

A Tracer Study from 2016-2019 of Bachelor of Science in Information Technology Alumni of Guimaras State College

Abstract –The Bachelor of Science in Information Technology of the Guimaras State College is offered as a 4-year degree program that enables students with the basic skills on computer applications from conceptualization, designing and implementation of softwares for them to ready as IT professionals. It is, thus, the purpose of this tracer study to determine whether the purpose of offering the program is achieved and determine the significance of the BSIT curriculum to the knowledge and skills acquired by the graduates to their employment. The study used a descriptive research design and the targeted respondents were all the BSIT graduates of the GSC for the school years from 2016 to 2019. However, of the 213 graduates, only 151 responded to the survey where the CHED-standard questionnaire were utilized. Descriptive statistics was also used in the data analysis, where mean, percentage, and rank are utilized. The study showed that almost 80% of the graduates are gainfully employed in various fields, industries and agencies of government. It is also suggested, being a further outcome of this study.

Keywords –Guimaras State College, tracer, BSIT

INTRODUCTION

A state-funded higher education institution located in the Western Visayas, the Guimaras State College (GSC) aimed to provide quality tertiary education to its main stakeholders. In 2005, the College offered the Bachelor of Science in Information Technology (BSIT) to cater to the needs of high school graduates whose interests are into computer applications, development, operations, and maintenance. After all, among a higher education institution's (HEI's) thrusts is to continue evolving in order to adapt to the needs of times [1]. On a futuristic point of view, the trends of time is into information technology as the platform of technological advances and global competitiveness [2].

The BSIT in GSC is offered as a 4-year degree program that enables students with the basic skills on computer applications from conceptualization, designing up to implementation of softwares. It readies the students to be IT professionals who can install, operate, develop, and maintain computer applications. The program aimed to produce information technologists equipped with the ability to assist individuals and organizations to troubleshoot issues by using information technology techniques and processes.

HEI's must respond to the needs of professional education in information technology with a rationalized curriculum; provide modern equipment and facilities; deliver efficient student services; and make available a responsive organization and administration. Their faculty should possess effective and efficient teaching techniques and strategies to maximize and guarantee student learning. They should hone the students to develop their employability skills in terms of communication, leadership, problem solving, among others [3]. The concept of employability requires focusing on four main dimensions: the dimension relating to the skills and competences that make an individual potentially employable, that focused on the motivation to find a job, the one related to social, economic and cultural determining factors, and the last dimension comprising the diverse effects on work-related, personal, economic, health-related and unemployment effects [4].

Values education in the technical discipline can be an effective way to inculcate to the young minds the seeds of humanity for them to grow as real professionals and have multidimensional individuals to live valuable lives and serve the interests of mankind in general [5]. Therefore, developing the work values and other skills of the students plays a vital role in reshaping the character of the graduates [6]. Identifying its great contribution to their employment would also guide the College on how to integrate values aside from skills in the curriculum. Thus, a strong curriculum plays a vital role to produce competitive graduates in the job market [7].

Contributions to the improvement of the College are among the outcomes of this tracer study. In such a way that the College will be more responsive to the needs of its stakeholders. Periodic monitoring should be done to ensure its continued relevance and effectiveness. The competence of the school program can be gauged by the occupational opportunities presented to the graduates, their present positions and the nature of the jobs they obtained immediately after graduation [6].

OBJECTIVES OF THE STUDY

This tracer study aimed to determine the significance of the BSIT curriculum to the knowledge and skills acquired by the graduates to their employment; identify the personal and professional characteristics and job placement of the BS Information Technology graduates and the school-related factors supplemental to their employment. As part of Guimaras State College's mission to provide access to relevant and quality education, the findings of the study will serve as references for the researchers to improve and update BS Information Technology curriculum to make it more responsive to the needs of the industries and the community.

MATERIALS AND METHODS

Research Design

This study used a descriptive research design. Data gathering was done through survey by sending online the survey questionnaire to the target respondents who are all the graduates of BS Information Technology from 2016 - 2019.

Research Locale

The study was conducted in Municipality of Buenavista, Province of Guimaras, Philippines where the College is located. However, the College being a state college does not restrict to the non-residents of Guimaras, hence there are respondents outside the Province of Guimaras.

