RESEARCH ARTICLE

STANDARDS OF EXCELLENCE AND JOB SATISFACTION OF AGRICULTURAL ENGINEERING GRADUATES IN A STATE UNIVERSITY

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ABSTRACT

This study is focused on standards of excellence of the Bachelor of Science in Agricultural Engineering program and the graduates’ job satisfaction. A total of 124 graduates of the Romblon State University, 119 employers and 22 members of the school top management were the participants of the study. Using the descriptive research design, the study revealed that the BSAgEn program has “Very Satisfactory” quality level in terms of standards of excellence in VMGO, Administration, Curriculum and instruction, Faculty, Research and Extension Services, and Physical Plant and Facilities, but has “Satisfactory” quality level in Student services, Library and Laboratory & Equipment. The program is strong in terms of tuition fees, faculty performance, accredited curriculum, and administration, but weak as regards info-tech instructional practices, student services, library, and laboratory facilities. The study also revealed that the graduate-employees are “Satisfied” with the work condition, career growth opportunities, salaries and benefits and course relevance to the job. Strengths of the program are in terms of compensating salaries and benefits, policies on job security and safety, attractive career growth opportunities, and very good work condition; while the weaknesses are the limited skills related to actual work, promotions usually influenced by politicians, and irrelevance of the course to the job. There is a significant difference in perceptions between the school top management and the graduates on the status of the program, but no significant difference between perceptions on application to the job of the knowledge and skills and level of job satisfaction with the work environment.

Keywords:
Standards of Excellence
Job Satisfaction

INTRODUCTION

The critical role of program evaluation and assessment as a unique feature of school management is best experienced amidst globalization phenomenon, when the learning institution faces the pressing demands of change. New knowledge and skills are needed by a branded competent graduate to cope with the ever-changing work standards in the world of employment. Effective educational program increases the graduate’s job performance, increases the demand of their services and maximizes their participation in the economic process. The conduct of tracer study of graduates is a modern practice adopted by visionary education managers. It is within the concept of quality assurance in education embracing an ongoing, continuous process of evaluation. Surveys of graduates from institutions of higher education are utilized in the evaluation of output of the learning institution to gain systematic information and feedback from the alumni. The present research is an assessment of the Bachelor of Science in Agricultural Engineering Program of the Romblon State University conducted through a tracer study of the graduates who have finished the five-year course and who provided essential feedback to the University through perceptions of the effectiveness of the program in ensuring application to job of the knowledge and skills and job satisfaction.

Objectives

The objective of the study is find answers to the following: (1) What is the status of the Bachelor of Science in Agricultural Engineering Program as perceived by school top management and graduates as regards standards of excellence in terms of VMGO, Faculty, Curriculum & Instruction, Student Services, Research & Extension Services, Library, Laboratories and Equipment, Physical Plant and Facilities and Administration?
What is the level of job satisfaction of the graduates with
the work environment as perceived by the employers and the
graduates themselves in terms of Work condition, Salaries and
benefits, Career growth opportunities, Relevance of the course
to the job? (4) What are the strengths and weaknesses of the
BSAgEn Program? (5) Is there significant difference that exists
between the perceptions of the respondents?

Hypotheses

The study tested the following hypotheses:

1. There is no significant difference between perceptions
   of the respondents on the status of the BSAgEn Program
   as regards the standards of excellence.
2. There is no significant difference between perceptions
   of the respondents on the graduates’ level of job
   satisfaction with the work environment.

