

Employability Of Batstate-U Bachelor Of Industrial Technology Graduates

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Abstract: A tracer study focusing on the employability, transition to employment and relevance of the course to current employment was conducted among Batangas State University, Bachelor of Industrial Technology (BIT) graduates of Alangilan Campus from 2008 to 2012. It also focused on determining the adequacy of skills and competencies acquired during the pre-service education and training provided by the university as well as the relevance of the curriculum to the urgent and inevitable needs brought by various developments such as internationalization of standards of higher education programs and the ASEAN 2015 Integration. The findings revealed high employment rate of the graduates both locally and internationally. The skills and competencies provided were evaluated as adequate and relevant to current jobs as well. Meanwhile, it is viewed that the Bachelor of industrial Technology undergraduate curriculum though still relevant needs to be enhanced to be at par with the International Standards.

Keywords: Industrial Technology, BIT curriculum, employability, tracer study

Introduction

In the Philippines, the Commission on Higher Education (CHED) requires all Higher Education Institutions (HEIs) to conduct a tracer study to track and to keep record of their students once they have graduated from the institution. This mandate is equally reflected as one of the required documents by any higher education accrediting body such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP) is the result of conducted tracer studies. Tracer study is an approach widely used in most organization especially by the educational institutions. It is the follow-up of graduates of higher education or institutes which aims to evaluate the graduate's progress up to the time he or she gets a job. It is seen as a management tool for planning and monitoring of training programs. A simple tool designed to measure the relevance of pre-service training; they provide information for review of training curricula and it also helps to monitor the delivery of training. A study by Gines [1] pointed out that tracer studies are important source of information to know what happened to the graduates of academic programs in HEIs. It is an important way of understanding the relevance and quality of programs offered by the college/university as well as the labor market. It constitutes an important tool for educational planners, as they can provide valuable information for evaluating the results of the higher education and training institutions. This information may be used for minimizing any possible deficits in a given educational program in terms of content, delivery and relevance for further development of the institution in the context of quality assurance. Tracer study will benefit every institution most especially the Commission on Higher Education and the institutions of higher learning because it will help them know the status of their products after graduating from their institutions. The College of Industrial Technology (CIT), is one of the premiere colleges of Batangas State University offering a ladderized program in Industrial Technology leading to Bachelor of Industrial Technology (BIT). The college has met its objectives of producing competitive citizens in the different fields of specialization namely: Automotive Technology, Civil Technology, Computer

Technology, Drafting Technology, Electrical Technology, Electronics Technology, Instrumentation and Control Technology, Mechanical Technology, Mechatronics Technology, Welding and Fabrication Technology, and Food Technology. It has gone behind some of the objectives included in the Strategic Plan of the Commission on Higher Education for 2011 to 2016 [2] by including technical-vocational education and training to develop students' competency and proficiency by providing up-to-date curricula to meet the changing needs of industry both local and international. As shown by the number of its bachelor's degree graduates listed in the university commencement programs (2008-2012) [3], one hundred one (101) in 2008, ninety-five (95) in 2009, ninety-seven (97) in 2010, one hundred twenty (120) in 2011 and one hundred thirty-four (134) in 2012, with the total of five hundred forty seven (547) graduates, College of Industrial Technology is continuously contributing to the production of the country's productive and valuable citizen. This is proven by most of its graduates who are employed in the country's manufacturing industries, petrochemical industries, electronics and electrical industries and many who are working abroad. Through this tracer study, the college will be able to evaluate the quality of education it provides to its graduates by knowing the graduates' employability, transition to employment and the level of satisfaction in terms of the University's services, learning environment and facilities. Further, the adequacy and relevance of competencies and skills acquired during the pre-service education and training provided by the university as well as the relevance of the curriculum shall be evaluated in order to address the urgent and inevitable needs brought by various developments such as internationalization of standards of higher education programs and the 2015 ASEAN Economic Integration. In local policy level, this will help track down tertiary graduates who can help the Higher Education Institutions like Batangas State University to be more strategic in developing their curricula as well as in deciding on program offerings, staffing patterns and faculty development. It may also be used to measure the effectiveness and or/ responsiveness on identifying cluster of

courses/subjects that the graduates found most useful in their workplaces.

