GRADUATE'S EMPLOYABILITY: A TRACER STUDY OF THE CARAGA STATE UNIVERSITY CABADBARAN CITY ON BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSIT) GRADUATES FOR THE ACADEMIC YEARS 2015 – 2018

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ABSTRACT: *This study aims to determine the employability of the graduates of the Bachelor of Science in Information Technology of Caraga State University Cabadbaran City Campus from 2015-2018. The researchers used descriptive quantitative research design since the study determined the employment status, socio-demographic profile, and socio-economic background. There are 177 BSIT graduates and 153 or (85.95%) who participated in this study. The data gathering instrument used by the researchers was the Graduate Tracer Study approved by the university. The findings revealed that 64.41 % (or 114 out of 153) of the respondents were presently employed while 18.08% (32 out of 153) responded were not presently employed and still applying. Moreover, 74 or 48.37% were permanent or regular employees while 38 or 24.84% were still contractual or casual status, most of the respondents (54.25% or 83 out of 153) are connected with non-government agencies with a little percentage of 19.61 or 30 out of 153 respondents were working in the government. Meanwhile, most of the respondents (47.71% or 73 out of 153) were assigned to professional, technical, and supervisory positions while 23.53% or 36 out of 153 respondents were working in rank and file or clerical positions. Furthermore, most of the respondents (28.88 or 36 out of 153) are earning P5,000 to 9,000 per month. Most of the BSIT graduates, 46.41% or 71 out of 153 respondents were employed through walk-in applications. In this study, one of the recommendations of the researchers is to further increase the marketability of BSIT programs and the employability of the graduates, periodic review of curriculum by academic leaders, alumni, and industry representatives must be conducted to ensure that graduates are equipped with the necessary knowledge and skills to make them highly employable in the industry.*

Keywords: *Graduates, employment, information technology, tracer study*

1. INTRODUCTION

A tracer study is a widely-used policy by educational institutions to gauge the relevance of higher education and collect other valuable information from the graduates of the institution [1]. The information increased from survey articles in a tracer study can be used by the graduate's alma mater and other education shareholders for curriculum development and reform, professional values, and the graduates' job satisfaction. therefore, Tracer is crucial to the development of any institution because if there is no evaluation of consequences of the educational process to be accompanied by the institution, there will be no benchmark in which the basis of future developments can be based upon. Badiru and Wahome (2016) also pointed out that the University Graduate Tracer Studies (GTS) are becoming a recognizable practice worldwide [2].

This tracer study is curriculum relevant and provides targeting benefits to graduates to enhance the marketability of educational programs. The Commission on Higher Education (CHED) is an institution produced to oversee the higher education system in the country. Moreover, this agency is also mandated to: oversee graduates that are both locally and globally responsive and competitive; promote quality standards of higher education that are accessible and affordable for all. It is further reinforced by the Executive Order No. 83 series of 2012 that establishes the Philippines Qualification Framework which mandates the Department of Education (DepEd), Commission on Higher Education (CHED), Technical Education and Skills Development Authority (TESDA), Philippine Regulatory Commission (PRC), and Department of Labor and Employment (DOLE) to review the learning standards in basic education, technical skills development, and higher education. In order to assess the effective and ineffective components of a specific program or project, the commonly used assessment instrument is the tracer study. According to Millington (2001), tracer study is quantitative structural data that explores the professional track and experiences of the graduates [3].

The Caraga State University of Cabadbaran City Campus (CSUCC) offered a Bachelor of Science in Information Technology in 2007 to provide that education that is beyond basic learning as well as experiences in computer to the technology [4]. The BS Information Technology is a four-year degree program that focuses on the study of the utilization of both hardware and software technology involving planning, installing, customizing, operating, managing to administer, and maintaining information technology infrastructure that provides computing solutions to address the needs of an organization [5]. The said program prepares students to become Information Technology (I.T.) professionals who are experts in software applications, database administrations, computer networks, and technical support. It also produces successful practitioners with their field of specialization in information technology in any I.T. industry. At the end of the course, the students should enable to pass the TESDA. national certificates and ICT specialist proficiency examination to be fully equipped in landing a job and compete globally. The CSUCC provides the best quality education in any program because they are fully equipped in their laboratory and library, qualified instructors, and accept challenges by accrediting all the programs in the AACCUP.

