSAS Graduates

Table 1 presents the demographic profile of the BSAS graduates. Forty-five percent of the respondents were male and 55 percent were female. Majority of the respondents were graduates of 2004 and of 2006, which were 34 percent and 31 percent, respectively.

Among the respondents, 79 percent had been employed in various types of jobs. However, only 55 percent had jobs that were in line or related to their degree, such as Data Collector, Enumerator, Researcher, Accounting Officer, Report Analyst, Sales Assistant, Checker/ Cashier, and Customer Service Representative. In addition, 7 percent were Statisticians, and 14 percent had teaching/tutoring jobs in Math and Statistics. Thus, the total percentage of statistics-related job equaled to 76 percent.

On the extent of “match” of BSAS graduates’ academic preparation with their job, the average rating of 3.22 with 26 percent variability was obtained. This indicates that the match between academic preparation and their nature of work was *moderate*.

Factors that Contribute to the Graduates’ Employability

Table 2 shows factors and the extent of their contribution to the employability of BSAS graduates. Personality, communication skills, and academic performance were rated as having a big contribution to their employability. The average ratings were 4.17, 4.07, and 3.62, respectively. The corresponding variability measures were 18 percent, 20 percent and 29 percent indicating some cohesiveness of the respondents as reflected in their ratings. These three factors could be attributed to the individuality of the graduate -- on what he or she has become.

The prestige of being a BSU graduate, the socio-cultural exposure at BSU, the prestige of being a BSAS graduate, and ethnic affiliation had moderate contribution while high school graduated from and political backing were considered as having little contribution to their employability. The variability of 64 percent for political backing could mean the respondents were somewhat “divided” on their views regarding the extent of contribution of political backing to their employability.

Table 1. Demographic profile of the BSAS graduates

PROFILE	Number	Percent (%)
GENDER		
Male	13	45
Female	16	55
YEAR OF GRADUATION		
1993	1	3
2002	2	7
2003	4	14
2004	10	34
2005	3	10
2006	9	31
EMPLOYMENT	23	79
Nature of Work		
Statistician	2	7
Data collector, Enumerator, Researcher, Accounting Officer, Report Analyst, Sales Assistant, Checker/Cashier, Customer Service Representative	16	55
Math/Statistics Teacher	4	14
Tutor, Clerk, Secretary, Admin Aide, Attendant, Technician, Service Crew	8	28
Network & Direct Selling, vegetable dealer	2	7
Storing/packaging vegetable, bagger	2	7
Self-employed: Proprietor	2	7
Extent of match between academic preparation and job	Average rating of 3.22 with 26% variability	MODERATELY MATCHED

All these findings had some similarities to the BSAS Tracer Study conducted in 2002 where academic training, social development, prestige of being a BSAS graduate, and personal appeal were considered as factors that highly affected the employability of the graduates. The prestige of being a BSU graduate was also a factor that had a strong bearing on the employability of the graduates. However, for the current study, the graduates considered 'prestige' and socio-cultural exposure as providing



only a moderate contribution.

Table 2. Factors that contribute to the graduates' employability

FACTORS	Summary Statistics		DESCRIPTION
	Average	Variability (%)	
Personality	4.17	18	BIG contribution
Communication skills	4.07	20	BIG contribution
Academic performance	3.62	29	BIG contribution
Prestige of being a BSAS graduate	3.38	29	MODERATE
Socio-cultural exposure at BSU	3.10	26	MODERATE
Prestige of being a BSU graduate	3.00	33	MODERATE
Ethnic affiliation	2.52	45	MODERATE
High School graduated from	2.24	42	LITTLE
Political backing	2.17	64	LITTLE

Improvements Needed to Enhance Employability

Table 3 shows various areas in the BSAS degree program with the corresponding level of improvement needed to enhance the employability of graduates. The respondents considered that big improvement was needed for all the areas, except for Physical facilities on classrooms which was rated as moderately needing improvement. The variability of the ratings were small, ranging from 19 percent to 34 percent. This indicates similarity of perception of the respondents along these aspects. It is worth noting that the graduates considered Library facilities and Physical facilities as the top areas which needed big improvement.

Some comments of the respondents were: there should be more statistical programming using statistical packages like STATA, SPSS and SAS; and there should be more exposure to actual statistical work.

As recommended in the Asian Development Bank Tracer Study (1987), "continuous auditing" measures should be included in assessing the impact and effectiveness of any degree program in the academe. The views of the graduates on the different areas of their degree program must be part of such auditing measures to assure high quality of education.

Table 3. Level of Improvement Needed to Increase the Graduates' Employability

FACTORS	Summary Statistics		DESCRIPTION
	Average	Variability (%)	
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Ethnic affiliation	2.52	45	MODERATE
High School graduated from	2.24	42	LITTLE
Political backing	2.17	64	LITTLE

SUMMARY AND CONCLUSION

The BSAS graduates considered their job to be moderately matched with their academic preparation. Among the respondents, 79 percent had been employed in various types of jobs but 69 percent indicated that their jobs were related or in line with their degree.

Personality, communication skills, and academic performance were rated as having a big contribution to employability of graduates.

Lastly, according to the BSAS graduates, big improvement is needed in each of the areas of library facilities, physical facilities, instruction and curriculum, in order to enhance employability.

RECOMMENDATIONS

Based on the findings of this study, two recommendations are offered:

1. For the University to give considerable attention to the areas in the BSAS degree program which need big improvement. More books for major subjects in Statistics and more computer units with licensed statistical software be provided to the BSAS students.
2. For the University, through its Alumni Association and Office of Student



Affairs, to have an updated file of the whereabouts of all graduates, in order to facilitate the conduct of similar tracer studies and even help the graduates find employment. Each College could collaborate with these Offices so that the bulk of work will be decentralized. A website for alumni or email groups could be created, so that those who have access to the internet can easily be contacted.

3. For the University, to support the creation of a Statistical Center where BS Applied Statistics graduates could be employed. This Statistical Center would be an Income Generating Project of the University, at the same time, it would be a training ground of the BSAS students/ graduates.

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