Conceptual Framework

According to Schomburg (2001), the institution’s performance
can be assessed in terms of both the internal indicators such as
quality of teaching, adequacy of facilities, relevance of course
programs and policies, and external indicators such as
employability and job satisfaction of graduates in the field of
employment. In the conduct of this study, Herzberg’s Two-
Factor Theory was considered to account on the graduates’ job
satisfaction in the work environment as they apply the
knowledge and skills to their work. It was developed by
Frederick Herzberg in 1959, after which it gained popularity in
describing employee’s satisfaction in their job. The tracer study
of Bachelor of Science in Chemistry Graduates conducted by
Santos (2004) used this theory to measure the job satisfaction
among the alumni of the program in Adamson University. In
his transcontinental tracer studies, Schomburg & Sawyer,
(2003) employed the same theory in analyzing job satisfaction
of the graduates in several African universities. Herzberg
argued that factors related to the external environment of the
work are dissatisfiers or hygiene factors; while factors related
to the work itself are satisfiers or motivators. It provides that
the absence of hygiene factors can create job dissatisfaction but
their presence does not motivate or create satisfaction.
(Dessler, 2001). In this study, this theory holds that both Work
environment (dissatisfiers) and work itself (satisfiers) influence
job satisfaction, which is one of the indicators of an effective
course program. A substantive theoretical support to this study
is Range of Affect Theory developed by Edwin A. Locke
(1976). This is perhaps the most famous job satisfaction model
with the premise that satisfaction is determined by a
discrepancy between one wants in a job and what has in a job.
Further, the theory states that how much one values a given
facet of work moderates how satisfied one becomes when
expectations are met or otherwise. In this study, the theory
supports that in applying the graduates’ knowledge and skills,
their satisfaction depends on whether or not their expectations
relative to their work are met. This concept is described in the
framework below.

METHODOLOGY

Research design

The descriptive research design was used to determine the
present status of the BSAgEn Program of the University as
regards standards of excellence. It looked into the application to
the job of the graduates’ knowledge and skills, likewise the job
satisfaction level.

Research Locale

The study was conducted in the province of Romblon
specifically at the Romblon State University in Odiongan,
Romblon. However, some other places inside and outside the
country wherever the graduates are employed were included in
the conduct of this research. The Romblon State University is
geofraphically located at the central part of Tablas Island, the
biggest island in the province. It caters services not only to the
people of Romblon but also to some students coming from
nearby places like Mindoro, Batangas, Aklan, and Antique. For
many years, the State University has been the venue of several
class reunions when the alumni see each other, sharing
experiences not only in their past learning experiences acquired
in the college, but most importantly their present employment
situation. The province has seventeen municipalities distributed
in the seven islands comprising it. Government and non-
government establishments are scattered all over the islands,
which serve as the workplaces of most RSU graduates – thus
the setting of the study. Such details are reflected in Figure 1.
Sampling Procedure

A total of 216 BSAgEn graduates from class 1990-2009 served as the population of the study from which the sample size was determined using the Slovin’s formula at 5% margin of error. One hundred twenty-four (124) graduates, one hundred nineteen (119) employers and twenty-two (22) members of the school top management participated in this study. Stratified random sampling was observed in selecting the graduate participants; however, the sample respondents for the study depended on the availability of alumni’s track records and addresses. Complete enumeration was done for the eight (8) faculty-respondents and fourteen (14) school top officials.

Participants of the Study

Graduates of the BS Agricultural Engineering Program from class 1990 to class 2009 were the main participants of the study. Faculty, school officials and stakeholders of the program particularly the graduates’ employers were also requested to participate in the research study to validate among others the alumni’s perceptions.

From a total population of 216 graduates, a minimum of one hundred- forty are required as representative sample for the study proportionately taken from all strata. Even so, it was found out that track records and addresses of some graduates were not available. Such situation created some degree of adjustment in the number of instruments distributed to the respondents required in each stratum. Out of one hundred forty three (143) sets of instruments distributed to the graduates and their employers, nineteen were returned without the employer’s instrument. One hundred twenty-four (124) were retrieved complete thus considered participants of the study. The instruments were administered with retrieval rate of 86.7 percent.