2. MATERIALS AND METHODS

Research Design. The researchers used descriptive quantitative research since the study determined the employment status, socio-demographic profile, and socio-economic background.

Locale of the Study. This study was conducted in the different barangays of Cabadbaran City where most of the graduates were residing and in the neighboring towns and cities such as Tubay, Santiago, Magallanes, Jagupit, Kitcharao, Jabonga. Dinagat, Surigao, RTR, Bayugan and Butuan City.

Respondents and Sampling Technique. The respondents of this study were from the BSIT graduates from 2015 – 2018, thus, the researchers used the convenient sampling technique. There were 153 or 85.92% out 177 graduates who responded to the survey.

Table 1. Number of graduates and responded to the survey questionnaires per year.

Year	# of Graduates	Responded	
		Frequency	Percentage (%)
2015	37	35	94.59
2016	37	28	75.68
2017	33	28	84.85
2018	70	62	88.57
Total	**177**	**153**	**85.92**

Research Instrument. The study was utilizing an e-survey questionnaire using Google Forms for a tracer study developed by the Caraga State University. Questionnaires will be individually sent to all graduates via electronic mail or Facebook messenger. The questionnaire will consist of four parts: general information, college profile, professional career, further studies, and advanced training.

Data Collection Procedure. The researchers received the answered e-survey questionnaires from the respondents dated from September 2019 to May 2021. Right after the retrieval of questionnaires, the researchers started organizing the data.

Analysis of Data. The researchers used descriptive statistics in analyzing the data gathered. Frequency counts, percentage, rank, and weighted mean were used. In this study, the researchers simply summarized and described the employment, unemployed, self-employed, and full-employed. The summary is presented in a tabular and graphical form.

3. RESULTS AND DISCUSSIONS

Table 2 presents the profile of BSIT graduates from 2015 to 2018 in terms of Age and Sex. The data reveals that out of 153 respondents, 62(40.52%) were male while 91(59.48%) were female which is more than half of the total female respondents from 2015 to 2018. Overall, graduates from 2015 have the highest respondents with a frequency of 22(62.68%) while barely 11(39.29%) respondents were from batch 2017. Meanwhile, most of the respondents from batch 2015 and 2018 were under 30 years old with a frequency of 22(62.86) and 61(98.39%) respectively and in batch 2016, 26(92.86%)

Scale Values	*Mean Rating*	*Adjectival Description*
5	4.21 - 5.00	Extremely Useful
4	3.41 - 4.20	Very Useful
3	2.61 – 3.40	Moderately Useful
2	1.81 – 2.60	Slightly Useful
1	1.00 – 1.80	Not Useful

were over 30. Generally, based on the trend, it is imperative that most female, and under 30 years old of batch 2015 to 2018 of BSIT graduates are at the peak of establishing their career in information technology or other related fields. In terms of the civil status distribution of BSIT graduates from, 2015 t0 2018. Generally, among the 153 respondents of the study, 89 (58.17%) were single and 64 (41.83%) were married.

Table 3 presents the frequency of BSIT graduates from 215 to 2018 in terms of employment status. As revealed from the data, 64.97% (or 115 out of 153) of the respondents were presently employed when this survey was conducted. On the other hand, 18.08% (or 32 out of 153) of the respondents were not employed. With 3.95% who were never employed and 12.99% (or 23 out of 153) of the respondents did not respond the survey questionnaire. According to Ahmad (2012), graduates are competing among themselves to meet the job market in various sectors [6]. Because of the limited amount of jobs available, many graduates end up unemployed. However, the study of Balingbing (2014) yielded an interestingly low unemployment rate with only 2.60% (or 4 out of 155 respondents). Nevertheless, 69.78% (or 97 out of 139) believed that their first job is related to the program (BSIT) they took up in college. This percentage is even higher compared to the 59.5% of respondents in the study of Woya (2019) who perceived that their work is directly aligned to their field of study [7].