Statement of the Problem

This research study aimed to determine the employability of the graduates of Bachelor of Industrial Technology from 2008 to 2012. Specifically, it sought answers to the following problems:

1. What is the profile of the BIT graduates in terms of: (a) Employment Characteristics, and(b) Transition to Employment
1. 2 What is the degree of relevance of the graduate’s course, curriculum and competencies acquired from the University to their employability?
2. What is graduates’ level of satisfaction with the university’s services, learning environment and facilities?

Conceptual Framework

The system approach is adopted in the conceptual framework of this study. Figure (1) presents the conceptual paradigm of the study. It is consisted of four (4) parts namely: input, process, output and feedback. The inputs used were the profiles and assessments made by the BIT graduates, SY 2008-2012, the process or the through-put were the access to the graduates using the online survey questionnaire and the analysis made on the responses, the output was the data on employability of the graduates. The system also included the feedback mechanism.

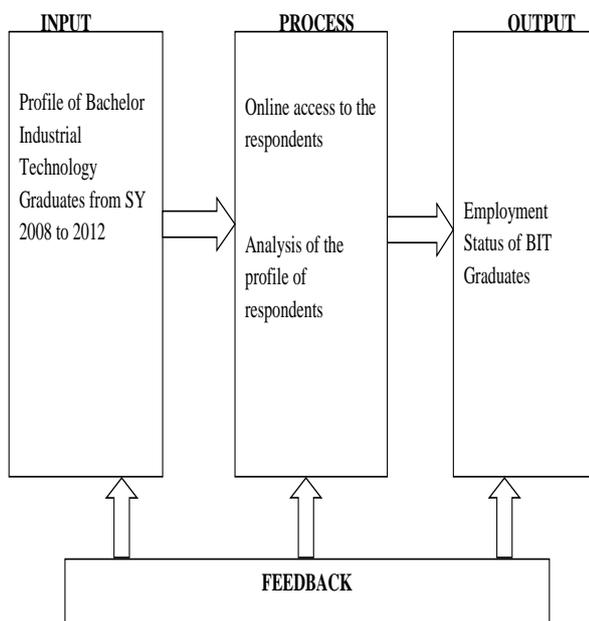


Fig. 1. Paradigm of the Study

Methodology

Research Design

The researcher made use of the descriptive survey method in the conduct of this study. Qualitative and quantitative data were obtained from the respondents.

Respondents and Sampling Plan

This tracer study covers the Bachelor of Industrial Technology (BIT) graduates of Batangas State University (BatstateU) Governor Pablo Borbon Memorial Campus II, who completed their studies from April of 2008 to November 2012. Its target respondents comprised graduates from bachelor’s degree program only, excluding those with certificate, diploma, post-graduate, professional, master’s degree and doctoral degree graduates.

Data Gathering Instrument and Procedure

In this study, an on-line web-based application system developed by Engr. Divina Gracia Ronquillo and John Richard Esguerra [4] of Batangas State University was utilized as the primary data gathering tool. The content of which is patterned to the Commission on Higher Education (CHED) developed tracer study questionnaire. The questionnaire is divided into two parts; Part I – a) personal information b) educational profile, c) employment characteristics d) transition to employment and Part II - is on Reflective Evaluation of the Program covering a) satisfaction with the services, learning environment, facilities, b) adequacy of skills learned, and c) relevance of curricular program in terms of competencies. The total number of BIT graduates from 2008-2012 was 547, this corresponds to the total target population of this study. Intensive effort through the use of internet; social media and telecommunication services were utilized in order to trace those graduates. One hundred fifty six (156) randomly selected respondents participated in the survey by answering the online graduate tracer survey questions. This approximates the expected response rate of 30 to 60 percentage recommended by [4] on the conduct of graduate tracer studies.

Data Analysis

Data cleaning and analysis was done by the researcher. The data analysis in this study primarily employed frequency counts, percentage, ranking and mean.