Table 1 Frequency Distribution of School Top Management Participants by Designation

<table>
<thead>
<tr>
<th>Designation/Position</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Dean</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Director/unit head</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Librarian/library staff</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Health Officer/nurse</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Faculty</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 2 Summary of the Status of the BSAgEn Program Perceived by the School Top Management and the Graduates as Regards the Standards of Excellence

<table>
<thead>
<tr>
<th>School Top Mgt</th>
<th>Graduates</th>
<th>Average</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>VI</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>VMGO</td>
<td>4.25</td>
<td>VS</td>
</tr>
<tr>
<td>2</td>
<td>Faculty</td>
<td>4.05</td>
<td>VS</td>
</tr>
<tr>
<td>3</td>
<td>Curriculum/Instruction</td>
<td>4.24</td>
<td>VS</td>
</tr>
<tr>
<td>4</td>
<td>Laboratory &amp; Equipment</td>
<td>2.99</td>
<td>S</td>
</tr>
<tr>
<td>5</td>
<td>Research &amp; Extension Services</td>
<td>3.87</td>
<td>VS</td>
</tr>
<tr>
<td>6</td>
<td>Library</td>
<td>3.24</td>
<td>S</td>
</tr>
<tr>
<td>7</td>
<td>Student Services</td>
<td>3.43</td>
<td>S</td>
</tr>
<tr>
<td>8</td>
<td>Physical Plant and Facilities</td>
<td>3.61</td>
<td>VS</td>
</tr>
<tr>
<td>9</td>
<td>Administration</td>
<td>3.83</td>
<td>VS</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>3.88</td>
<td>VS</td>
</tr>
</tbody>
</table>

Legend:
- Scale Interval
- Verbal Interpretation (VI)

<table>
<thead>
<tr>
<th>Scale Interval</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.51-5.00</td>
<td>Outstanding (O)</td>
</tr>
<tr>
<td>3.51-4.50</td>
<td>Very Satisfactory (VS)</td>
</tr>
<tr>
<td>2.51-3.50</td>
<td>Satisfactory (S)</td>
</tr>
<tr>
<td>1.51-2.50</td>
<td>Fair (F)</td>
</tr>
<tr>
<td>1.00-1.50</td>
<td>Poor (P)</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

On the Status of Bachelor of Science in Agricultural Engineering program

Table 2 gives the summary of the status of the BSAgEn program perceived by the school top management and the graduates as regards the standards of excellence in its nine areas. Gleaning on the figures, the data reveal that among the area indicators, “VMGO” ranks the highest with a computed mean of 3.89 interpreted as “Very satisfactory” whereas “Laboratory and Equipment” ranks the lowest with a computed mean of 3.04 interpreted as “Satisfactory”.

In addition, it shows that the respondents’ assessment of the program across all indicators has an over-all mean of 3.60 with an interpretation of “Very Satisfactory”. This gives a gap of 1.4 to attain Total Quality Standard (TQS) of excellence. Moreover, it reflects that all assessment results fall below the Total Quality Standard level “Outstanding” based on the scale used. This means that the existing gaps are management concerns which need to be addressed. Apparently, there is a need for the management and leadership of the university to give immediate and priority attention on the areas with “Satisfactory” quality level particularly “Laboratory and Equipment”, “Library” and “Student Services” among others.

On the comparison between perceptions as regards the status of BSAgEn Program. The comparison between the perceptions of the school top management and the graduates on the status of the BSAgEn program as regards the standards of excellence is reflected in Table 3.

It can be observed that using t-test at 5% level of significance, the over-all difference between the mean perceptions of the graduates and the school top management is significant thus, the null hypothesis is rejected. The significant difference between the perceptions of the two groups of respondents merely indicates that there is a discrepancy of views between the school top management and the graduates in terms of the status of the BSAgEn program with reference to the standards of excellence.
The school top management perceives the status of the program as Very Satisfactory whereas the graduates perceive it not. This may imply that there are inconsistencies of management practices in the implementation and monitoring of the program such that the true problems and concerns of the graduate-employees during their stay in the University were not conveyed clearly to the school top management.