Table 4 shows the profile of the respondents of BSIT graduates from 2015 to 218 in terms of to their Present Employment Status, Classification of Employment, Present Position, Salary Monthly Income & Job Search. Most of the respondents in this study (48.37% or 74 out of 153) have regular employment status.

Table 2. Frequency distribution of respondents according to the Profile of the graduates

		2015		2016		2017		2018		Total	
Measure	**Item**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**
Sex	Male	13	37.14	13	46.43	11	39.29	25	40.32	62	40.52
	Female	22	62.68	15	53.57	17	60.71	37	59.68	91	59.48
Age	Under 30	22	62.86	2	7.14	28	100	61	98.39	113	73.86
	Over 30	13	37.14	26	92.86	0	0	1	1.61	40	26.14
Civil Status	Single	9	25.71	22	78.57	1	3.57	57	91.94	89	58.17
	Married	26	74.29	6	21.43	27	96.43	5	8.06	64	41.83

Table 3. Frequency Distribution of the BSIT Graduates in Terms of Employment Data

Present Employment	2015		2016		2017		2018		Total	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Presently Employed	28	75.68	26	70.27	20	60.61	40	57.14	114	64.41
Not Presently Employed	5	13.51	2	5.41	7	21.21	18	25.71	32	18.08
Never Employed	2	5.41	0	0	1	3.03	4	5.71	7	3.95
Not responded	2	5.41	9	24.32	5	15.15	8	11.43	24	13.56
Total	37	100	37	100	33	100	70	100	177	100

This is a good development in the graduates' career since they have already obtained security of tenure. The study of Albina & Sumagaysay (2019) recorded almost the same percentage of respondents with permanent employment status which is 46.04% (64 out of 177) among BSIT and BSCS graduates from 2015–2017 from a State University in the Philippines [4]. Likewise, most of the respondents (54.25% or 83 out of 153) are connected with non-government agencies with a little percentage of 19.61 or 30 out of 153 respondents were working in the government. Meanwhile, most of the respondents (47.71% or 73 out of 153) were assigned to professional, technical, and supervisory positions while 23.53% or 36 out of 153 respondents were working in rank and file or clerical positions. Furthermore, most of the respondents (28.88 or 36 out of 153) are earning P5,000 to 9,000 per month.

This finding is different from a similar study conducted by Albina (2019) on the monthly income of the graduates from 2015 to 2017 which found out that the majority of the respondents (49.64%) were earning P10,001 to 15,000. his implies that the monthly earning of BSIT graduates varies from place to place. Lastly, generally, most of the BSIT graduates, 46.41% or 71 out of 153 respondents were employed through walk-in application.

Table 5 shows the competencies learned in college by BSIT graduates from 2015 to 2018 that the graduates find useful in their job. The data indicates that "communication skills" are considered by the majority of the respondents (mean is 3,99) as the foremost competency they learned in college that they find very useful in their job. This finding is parallel to the claim of Martin (2014) that "communicative competence can greatly help new graduates to develop them potential, both socially and occupationally" [8].

His study further suggests that the "importance of communicative competencies should be included in the educational context to enhance the employability and productive force of future graduates."

Table 4. Frequency Distribution of Respondents According to their Present Employment Status, Classification of Employment, Present Position, Salary Monthly Income & Job Search

		2015		2016		2017		2018		Total	
Measure	**Item**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**	**f**	**(%)**
Present Employment Status	Contractual/Casual	9	25.71	7	25.00	5	17.86	17	27.42	38	24.84
	Permanent/Regular	19	54.29	19	67.86	14	50.00	22	35.48	74	48.37
	Self-employed	0	0	0	0	1	3.57	0	0	1	0.65
	Probationary	0	0	0	0	0	0	1	1.61	1	0.65
	No answer	7	20.00	2	7.14	8	28.57	22	35.48	39	25.49