The interpretations of means were based on the following scales:

SCALE	SATISFACTION	RELEVANCE
1.00-1.50	Very Low Satisfaction	Not Relevant
1.51-2.50	Low Satisfaction	Somewhat Relevant
2.51-3.50	Moderate Satisfaction	Relevant
3.51-4.50	High Satisfaction	Very Relevant
4.51-5.00	Very High Satisfaction	Extremely Relevant

Results and Discussions

The following table shows the findings and analysis of the data after applying some descriptive statistical tools.

Table 1a: Demographic Profile of the Graduates

Profile variables	Frequency	Percentage
Sex		
Male	105	67.31%
Female	51	32.69%
Age		
20-24	95	60.90%
25-29	60	38.46%
30-34	1	0.64%
Civil status		
Single	134	85.90%
Married	21	13.46%
Widowed	1	0.64%

Table 1a presents the demographic profile of the respondents, where one hundred five or 67.31% were male while fifty-one or 32.69% were female. Majority of the graduates is at 20-24 years of age and are still single.

Table 1b: BIT majors taken by the Graduates

Profile variables	Frequency	Percentage
Automotive Technology	3	1.92%
Civil Engineering Technology/Civil Technology	5	3.20%
Computer Engineering Technology/Computer Technology	50	32.06%
Drafting Engineering Technology	2	1.28%
Electrical Engineering Technology	12	7.69%
Electronics Engineering Technology/Electronics Technology	13	8.34%
Instrumentation and Control Engineering Technology/Instrumentation and Control Technology	48	30.77%
Mechanical Engineering Technology/Mechanical technology	19	12.90%
Welding Fabrication Engineering Technology	5	3.20%
Mechatronics Engineering Technology	1	0.64%
Total	156	100%

The Instrumentation and Control Technology graduates as well as the Computer Engineering 32.06% and 30.77% respectively top the respondents who answered the online survey.

Table 1c: Other Demographic profiles of BIT Graduates

Profile variables	Frequency	Percentage
Year Graduated		
2008	12	7.69%
2009	18	11.54%
2010	37	23.72%
2011	33	21.15%
2012	56	35.90%
Total	156	100.00%
Professional Examination Passed		
National Certificate II- (Driving, Automotive)	5	3.21%
Career Service Examination	2	1.28%
Licensure Exam for Teachers	3	1.92%
No Answer	146	93.59%
Total	156	100.00%

Other tertiary level qualification/advance studies pursued		
Yes	62	39.74%
No	94	60.26%
Total	156	100.00%

As presented in Table 1c, majority of the respondents (35.90%) were those who graduated in 2012. Most of the graduates did not take other professional examinations and other advance studies.

Table 2. Reasons for Pursuing Advance Studies

Reasons	Frequency	Percentage
For promotion	28	17.95%
For Professional Development	95	60.90%
Others	33	21.15%
Total	156	100.00%

Majority of the graduates (60.90%), as shown in table 2 are willing to pursue advance studies for their own professional advancement or development. This implies the importance of offering graduate studies on the university's end to be able to address the needs of the graduate students.

Table 3. Reasons of the Graduates in Taking the Course

REASONS	FREQUENCY	PERCENT
Good grades in subject matter	20	12.82%
Peer influence	27	17.31%
Strong passion for the profession	15	9.62%
Status or prestige of profession	19	12.18%
Prospect of career advancement	50	32.05%
Prospect of attractive compensation	72	46.15%
Influence of parents	8	5.13%
Inspired by role model	29	18.59%
Prospect for immediate employment/relevance/adaptability	43	27.56%
Availability of course offering in chosen institution	36	23.08%
Affordability for family	17	10.90%
No particular choice/ no better idea	4	2.56%
Others (DOST Scholarship, own choice, no idea of course to pursue	4	2.56%

As seen in Table 3, the College is believed to offer in-demand courses and thereby graduates took the course for their belief that they will have attractive compensation (46.15%), better chance of career advancement (32.05%) and higher chance of finding immediate employment (27.56%).

