

Employment Outcomes and Licensure Examination Performance of Engineering Graduates of Tarlac College of Agriculture

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Abstract

This study aimed to determine the employment outcomes and licensure examination performance of engineering graduates of Tarlac College of Agriculture from 2008 to 2012. It made use of descriptive-comparative-correlational method to answer the problems of the study. The study has the following significant findings: More than majority (66%) of the BSGE graduates passed the licensure exam from 2008 to 2012 while there was only 33% average passing percentage for BSAE graduates. Also, more than majority of the total number of BSGE and BSAE graduates were employed in jobs related to their specialization. Moreover, the age of the BSGE graduates is not correlated to the engineering licensure examination. On the other hand, young BSAE graduates is significantly correlated to their licensure examination. The GPA of the BSGE and BSAE graduates registered a high significant relationship to their licensure exam performance and employment. Lastly, male and female BSGE and BSAE graduates have a comparable performance in licensure examinations and employment opportunity.

Keywords: employment, engineering licensure examination

Introduction

According to the findings of the Educational Commission headed then by Senator Edgardo Angara, the Philippine educational system is disoriented and misdirected. This implies the need to remodel some important aspects of the Philippine education to make it more relevant and functional. Moreover, there is a need to review and evaluate the operation of educational institutions, which should be appraised in terms of its quality and relevance.

At present, one of the major concerns in the Philippine school system is producing competent and efficient graduates after graduation. One indicator to measure the effectiveness of programs offered in an academic institution is the quality of its graduates, which, in turn, is gauged through their licensure examination performance.

Moreover, based on the report of the Task Force on Higher Education (1995) the most commonly mentioned indicators of quality higher education programs in the country apart from the performance of the graduates in the licensure examinations, are accreditation status of the programs, and employability of graduates.

The Tarlac College of Agriculture (TCA) particularly the Institute of Engineering offers Bachelor of Science in Geodetic Engineering (BSGE) and Bachelor of Science Agricultural Engineering (BSAE). The rate of passing the licensure examination justifies the continued existence or non-existence of engineering. Hence, the researchers aimed to determine the employment outcomes and licensure examination performance of engineering graduates of Tarlac College of Agriculture from 2008 to 2012.

Objectives of the Study

This study aimed to:

1. Describe the BSGE and BSAE graduates in terms of their status in the engineering licensure examinations;
2. Describe the BSGE and BSAE graduates in terms of their status of employment;
3. determine the extent of relationship of the graduates' performance in the licensure examination to their age and grade-point average (GPA);
4. determine the extent of relationship of the graduates' employment to their age, licensure exam rating and grade-point average (GPA);
5. determine the extent of difference between male and female in terms of the licensure examination performance; and
6. determine the extent of difference between male and female in terms of employment.

Hypotheses of the Study

1. There is no significant relationship of the graduates' performance in the Licensure Examination to their age and grade-point average (GPA).
2. There is no significant relationship of the graduates' employability to their age, licensure exam rating, and grade-point average (GPA).
3. There is no significant difference between male and female in terms of the graduates' licensure examination performance.
4. There is no significant difference between male and female in terms of the graduates' employment.

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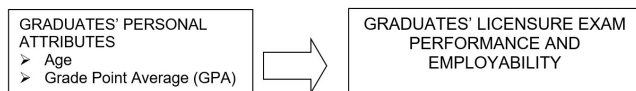


Figure 1. presents the conceptual paradigm of the study.

Significance of the Study

The findings of this study will give information to the teachers of the Institute of Engineering regarding the correlates of BSGE and BSAE graduates’ employability and licensure examination. Guided by the results of this study, teachers may craft strategies/methodologies that would equip engineering students with the necessary skills needed in passing their licensure examination and would increase their chance of employability.

Scope and Delimitation

This study was intended for the BSGE and BSAE graduates of TCA from 2008 to 2012. The variables correlated to the BSGE graduates’ licensure examination performance and employment were their age and GPA.

Conceptual Framework

The researchers conceptualized that graduates who are young and with high GPA have greater chance of getting higher rating in the licensure examination and have better chance of employment.