Classification of Employment	Government	11	31.43	6	21.43	2	7.14	11	17.74	30	19.61
	Non-government	17	48.57	19	67.86	18	64.29	29	46.77	83	54.25
	Self-employed	0	0	1	3.57	0	0	0	0	1	0.54
	No answer	7	20.00	2	7.14	8	28.57	22	35.49	39	25.49
Present Position	Rank or Clerical	14	40.00	7	25.00	5	17.86	10	16.13	36	23.53
	Professional, Technical and Supervisory	13	37.14	16	57.15	15	53.75	29	46.78	73	47.71
	Managerial or Executive	3	8.57	3	10.71	0	0.00	1	1.61	7	4.58
	No answer	5	14.29	2	7.14	8	28.57	22	35.48	37	24.28
Salary Monthly Income	35,000 and above	1	2.86	0	0	0	0	0	0	1	0.65
	30,000 - 34,999	1	2.86	0	0	0	0	0	0	1	0.65
	25,000 - 29,000	2	5.71	2	7.14	1	3.57	0	0	5	3.27
	20,000 - 24,999	0	0	4	14.29	4	14.29	1	1.61	9	5.88
	15,000 - 19,999	12	34.29	11	39.29	5	17.86	4	6.45	32	20.92
	10,000 - 14,999	4	11.43	5	17.86	5	17.86	15	24.19	29	18.95
	5,000 - 9,999	8	22.86	4	14.29	5	17.86	18	29.03	35	22.88
	Below 5,000	0	0	0	0	0	0	2	3.23	2	1.31
	No answer	7	20.00	2	7.14	8	28.57	22	35.49	39	25.49
Job Search	Walk-in application	14	40.00	18	64.29	12	42.86	27	43.55	71	46.41
	Referrals	7	20.00	3	10.71	4	14.29	6	9.68	20	13.07
	Through job fair	0	0	0	0	0	0	2	3.23	2	1.31
	Online advertisements	3	8.57	0	0	3	10.71	1	1.61	7	4.58
	Through office posting	0	0.00	0	0	0	0.00	0	0	0	0.00
	Personal achievement	4	11.43	5	17.86	1	3.57	3	4.84	13	8.50
	My own hard work	0	0	0	0	0	0	0	0	0	0.00
	No answer	7	20.00	2	7.14	8	28.57	23	37.10	40	26.14

Aside from communication skills, "Productivity and Accountability skills" is the second-highest competency (weighted mean 3.95) believed by the respondents to be useful in their job. Ranked at the bottom in this category are "entrepreneurial skills" and "global citizenship", with a weighted mean of 3.64 and 3.69 respectively. This finding is contrary to the finding in the study of Cañizares (2015) where critical thinking (along with literacy skills, problem-solving skills, numeracy skills, and content-specific knowledge) emerged excellent as a skill being developed by the graduates. In conjunction to that, Siraye (2018) concluded that "supervisors desire employees who can identify problems and their essential components at the workplace" [9,10].

Table 6. Usefulness of the course curricula in their professional work.

Category	2015		2016		2017		2018		Total		Rank
	WM	D	WM	D	WM	D	WM	D	WM	D	
General Education/Minor Courses	3.91	VU	3.89	VU	3.48	VU	3.59	VU	3.72	VU	2
Core/Major Courses	3.70	VU	3.68	VU	3.48	VU	3.60	VU	3.62	VU	3
Special Professional Course	3.64	VU	3.75	VU	3.52	VU	3.57	VU	3.62	VU	3

Elective Courses	3.52	VU	3.68	VU	3.30	MU	3.40	MU	3.48	VU	4
Internship/On-the-Job Training	3.73	VU	3.79	VU	3.70	VU	3.74	VU	3.74	VU	1

Legend: WM=Weighted Mean, **D**=Description, **EU**=Extremely Useful, **VU**=Very Useful, **MU**= Mo -derately Useful, **SU**=Slightly Useful & **NU**=Not Useful

Table 6 shows the profile of the respondents of BSIT graduates from 2015 to 2018 as to the usefulness of course curricula in their professional work. The data indicates that "Internship/On-the-Job Training" is considered by majority of the respondents (weighted mean 3.74) as the foremost course that the graduates find very useful in their professional work. Aside from Internship, the graduates considered "General Education/Minor Courses the second-highest course (weighted mean 3.72) believed by the respondents to be useful in their professional work. The composite mean score of 3.64 implies that the BSIT Curriculum is considered useful to the professional work of BSIT graduates.