**On the graduates’ level of job satisfaction with the work environment**

A summary of the graduates’ level of job satisfaction with the work environment is presented in Table 4. Within the four area indicators, it is noted that the total mean is 3.06 interpreted as “Satisfied” or a gap of 0.94 towards total quality standard.

**Table 3 Comparison between the Perceptions of the Respondents on the Status of the BSAgEn Program as Regards the Standards of Excellence**

| Indicators          | Participant | Mean   | Std. Dev. | Mean Diff | df | t-value | p-value | Interpretation |
|---------------------|-------------|--------|-----------|-----------|----|---------|----------|----------------|----------------|
| 1. VMGO             | Graduate    | 3.82   | 0.56      | 0.42      | 144| 3.37    | 0.001   | Significant    |
|                     | Sch. Top Mgt | 4.25   | 0.46      |           |    |         |          |                |
| 2. Faculty          | Graduate    | 3.70   | 0.57      | 0.35      | 144| 2.67    | 0.008   | Significant    |
|                     | Sch. Top Mgt | 4.05   | 0.43      |           |    |         |          |                |
| 3. Curriculum/      | Graduate    | 3.80   | 0.60      | 0.43      | 144| 3.12    | 0.002   | Significant    |
| Instruction         | Sch. Top Mgt | 4.24   | 0.60      |           |    |         |          |                |
| 4. Laboratory &    | Graduate    | 2.99   | 0.76      | 0.34      | 144| 1.95    | 0.053   | Not Significant|
| Equipment           | Sch. Top Mgt | 3.33   | 0.74      |           |    |         |          |                |
| 5. Community        | Graduate    | 3.58   | 0.57      | 0.30      | 144| 2.14    | 0.034   | Significant    |
| Ext. Service        | Sch. Top Mgt | 3.87   | 0.77      |           |    |         |          |                |
| 6. Library          | Graduate    | 3.24   | 0.67      | 0.40      | 144| 2.49    | 0.014   | Significant    |
|                     | Sch. Top Mgt | 3.64   | 0.76      |           |    |         |          |                |
| 7. Student Services | Graduate    | 3.43   | 0.70      | 0.33      | 144| 2.06    | 0.042   | Significant    |
|                     | Sch. Top Mgt | 3.76   | 0.68      |           |    |         |          |                |
| 8. Physical Plant   | Graduate    | 3.61   | 0.66      | 0.01      | 144| 0.075  | 0.94    | Not Significant|
| and Facilities      | Sch. Top Mgt | 3.62   | 0.77      |           |    |         |          |                |
| 9. Administration   | Graduate    | 3.83   | 0.68      | 0.30      | 144| 1.98    | 0.049   | Significant    |
|                     | Sch. Top Mgt | 4.14   | 0.49      |           |    |         |          |                |
| Over-all            | Graduate    | 3.56   | 0.54      | 0.32      | 144| 2.57    | 0.011   | Significant    |
|                     | Sch. Top Mgt | 3.88   | 0.55      |           |    |         |          |                |

Legend: 
- p-value Interpretation
- ≥ 0.05 Not significant
- < 0.05 Significant

**On comparison between perceptions on the graduates’ job satisfaction with the work environment**

Table 5 presents the comparison between the perceptions of the employers and the graduates on the level of job satisfaction with the Work Environment to test the null hypothesis “Ho: There is no significant difference between perceptions of the respondents on the graduates’ level of job satisfaction with the work environment”. It can be gleaned from the table that at 5% level of significance the over-all mean difference (MD= 0.032) between the perceptions of the graduates and the employers is not significant (p = 0.629), therefore the above null hypothesis is accepted.