Methodology

Research Design

This study used the descriptive-comparative-correlational method.

Location of the Study

The study was conducted at the Institute of Engineering, Tarlac College of Agriculture, Camiling, Tarlac.

Subjects of the Study

The subjects of the study were the BSGE and BSAE graduates of TCA from S.Y. 2008 to 2012.

Data Gathering Instrument

The researchers used the documentary analysis in getting the graduates’ GPA, Licensure Exam ratings, and employment status.

Data Gathering Procedure

The researchers sought permission from the Director of Admission in securing a copy of the graduates’ GPA while the graduates’ Licensure Exam ratings were taken from the files of

the Institute of Engineering where the results from the PRC are kept. Lastly, the status of employment of the BSGE and BSAE graduates were taken from the graduates themselves which were validated by their respective employers.

Units of Analysis

The BSGE and BSAE graduates of TCA from 2008 to 2012 were the units of analysis of the study.

Data Analysis

Frequency counts and percentage were used to describe the status of licensure examination performance and employment of BSGE and BSAE graduates. Multiple linear correlation was used to determine the correlates of the graduates’ Licensure and graduates’ employability. T-test was used to determine the difference between male and female graduates in terms of their licensure examination performance and employability.

Results and Discussion

Licensure Examination Performance of TCA BSGE Graduates (2008-2012)

The status of licensure examination performance of TCA BSGE graduates from 2008 to 2012 is presented in Table 1.

Table 1. Status of licensure examination performance of TCA BSGE Graduates (2008-2012)

YEAR	PASSED		FAILED		TOTAL	
	Freq	%	Freq	%	Freq	%
2008	10	71.43	4	28.57	14	100
2009	12	66.67	6	33.33	18	100
2010	5	62.50	3	37.50	8	100
2011	6	66.67	3	33.33	9	100
2012	4	57.14	3	42.86	7	100
TOTAL	37	66.07	19	33.93	56	100

As seen in Table 1, the passing and failing percentage of BSGE graduates is decreasing except in 2011. The data further reveal that in 2008, 71.43% passed the licensure exam while 66.67% in 2009, 62.50% in 2010, 66.67% in 2011, and 57.14% in 2012. These results show that more than majority of the BSGE graduates passed their licensure exam from 2008 to 2012.

Licensure Examination Performance of TCA BSAE Graduates (2008-2012)

Table 2 presents the status of licensure examination performance of TCA BSAE graduates from 2008 to 2012.

Results show that the passing and failing percentage of BSAE graduates is fluctuating from 2008-2012. The data further reveal that in 2008, only 33.33% passed the licensure exam while 43.86% in 2009, 33.33% in 2010, 22.22% in 2011, and 50% in

Table 2. Status of licensure examination performance of TCA BSAE Graduates (2008-2012)

YEAR	PASSED		FAILED		TOTAL	
	Freq	%	Freq	%	Freq	%
2008	3	33.33	6	66.67	9	100
2009	3	42.86	4	57.14	7	100
2010	2	33.33	4	66.67	6	100
2011	2	22.22	7	77.78	9	100
2012	1	50.00	1	50.00	2	100
TOTAL	11	33.33	22	55.67	33	100

2012. These results show that the passing percentage of the licensure exams of TCA BSAE graduates from 2008 to 2012 is quite low.

Percentage of Employment of Engineering Graduates Related to Their Specialization

Percentage of Employment of BSGE Graduates Related to Their Specialization

Table 3 presents the status of employment of TCA BSGE graduates from 2008 to 2012.

Results show that more than majority of the total number of BSGE graduates from 2008-2012 were employed related to their specialization. This goes to show that the employability of TCA BSGE graduates is high.

Percentage of Employment of BSAE Graduates Related to Their Specialization

Presented in Table 4 is the status of employment of TCA BSAE graduates from 2008 to .2012.

Table 4 shows that more than half of the total number of BASE graduates from 2008-2011 were employed in jobs related to their specialization while there was only one (1) or 50% in 2012. This goes to show that majority of the BSAE graduates are employed with their respective degrees or specialization.