Sampling Procedure

The target respondents were all of the 213 BSIT graduates from 2016 to 2019. However, there were only 151 graduates who heeded the call. Considering the modified Cochran's Formula to determine sample size given the population, it yielded 138 as the minimum number of respondents [8]. Thus, 151 is acceptable. The questionnaire was sent online through the alumni's registered emails.

Data Collection

The researchers used the CHED-standard Graduate Tracer Study (GTS) questionnaire [9]. The questionnaire was sent online and left for 2 weeks prior to retrieval. At 71% retrieval rate, the number of respondents is deemed representative of the population.

Data Analysis

Processing of the data gathered in this study was done using the descriptive statistics where mean and percentages were used.

RESULTS AND DISCUSSION

The study extracted information relating to the personal, academic, and the employment profile of the respondents. They are presented in a form of matrices and described as follows:

Table 1. Personal Profile of the Respondents

	f	%
Sex		
Male	44	29.40
Female	107	70.60
Total	151	100.00
Civil Status		
Married	18	11.80
Single	129	85.30
Single parent (born a child but not married)	4	2.90
Total	151	100.00

Residence Location		
City	4	2.94
Municipality	142	94.12
No response	5	3.04
Total	151	100.00
Province		
Antique	4	2.94
Guimaras	134	88.76
Iloilo	9	5.96
No Response	4	2.94
Total	151	100.00

Table 1 presents the profile of the respondents, which shows that the BSIT are dominated by female graduates (70.60%). Most of respondents (85.30%) remain single and stayed in the province of Guimaras.

Table 2. Academic and Professional Profile of the Respondents

Year of Graduation		
2019	71	47.02
2018	49	32.45
2017	9	5.96
2016	22	14.57
Total	151	100.00
Honors and Awards		
Magna Cum Laude	4	2.65
Cum Laude	13	8.61
Excellence in Information Technology	4	2.65
Dean's Lister	8	5.30
Special Award	4	2.65
None	23	15.23
N/A	36	23.84
No Response	59	39.07
Total	151	100.00
Professional Examinations		
Career Service Professional Examination (2018 – 2019, Rating range = 80 – 83)	12	7.95
None	27	17.88
N/A	45	29.80
No Response	67	44.37
Total	151	100.00
Professional/Work-related Trainings and/or Advanced Studies		
NCII: Bread Making (Leading to Pastry Production)	18	11.92
NCII: Housekeeping		
NCII: Contact Services and Diploma in Teaching	10	6.62
Cash Flow, Strategic Planning, etc.	4	2.65
Diploma in Teaching	19	12.58
In Praxis: Virtual Symposium on Learning and Co-implementing Access to Information and Archives and Records Management	8	5.30
	19	12.58

DICT-ICpEP Industry 4.0 Training-Webinar 2-Day Orientation-Seminar on Quality Management Systems Standard (QMS) 15-hour Webinar on Data Privacy Protection Extension Capability Building, Research Capability Building On the Job Training – MIS Department Assistant Webinar on Industry 4.0	4	2.65
None	4	2.65
N/A	18	11.92
No Response	17	11.26
	30	19.87
Total	151	100.00
Reason/s for taking BSIT		
High Grades in the course or subject area(s) related to the course]	13	8.61
Good grades in high school	18	11.92
Influence of parents or relatives	36	23.84
Peer Influence	22	14.57
Inspired by a role model	4	2.65
Strong passion for the profession]	36	23.84
Prospect for immediate employment	58	38.41
Status or prestige of the profession	13	8.61
Availability of course offering in chosen institution	44	29.14
Prospect of career advancement	31	20.53
Affordable for the family	31	20.53
Prospect of attractive compensation	9	5.96
Opportunity for employment abroad	22	14.57
No particular choice or no better idea	13	8.61
Total	350*	

*the graduates were allowed to choose more than 1 reason

Table 2 shows the academic and professional profile of the respondents where almost half of them (47.02%) belong to batch 2019. More than a fifth (21.85%) of them received honors or awards during their college days. These awards include the Latin honors of Magna cum laude (2.65%) and Cum laude (8.61%), while the awards include the Dean's list, special award and Excellence in Information Technology with, respectively, 5.30%, 2.65% and 2.65% of the respondents.

It may be understandable that BSIT being a non-board program, only about 8% took a professional examination sanctioned by the Civil Service Commission, and it may be safe to infer that this 8% is working or intend to work in the government sector as a career professional.