**Table 4 Summary of Graduates’ Level of Job Satisfaction with the Work Environment Perceived by the Employers and the Graduates Themselves**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Employer</th>
<th>Mean</th>
<th>VI</th>
<th>Graduate</th>
<th>Mean</th>
<th>VI</th>
<th>Average</th>
<th>Verbal Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Work Condition</td>
<td>3.19</td>
<td>S</td>
<td>3.20</td>
<td>S</td>
<td>3.20</td>
<td>S</td>
<td>Satisfied</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2. Salaries and Benefits</td>
<td>3.18</td>
<td>S</td>
<td>3.10</td>
<td>S</td>
<td>3.14</td>
<td>S</td>
<td>Satisfied</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3. Career Growth Opportunities</td>
<td>3.20</td>
<td>S</td>
<td>3.13</td>
<td>S</td>
<td>3.17</td>
<td>S</td>
<td>Satisfied</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4. Relevance of the Course to the Job</td>
<td>2.72</td>
<td>S</td>
<td>2.74</td>
<td>S</td>
<td>2.73</td>
<td>S</td>
<td>Satisfied</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.07</td>
<td>S</td>
<td>3.04</td>
<td>S</td>
<td>3.06</td>
<td>S</td>
<td>Satisfied</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: 
- Rating scale
- 3.51-4.00: Highly satisfied (HS)
- 2.51-3.50: Satisfied (S)
- 1.51-2.50: Fairly satisfied (FS)
- 0.51-1.50: Not satisfied (NS)
- Verbal Interpretation (VI)

When ranked accordingly from highest to lowest, it shows that “Work Condition” has the highest mean of 3.20, followed by “Career Growth Opportunities”, “Salaries and Benefits” and “Relevance of the Course to the Job” has the lowest mean of 2.73. Both groups of respondents described the level of job satisfaction in every indicator as “Satisfied” which validates the over-all result.

Going further over the data, it shows that in every area indicator, there is no significant difference between the mean perceptions of the two groups of participants which obviously justifies the over-all result. The areas of job satisfaction considered in the study are (1) Work condition, (2) Salaries and benefits, (3) Career growth opportunities and (4) Relevance of the course to the job.
The “Not significant” difference in the perceptions of the two groups of participants indicates that there is agreement in the perceptions of the graduates and the employers in terms of the graduates’ level of job satisfaction in the work environment. It simply means that they both perceived that the graduate-employees are satisfied in their job considering the four indicators.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

On the status of the BSaGEn Program as regards the Standards of Excellence

Across the nine areas, the program reflected a “Very Satisfactory” quality level in 1) VMGO, 2) Administration, 3) Curriculum/Instruction, 4) Research & Extension Services and 6) Physical Plant and Facilities while “Satisfactory” quality level in 1) Student Services, 2) Library and 3) Laboratory and Equipment. The highest rating was given to “VMGO” and the lowest rating to “Laboratory and Equipment”. The “Not significant” difference in the perceptions of the two groups of participants indicates that there is agreement in the perceptions of the graduates and the employers in terms of the graduates’ level of job satisfaction in the work environment. It simply means that they both perceived that the graduate-employees are satisfied in their job considering the four indicators.

The respondents perceived the major strengths of the BSaGEn Program as regards the standards of excellence

- The respondents perceived the major strengths of the program in terms of (1) Faculty members’ mastery in teaching the fields of specialization, (2) Strict observance of required course pre-requisites, (3) Proper labeling of chemicals in the laboratories, (4) Awareness of the needs and problems of the community, (5) Competence of the head librarian in doing the job, (6) Very accessible office of the guidance counselor, (7) Accessibility of the institution by all types of transportation, (8) Very qualified department head and competent school officials, (9) Very economical tuition and other fees, (10) Students’ participation in evaluating faculty performance and (11) Well designed and properly accredited curriculum.