Table 4: Employment Status of Graduates

STATUS	FREQUENCY	PERCENTAGE
Permanent	140	89.74%
Temporary	13	8.33%
Self-employed	2	1.28%
Casual	0	0.00%
Contractual	0	0.00%
Job Order	0	0.00%

As presented in Table 4, from among the respondents, one hundred forty (140) or 89.74% graduates from the college are securely employed, thirteen (13) are temporarily employed while only two graduates are self-employed.

Table 5. Period It Takes to Get the First Job

In Table 5, it is after 2-5 months after graduation that the CIT graduates usually land on their first job as depicted by sixty nine (69) or 44.81% of the respondents, forty three (27.92%) in less than a month, while twenty eight (28) or 18.18% in 6-12 months.

Table 6. Length of Service in their Current Jobs

As depicted in Table 6, the longest period of employment, twenty-five (25) months and above is of the highest percentage (32.33%); while the shortest period is of 23.31%.

Table 7. Reasons why graduates are currently unemployed

As can be seen in Table 7, from among the graduate respondents, only six are currently unemployed. Their reasons range from lack of job experience, family concerns and indecision of finding a job as well as lack of job opportunity.

Table 8. Employability of Graduates

VARIABLES	FREQ	PERCENT
Number of job since graduation	0	3.85%
	1	30.13%
	2	25.15%
	3	23.72%
	4	10.89%
	5	3.21%
	6	0.64%
Gross Monthly Income (Php)	Less than 10,000	23.13%
	10,000-19,999	35.82%
	20,000-29,999	11.19%
	30,000-39,999	5.97%
	40,000-49,999	2.99%
	50,000-59,999	0.75%
	60,000-69,999	0.75%
	70,000-79,999	0.75%
	80,000-89,999	0.00%
	90,000-99,999	0.00%
100,000-149,999	2.99%	

	150,000 or more	3	2.24%
	Did not disclose	6	4.48%
Nature of work	Government	23	15.33%
	Non-Government	127	84.66%
Place of work	Local	103	58.86%
	Abroad	36	41.14%

As can be seen in Table 8, forty-six (47) of the respondents remain in their job to the present, forty-three (43) had two jobs already and others had more than two jobs, while one of them had been employed six times.

Many graduate respondents (35.82%) are earning gross monthly income of P10, 000-19,999, while 23.31% are earning less than P10, 000. It is also noticeable that four (4) 2.99% are earning a sumptuous gross income of more than P100, 000.00 per month.

Ninety- one percent is working on non-government institutions, most (58.86%) are working inside the country

PERIOD	FREQUENCY	PERCENTAGE
Less than 1 month	43	27.92%
2-5 months	69	44.81%
6- 12 months	28	18.18%
More than one year	14	9.09%
did not answer	2	1.30%

LENGTH OF SERVICE	FREQUENCY	PERCENT
1-6 months	31	23.31%
7-12 months	27	20.30%
13-18 months	15	11.28%
19-24 months	17	12.78%
25 months and above	43	32.33%

while thirty-six or 41.14% are working abroad.

Table 9. Graduates First Job Relevance

GRADUATES' FIRST JOB RELEVANCE INDICATOR	FREQ	PERCENT	
REASONS			
Advanced or further studies	0	0.00%	
Lack of job experience	2	15.38%	
Did not look for a job	0	0.00%	
Family concerns and decision not to find a job	2	15.38%	
No job opportunity	2	15.38%	
Health-related reasons	0	0.00%	
Others	0	0.00%	
Graduates' course/degree	Yes	112	71.79%
	No	44	28.21%

Curriculum in college	Yes	113	72.44%
	No	43	27.56%

One hundred twelve (71.79%) affirmed that their course/degree is relevant to their first job, while One hundred ten (70.51% agree that the curriculum they had in college is relevant to their first job as can be seen in Table 9.