In terms of further studies, there are about 18% who took IT related trainings and seminars, about 9% took

further studies leading to teaching, others are into breadmaking ($\approx 12\%$), housekeeping ($\approx 7\%$), and cash flow and strategic planning ($\approx 13\%$) while the rest, more than 40%, either did not take trainings or further studies ($\approx 12\%$), did not find applicable training ($\approx 11\%$) or opted not to divulge whether further studies or trainings were taken ($\approx 20\%$).

For the reasons of them taking BSIT, most of the graduates ($\approx 38\%$) looked at the course then to have a high prospect of having immediate employment. It was followed by the course being available at the institution ($\approx 29\%$). This may be looked as that they were inclined to study at GSC and they were left with BSIT as among the courses available at the time. The strong passion for the profession (IT) comes in as the third reason, along with the parental influence, to take the course (both at 23.84%).

Affordability of the course and the prospect of career advancement are the fourth reason in taking BSIT ($\approx 21\%$ both). Peer influence and opportunity to work abroad complete the top 5 among the 14 reasons in taking BSIT with 14.57% apiece.

Role models (2.65%) did not seem to influence much in the graduates' choice when they were deciding to take BSIT. It also came as the least reason in taking the program.

Table 3. Employment Profile of the Respondents

Employment Status		
Employed	120	79.41
Not Employed	18	11.76
Never Employed	13	8.80
Total	151	100.00
Reason for non-employment		
No Job opportunity	13	41.94
Health-related reasons	2	6.45
Did not look for a job	5	16.13
Family concern and decided not to look for a job	9	29.03
Family concern and decided not to look for a job, Health-related reasons.	2	6.45
Total	31	100.00
Employment Standing		
Self-Employed	21	17.50
Regular or Permanent	28	23.33
Casual	21	17.50
Contractual	32	26.67
Temporary	18	15.00
Total	120	100.00
Employment Classification/Position (based on Philippine Standard Occupational Classification, 1992 Standard)		
Clerks	14	11.67
Clerks, Special Occupation	9	7.50
Officials of Government and Special-Interest Organizations, Corporate Executives, Managers, Managing Proprietors and Supervisors	18	15.00
Professionals	23	19.17
Professionals, Clerks	7	5.83
Service Workers and Shop and Market Sales Workers	9	7.50
Special Occupation	21	17.50
Technicians and Associate Professionals	14	11.67
Trade and Related Workers	5	4.17

Total	120	100.00
Place of Work		
Local	113	94.17
Abroad	7	5.83
Total	120	100.00

There are 120 or 79.50% who are able to land a job out of the 151 respondents who are BS Information Technology graduates from 2016 to 2019. The remaining 31 or 20.50% of the graduates are presently not employed; of these 31, 5 (16.10%) for unstated reasons did not look for a job, while 13 (41.9%) decided not to look for a job due to family reasons, 2 (6.5%) did not look for a job due to health reasons, and the remaining 13/31 (41.9%) find no job opportunity.

It is very seldom that a graduate would land a job immediately after he gets his diploma. There will be a certain span of time that they are unemployed, which is referred to as the natural rate of unemployment [10]. On another note, there is also a scenario of structural unemployment where the graduate or the job seeker stops his job search in order to align his abilities to the skills set that most employers are looking at [6]. This can be attributed to the five (5) presently unemployed graduates who did not look for a job without stating their reasons.

On the positive note, however, the result signifies that most of the BSIT graduates of Guimaras State College in Buenavista campus are employable because of the Information Technology skills, knowledge and appropriate work values that they hold. For the status of 120 presently employed graduates, 28 graduates or 23 percent already attained their regular or permanent status while 32 of them or 27 percent are still contractual, 18 respondents or 15 percent are temporary, 21 respondents (18%) are casual while another 21 respondents (18%) are self-employed.

With respect to the employment classification of the employed respondents, according to the Philippine Standard Occupational Classification, 27% of them are into special occupation, 25% are working as IT professionals, about 12% are working as technicians and associate professionals while 15% of them are into Government or Special-Interest Organizations as officials, corporate executives, managers, managing proprietors and supervisors.

The least number of them, 5 graduates or about 4%, are trades or related workers, and 9 or about 8% of them are service workers and shop and market sales workers. Business firms need a lot of computer literates to operate their business well. Being computer literate is to know how the computer functions and operates. As of 2005, people having basic computer skills are considered very important assets in developed countries [11]. Computer literacy helps to increase workers value especially when they are trained at a higher level of computer skills such as programming, web development, hardware maintenance, program development, database management, network administration, and many other related skills.