Correlates of Licensure Examination Performance of Engineering Graduates

Correlates of Licensure Examination Performance of the BSGE Graduates

Table 5 presents the variables associated with the licensure exam performance of the BSGE graduates.

As to Age

The age of the graduates has no significant relationship to their licensure examination performance. This implies that regardless of the graduates' age in taking the licensure exam, their performance will just be the same or comparable.

As to Grade Point Average

The data reveal that the GPA of the graduates registered high significant relationship to their licensure exam performance. This clearly shows that when a graduate-respondent has a high GPA, his or her licensure exam rating will also be high. This implies that graduates who are doing well academically are expected to perform well in the licensure examination.

Variables Associated with the Licensure Examination Performance of the BSAE Graduates

Presented in Table 6 is the variables associated with the licensure examination performance of the BSAE graduates.

As to Age

The graduates' age has a significant relationship to their licensure examination performance. The negative sign of the coefficient of correlation (-.365) implies that the young ones tend to perform better in the licensure exam than the old ones.

As to Grade Point Average

The GPA of the BSAE graduates registered a high significant relationship to their licensure exam performance. This clearly shows that when a graduate-respondent has a high GPA, his or her licensure exam rating will also be high. This goes to show that graduates who are doing well academically are expected to perform well in the licensure examination.

Variables Associated with the Employability of Engineering Graduates

Variables Associated with the Employability of BSGE Graduates

Table 7 presents the variables associated with the employability of BSGE graduates.

As to Age

The age of the graduates has no significant relationship to their employability. This means that the age of the BSGE applicants is not much of a factor for employers in hiring. This further implies that regardless of the graduates' age, they have equal chance of employment.

As to Grade Point Average

The GPA of the graduates registered a high significant relationship to their employability. This means that when a graduate-respondent has a high GPA, his or her chance of employment will also be high. It further implies that graduates who perform well academically or have high GPA have the greater chance of employment.

Table 3. Percentage of employment of BSGE graduates related to their specialization.

YEAR	NUMBER OF GRADUATES	NO. OF GRADUATES EMPLOYED RELATED TO SPECIALIZATION	PERCENTAGE OF EMPLOYMENT
2008	7	6	85.71
2009	9	8	88.89
2010	20	18	90.00
2011	18	16	88.89
2012	14	12	86.21

Table 4. Percentage of employment of BSAE graduates related to their specialization.

YEAR	NUMBER OF GRADUATES	NO. OF GRADUATES EMPLOYED RELATED TO SPECIALIZATION	PERCENTAGE OF EMPLOYMENT
2008	2	1	50.00
2009	10	8	80.00
2010	6	4	66.67
2011	7	5	71.43
2012	9	7	77.78

Table 5. Variables associated with the licensure examination of BSGE graduates.

VARIABLES	COEFFICIENT OF CORRELATION	RELATIONSHIP
Age	-.22	Not Significant
Grade Point Average (GPA)	+.919	Highly Significant

Table 6. Variables associated with the licensure examination of BSAE graduates.

VARIABLES	COEFFICIENT OF CORRELATION	RELATIONSHIP
Age	-.365	Significant
Grade Point Average (GPA)	+.811	Highly Significant

Table 7. Variables associated with the employability of BSGE graduates

VARIABLES	COEFFICIENT OF CORRELATION	RELATIONSHIP
Age	-.0115	Not Significant
Grade Point Average (GPA)	+.814	Highly Significant
Licensure Exam Rating	+.799	Highly Significant

As to Licensure Examination Rating

The licensure examination rating of the graduates posted registered a high positive association to their employability. This means that as the licensure examination rating of graduate becomes higher it follows that his or her chance of employment will also be high. This goes to show that graduates who perform well in the licensure examination have higher chance of employment.

Variables Associated with the Employability of BSAE Graduates

The variables associated with the employability of BSAE graduates is presented in Table 8.

As to Age

The graduate's age has no significant association to their employability. This goes to show that employers are not very particular with the age of BSAE applicants in hiring them. This further implies that regardless of graduates' age, they have an equal chance to be admitted or employed.