Job Training" is considered by majority of the respondents (weighted mean 3.74) as the foremost course that the graduates find very useful in their professional work. Aside from Internship, the graduates considered "General Education/Minor Courses the second-highest course (weighted mean 3.72) believed by the respondents to be useful in their professional work. The composite mean score of 3.64 implies that the BSIT Curriculum is considered useful to the professional work of BSIT graduates.

Table 7 demonstrates how the respondents evaluated in recognition the usefulness of curricular program of the college to their first job. It emerged that when asked whether or not the curricular program they had in college is useful in their first job, majority of the respondents (weighted mean 3.53) declared that the curricular of the program they had in college is indeed useful. The result of this evaluation confirmed that "competitive graduates in the job market often depend on a strong curriculum of the programs" [6].

It goes beyond stating that the curriculum must be relevant to the industry's needs, because "impractical university curriculum is one of the factors that cause graduates' skills gap, along with other factors like constant changes in the labor market, and students' passivity in planning and developing their career"[11,12, 13].

Table 7. Usefulness of the curricular program in their professional work

Category	2015		2016		2017		2018		Total		Rank
	WM	D	WM	D	WM	D	WM	D	WM	D	
Co-Curricular Activities (e.g. field trips & seminars	3.73	VU	3.46	VU	3.59	VU	3.33	MU	3.53	VU	1
Extra-Curricular Activities (e.g. intramurals & exit conference)	3.58	VU	3.64	VU	3.33	MU	3.22	MU	3.44	VU	2

Legend: WM=Weighted Mean, **D**=Description, **EU**=Extremely Useful, **VU**=Very Useful, **MU**=Mo -derately Useful, **SU**=Slightly Useful & **NU**=Not Useful

4. CONCLUSIONS AND RECOMMENDATIONS

Based on the above findings, the following conclusions are forwarded:

1. Most of the respondents' profiles are female while the age profiles are predominantly under 30 years old. When it comes to civil status, the majority are single.
2. Among the job placement profile of the respondents, majority of the respondents were gainfully employed, the work they acquire is related to the course completed.
3. The results are remarkably important to recognize and address curriculum-related issues, employment and unemployment status of the graduates, classification of employment, present position, salary monthly income and job search. Most of the respondents are employable with jobs which are related to their program in college which mostly working in non-government sector through walk-in application. Furthermore, most of the respondents have regular employment status, which consequently provides them the so-called security of tenure. Most of the respondents are also earning P5,000 to 10,000 per month – an amount modest enough to enable them to live a decent lives considering the salary range is within the minimum wage rate in the area where the respondents are employed.
4. The most identified competencies, which the respondents found useful in their jobs is communication skills. However, competencies in greatest need of curricular attention according to the perception of the respondents are entrepreneurship and global citizenship.
5. Present and aspiring students of Bachelor of Science in Information Technology consider Professional subjects as well as the General Education subjects very useful in performing their job. These subjects really helped them familiarize with the updated hardware and software products while performing their task in their professional job area.

Recommendation:

Further study can be done by collecting other possible input variables such as work attitudes or a passion for working in the field. The researchers find out the following

recommendations are made taking into consideration the results in this study:

1. To further increase the marketability of BSIT programs and the employability of the graduates they produce, periodic review of curriculum by academic leaders, alumni, and industry representatives is imperative to ensure that graduates are equipped with the necessary knowledge and skills to make them highly employable in the industry
2. Students should have an extremely appropriate on-the-job station to provide them opportunity to expressively experience and analyze the skills required in the fields specialization of Information Technology
3. Communication skills must be further intensified in a field of specialization that is not directly associated with writing and public speaking. This can be achieved by giving them enough classroom exercises and activities designed to enhance the confidence of the students in both writing and oral communications. Competencies; skills, course curricula, and co-curricular programs must always be strengthened since these are very much useful to their employment.
4. Conduct Graduate tracer studies regularly at least every other year covering broader scope in terms of graduates in preceding years to inaugurate a more robust data that reflects the employability of the graduates.

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