Table 4. Current Job, and the Pre- and Post- Job Acceptance Scenarios

Employers' Line of Business		
Agriculture , Hunting and Forestry	4	3.33
Financial Intermediation	7	5.83
Financial Intermediation, Real State, Renting and Business Activities	4	3.33
Health and Social Work	11	9.17
Hotels and Restaurants	18	15.00
Other Community, Social and Personal Service Activities	11	9.17
Public Administration and Defense, Compulsory Social Security	61	50.83
Others		
Total	120	100.00
Place of work		
Abroad	7	5.83
Local	113	94.17

Total	120	100.00
Is this your first job after college?		
Yes	60	50.00
No	60	50.00
Total	120	100.00
Reasons for staying on the job		
Career challenge	6	10.00
Career challenge, Related to special skill, Related to course or program of study, Family influence	6	10.00
Related to special skill	8	13.33
Related to special skill, Related to course or program of study	6	10.00
Salaries and benefits	10	16.67
Salaries and benefits, Career challenge, Related to special skill	6	10.00
Salaries and benefits, Career challenge, Related to special skill, Related to course or program of study, Proximity to residence	6	10.00
Salaries and benefits, Related to special skill	6	10.00
Salaries and benefits, Related to special skill, Related to course or program of study	6	10.00
Total	60	100.00
Reasons for accepting the job		
Career challenge, Related to special skills	16	26.67
Proximity to residence	12	20.00
Related to special skills	18	30.00
Salaries and benefits	15	25.00
Salaries and benefits, Career challenge, Related to special skills	16	26.67
Salaries and benefits, Related to special skills	18	30.00
Salaries and benefits, Related to special skills, Proximity to residence	20	33.33
Total		
Reasons for changing job		
Career challenge	16	26.50
Career challenge, Related to special skills	7	11.80
Proximity to residence	7	11.80
Related to special skills	5	8.80
Salaries and benefits	7	11.80
Salaries and benefits, Career challenge	7	11.80
Salaries and benefits, Career challenge, Proximity to residence	5	8.80
Salaries and benefits, Career	2	2.90

challenge, Related to special skills		
Salaries and benefits, Career challenge, Related to special skills, Proximity to residence	4	5.90
Total	60	100.00
Length of stay in the first job		
1 to 6 months	14	23.33
1 year to less than 2 years	16	26.67
2 years to less than 3 years	9	15.00
3 years to less than 4 years	2	3.33
7 to 11 months	10	16.67
Others	9	15.00
Total	60	100.00
How did you find your first job?		
Arranged by school's job placement officer	9	15.00
As walk-in applicant	14	23.33
Information from friends	7	11.67
Job Fair of Public Employment Service Office (PESO), Others	2	3.33
Recommended by someone	21	35.00
Recommended by someone, Information from friends	5	8.33
Response to an advertisement, As walk-in applicant	2	3.33
Total	60	100.00
How long did it take you to land in your first job?		
1 to 6 months	12	20.00
1 year to less than 2 years	14	23.33
2 years to less than 3 years	4	6.67
7 to 11 months	4	6.67
Less than a month	26	43.33
Total	60	100.00
Gross monthly earning in first job		
10,000.00 to less than 15,000.00	25	41.67
15,000.00 to less than 20,000.00	17	28.33
25,000.00 and above	4	6.67
5,000.00 to less than 10,000.00	60	100.00
Below 5,000.00	14	23.33
Total	120	100.00

Majority of the graduates (61 or 50.83%) indicated their industry as others, while the remaining less than 50% are employed in the agriculture and forestry, in other community, social and personal service activities, in hotels and restaurant, some in financial intermediation firms, while the rest are into public administration.

Most of the BSIT graduates, with 94 percent are employed locally while 6 percent are employed abroad. Of the 120 employed respondents, 60 or 50% of them answered that their current job is also their first job after graduation and the other half said that it is not their first job.

Salaries and benefits is the foremost reason of the graduates for staying on the job followed by career challenge; the tasks they are engaged in are related to their special skill; related to course or program of study and proximity of their work place to residence.