As to Grade Point Average

Results show that the GPA of the graduates registered a high significant relationship to their employability. This means that when a graduate-respondent has a high GPA, his or her chance of employment is also high. This means that graduates who did well academically have the greater chance of acceptance for

Table 8. Variables associated with the employability of BSAE graduates

VARIABLES	COEFFICIENT OF CORRELATION	RELATIONSHIP
Age	-.093	Not Significant
Grade Point Average (GPA)	+.842	Highly Significant
Licensure Exam Rating	+.895	Highly Significant

employment.

As to Licensure Examination Rating

There is a high significant relationship between the examination rating of the BSAE graduates to their employability. This goes to show that as the licensure examination rating of graduate becomes higher his or her chance of employment will likewise increase.

Difference Between Male and Female Graduates in terms of Their Licensure Examination Performance

Difference Between Male and Female BSGE Graduates in terms of Their Licensure Examination Performance

The difference between male and female BSGE graduates in terms of their licensure examination performance is presented in Table 9.

Table 9. Difference between male and female BSGE graduates in terms of their licensure examination performance.

GENDER	MEAN RATING
Male	77.77
Female	77.74
t-computed value=0.6969 t-critical value=2.07 Probability=0.4968	

Results reveal that there is no significant difference between male and female BSGE graduates in terms of their licensure examination performance since the computed t-value is less than the t-critical value. This implies that the performance of male and female graduates in the licensure examination for BSGE graduates is still the same or comparable.

Difference Between Male and Female BSAE Graduates in terms of Their Licensure Examination Performance

Table 10 presents the difference between male and female BSAE graduates in terms of their licensure examination performance.

Table 10. Difference between male and female BSAE graduates in terms of their licensure examination performance.

GENDER	MEAN RATING
Male	76.92
Female	77.83
t-computed value=0.769 t-critical value=12.71 Probability=0.5824	

Analysis of data reveals that there is no significant difference between male and female BSAE graduates in terms of their licensure examination performance since the computed t-value is less than the t-critical value. This means that whether the graduate is male or female, his or her licensure examination performance is still comparable.

Difference Between Male and Female Engineering Graduates in terms of Their Employment

Difference Between Male and Female BSGE Graduates in terms of Their Employment

Table 11 presents the difference between male and female BSGE graduates in terms of their employment.

Table 11. Difference between male and female BSGE graduates in terms of their employment

GENDER	MEAN RATING
Male	87.47
Female	88.19
t-computed value=0.318 t-critical value=12.71 Probability=0.8146	

Based on the data shown in the table, the females have an edge over the males in terms of employment but statistically speaking such difference posted insignificant difference at 5% level. This goes to show that the employability of male and female BSGE graduates is just comparable or the same.

Difference Between Male and Female BSAE Graduates in terms of Their Employment

The difference between male and female BSAE graduates in terms of their employment is presented in Table 12.

Data revealed that there is no significant difference between male and female BSAE graduates in terms of their employment since the computed t-value is less than the t-critical value. This implies that the employability of male and female BSAE graduates is comparable or the same.

Table 12. Difference between male and female BSAE graduates in terms of their employment

GENDER	MEAN RATING
Male	69.80
Female	68.50
t-computed value=0.424 t-critical value=12.71 Probability=0.864	

Conclusions

1. More than majority of the BSGE graduates passed the licensure exam while the BSAE graduates have low passing percentage from 2008 to 2012.
2. Male and female BSGE and BSAE graduates have comparable performance in licensure examinations and employment opportunity.
3. Engineering graduates who have high GPA tend to have higher chances in passing the Engineering Licensure Examination and at the same time better chance for employment.

Recommendations

1. A continuous tracer study for the engineering graduates be conducted which may serve as a basis in identifying the graduates' performance in the licensure examination. Its continuity will also serve as a benchmark information in working for the improvement of the Engineering curricular programs.
2. Teachers should employ more meaningful and effective teaching methodologies/strategies that would enhance independent thinking and creativity among engineering students which are crucial skills in passing the licensure examination and for them to have a better chance of employment.
3. Researchers should conduct other related study making use of other variables that may predict graduates' employability and better performance in the engineering licensure examinations.