Table 10. Level of Satisfaction on Services, Learning Environment facilities provided by the University

Parameters	Mean	Level of Satisfaction
Services	4.02	High Satisfaction
Learning Environment	3.80	High Satisfaction
Facilities	3.40	Moderate Satisfaction

Table 10 shows the mean level of satisfaction of the graduates on the services provided by the College such as faculty support, academic advising, food services and others were assed as “High Satisfaction” . Meanwhile, the learning environment as a whole was assessed as “High Satisfaction” also. In terms of facilities, the respondents assessed the availability of facilities like communication facilities, equipment and computer laboratories as “ Moderate Satisfaction”.

Table 11 .Relevance of Competencies acquired from the university

COMPETENCIES	MEAN	VERBAL INTERPRETATION
Communication Skills	4.02	Relevant
Human Relation Skills	4.00	Relevant
Entrepreneurial Skills	3.21	Moderately relevant
Information Technology Skills	3.80	Relevant
Problem-solving Skills	3.80	Relevant
Critical Thinking Skills	3.96	Relevant

Table 11 presents that the competencies acquired by the graduate respondents from the University are relevant to their chosen job, most relevant of which are Communication skills and Human Relation Skills with a mean of 4.02 and 4.00 respectively and Entrepreneurship which they considered moderately relevant. The importance of these skills for the graduates to compete in the labor market is pointed out [5] [6]. These identified skills must be further enhanced if local graduates are to enter the “free flow of

skilled labor in ASEAN Economic Integration. The harmonization of standards in education and training is believed to facilitate liberalization of employment [7].

Table 12. Graduates Satisfaction in their Present Job

SATISFACTION	FREQ	PERCENT
Intention to stay in the present job	Yes	94 60.26%
	No	60 38.46%

The high level of satisfaction of College of Industrial Technology (CIT) graduates in their present job is depicted in Table 12 since 60.26% of them prefer to stay in their current job.

Table 13. Graduates Reasons for Staying in the Present Job

REASONS	FREQ	PERCENT
Salaries and wages	60	38.46%
Related to special skill	58	37.18%
Proximity to residence	30	19.23%
Family influences	28	17.95%
Career challenge	16	10.26%
Related to course of study	3	1.92%
Peer influence	10	6.41%
Others (benefits & experience)	2	1.28%

As can be gleaned in Table 13, many respondents (60) are satisfied with their present job due to salaries and wages they are presently receiving as well as due to relevance to their special skills as stated by fifty eight respondents.

Table 14. graduates Reason for Changing jobs

REASONS	FREQUENCY	PERCENT
Salaries and wages	59	42.45%
Related to special skill	32	23.02%
Proximity to residence	19	13.67%
Family influences	13	9.35%
Career challenge	8	5.76%
Related to course of study	0	0.00%
Peer influence	3	2.16%
Others	5	3.60%

Table 14 shows that despite being presently employed, majority of the respondents (42.45%) would be willing to find other jobs if salaries and wages will be greatly improved, while 23.02% would like to find other jobs that are related to their special skill.

Conclusions

Based on the findings of this graduate tracer study, the College of Industrial Technology has proven itself to be an institution of expertise and achievers in the ladderized vocational and technical education program as confirmed by a number of graduates, who mostly demonstrated remarkable

accomplishments in the fields/institutions they are in. Further, the findings revealed very high employment rate of the graduates both locally and internationally at the time of study. There is already high percentage of graduates working abroad which may imply that the graduates are globally competitive. The skills and competencies provided were evaluated as adequate and relevant to current jobs as well. For further advancement, it is viewed that the Bachelor of Industrial Technology undergraduate curriculum though still relevant, may be enhanced to be at par with the International Standards.

Recommendations

In the light of the findings of the study, the following recommendations are hereby provided:

The Batstate-U College of Industrial Technology may conduct regular graduate tracer studies among its graduates every two or three years and include the non-degree graduates of the program in order to assess their relevance, employability and competence in the labour market.

The employers of the graduates may be included as respondents in the tracer study to determine their level of satisfaction on the graduates performance in their jobs or works as well as the adequacy of the competencies acquired by the graduates during their pre-service training /education.

To further enhance the Industrial Technology curricular programs taking into consideration the inevitable demands of the global market.

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