- The major weaknesses were on (1) Harmony between the educational practices and program objectives, (2) The average 35 students taught per faculty member, (3) Use of info-technology, and laboratory facilities in instruction, (4) Students’ exposure to the conditions and needs of the community, (5) Textbooks and references as well as audio-visual materials like maps, films, slides, sound recordings and videos in the library, (6) Housing facilities and security services, (7) Janitorial/maintenance staff and equipment, (8) Admission and retention policies of the Department, (9) Laboratory technician/helper for the upkeep of the laboratories and (10) Adequacy of equipment, apparatuses and laboratories for hands-on activities of major subjects.

On the comparison between perceptions as regards the status of BSaGEn Program

The difference in the over-all mean perceptions between the school top management and the graduate-employees on the status of the BSaGEn program was significant. Further, seven out of nine areas of the program yielded significant difference in perceptions reflected in (1) VMGO, (2) Faculty, (3) Curriculum/Instruction, (4) Research & Extension Services, (5) Library, (6) Student Services and (7) Administration. Conversely, two areas showed no significant difference, (1) Laboratory and Equipment and (2) Physical Plant and Facilities.

On the graduates’ level of job satisfaction with the work environment

The graduates’ over-all level of job satisfaction with the work environment was rated “Satisfied”. Both groups of respondents described the graduate-employees as “Satisfied” with (1) Work Condition, (2) Career Growth Opportunities, (3) Salaries and Benefits and (4) Relevance of the Course to the Job.

On the strengths and weaknesses of the program in terms of graduates’ job satisfaction with the work environment

- The strengths of the program were shown in terms of (1) Salaries and benefits which were very compensating, (2) Policies on job security and safety, (3) Good career growth opportunities, (4) Subsidies and other benefits given and (6) Very good work condition.

- The perceived weaknesses were pointed to (1) AgEn knowledge and skills not relevant to the present job, (2) Limited skills applicable to the actual work, and (3) Promotions usually influenced by politicians.

On the comparison between perceptions on the graduates’ job satisfaction with the work environment

There is no significant difference between mean perceptions of the respondents in terms of job satisfaction with the (1) Work condition, (2) Salaries and benefits, (3) Career growth opportunities and (4) Relevance of the course to the job.

CONCLUSION
In the light of the findings of the study, the following conclusions were drawn:

- The BSAgEn program is Very Satisfactory in terms of the standards of excellence and can be further enhanced in all the nine areas considering priority attention in Student Services, Library and Laboratory & Equipment.
- Program’s strength is in terms of tuition fees, VMGO, faculty performance and evaluation, accredited curriculum, and administration, but weak as regards info-tech instructional practices, student services, library, as well as equipment and laboratories.
- There is significant difference in perceptions between the school top management and the graduates on the status of the BSagEn program.
- The knowledge and skills in Preparatory Subjects are “Often applied” to the job while that in Fundamental Agriculture, Basic Engineering and Professional Agricultural Engineering subjects are “Seldom applied”.
- The graduate-employees are “Satisfied” with the work environment in terms of Work Condition, Career Growth Opportunities, Salaries and Benefits and Relevance of the Course to the Job.
- The strengths of the program on graduates’ satisfaction with the work environment are in terms of compensating salaries and benefits, policies on job security and safety, attractive career growth opportunities, and very good work condition; while the weaknesses are the limited skills related to actual work, promotions usually influenced by politicians, and irrelevance of the course to the job.
- There is no significant difference between perceptions of the employers and graduate-employees on the graduates’ level of job satisfaction with the work environment.

Recommendation

In the light of the findings and conclusions of the study, the researcher made the

Following recommendations

1. The university should give priority attention and effort to enhance the program areas especially those with relatively low quality level like Laboratories & Equipment, Library and Student Services.
2. The curriculum and instruction elements of the program should make intervention to address the difficulty in communication skills and the use of new technology package in agriculture.
3. The school should enhance the job placement unit to cater services for proper employment among the graduates.
4. There is a need to sustain the accreditation of the various program offerings towards total quality standards of management.
5. Similar study should be conducted considering other courses offered in the University to form systematic track records and job placement of all the graduates.

References