Almost half of the respondents at 43 percent acquired their first job in less than a month, while 23 percent found their job within 1 to 2 years. It is followed by 20 percent of the respondents who landed in their first job from 1 to 6 months while at 4% each, the graduates obtained their first job within 7 to 11 months, and 2 years and less

than 3 years. Of the respondents who have searched their jobs for almost 2 years, they answered that while they are waiting for work abroad.

Career challenge deemed to be the foremost reason of the respondents for accepting the job followed by salaries and benefits and their job is related to special skills they possessed. IT's are mostly liked to be challenged due to the nature of the challenging subjects they took in college like several mathematics subjects with natural and physical science applications. Their experiences as students mould them to be inspired and motivated to think logically and critically to make a substantial output from the problems presented to them during class discussions. These characteristics shaped their attitude that needs to be challenged professionally.

The graduate-respondents acquired their first jobs as walk-in applicants according to 23 percent of the respondents which is preceded by recommended by someone (35%) and then arrangement of the school's job placements services rounds up the top 3 modes of the graduates' job placement at 15%. Information from friends with 12 percent, and 3 percent apiece for response to advertisement and Job Fair rounded up the modes of job placement.

For the job level position of the respondents on their first job, 71 percent obtained rank or clerical position followed by being self-employed at 22% while professional, technical or supervisory with 7 percent.

Half of the respondents, 60 or 50 percent have initial Gross Monthly Earning in the First Job ranging from Php5,000.00 to less than Php10,000.00; followed by Php10,000.00 to less than Php15,000.00 with 21 percent receiving and 14 percent having P15,000.00 to less than P20,000.00. The least number of respondents are receiving P25,000.00 per month at 3.33%.

Table 5. Competencies learned in College that the students find useful in their job

Skills found useful in their first jobs.		
Entrepreneurial skills, Critical Thinking skills, Others	15	17.6
Human Relations Skills	13	14.7
Human Relations Skills, Critical Thinking skills	5	5.9
Human Relations Skills, Critical Thinking skills, Others	3	2.9
Human Relations Skills, Entrepreneurial skills	3	2.9
Human Relations Skills, Entrepreneurial skills, Critical Thinking skills, Others	3	2.9
Human Relations Skills, Entrepreneurial skills, Problem-solving skills, Critical Thinking skills	18	20.6
Human Relations Skills, Problem-solving skills	3	2.9
Human Relations Skills, Problem-solving skills, Critical Thinking skills	8	8.8
Human Relations Skills, Problem-solving skills, Critical Thinking skills, Others	3	2.9
Others	8	8.8
Problem-solving skills, Critical Thinking skills	8	8.8
Total	120	100.00
Suggestions to further improve course curriculum.		
Hands on Trainings and Seminars	84	55.60
Include topics/subjs that is relevant to the current trends	123	81.50

More in hands on experience in teaching complicated subj in IT. More resources for students when they research in IT related subspecially in Major Subj. Thank you!	91	60.30
More trainings and seminars to be attended	58	38.40
None	22	14.60
Quality of teaching, more motivation for students	101	66.90
Upgrade the facilities and equipments use in the laboratories	121	80.10
Total		

Human relations skills, Problem solving skills, critical thinking skills and entrepreneurial skills are the noted skills set that the graduates deemed to be their armor and their utilities to thrive in the work environment.

Meanwhile, about 82% of the graduates suggested that in order for the College to improve the curriculum, topics or subjects that is relevant and updated should be included in the program. It is closely followed at 80% by the suggestion that facilities and equipment being used in the laboratories be upgraded. Quality instruction that leads to motivation of students can be looked into to improve the program at 67%. Then more hands on experience for the students is also raised by 60% of the graduates.

CONCLUSION AND RECOMMENDATION

Based from the results of the study, the employment rate of Bachelor of Science in Information Technology from 2016 – 2019 of Guimaras State College is considered employable and this study aimed to propose a program that would enhance the future employment ratings of its graduates. In this way, the College must strengthen their services and focus on the quality of instruction with the support of research and community extension. Regular update once a year the status of their graduates and ask for possible curriculum enhancement programs they could offer to the College. Students must learn to be motivated to work hard and persevere to whatever task and project assigned to them to develop their sense of responsibility and leadership. BSIT students should attend supplemental oral and written communication trainings to enhance their social interactions with all levels of professional community. Work skills and values of the students must be further emphasized in the application of the curriculum. Enhancements of the curriculum is also deemed necessary for the program to thrive further.

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