Tracer study of information technology graduates from the San Jose Campus of Occidental Mindoro State College, Philippines from 2018 to 2022

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Article Info

ABSTRACT

The goal of this study was to track the current status and employment of Occidental Mindoro State College, San Jose Campus, Bachelor of Science in Information Technology (BSIT) graduates for the academic years 2017-2018 to 2021-2022. The primary data-gathering tool was a modified questionnaire adapted from the Commission on Higher Education (CHED) and used in conjunction with the descriptive research methodology. Out of the 963 graduates who were surveyed, only 465 graduates replied. In this study, descriptive statistics, including frequency counts, percentages, ranking, and T-test analysis were used. The study also wants to identify the general characteristics, educational background, post-college professional examinations passed, employment characteristics reasons for unemployment of the unwaged respondents, and to test the significant difference of the graduate's competencies to the business line of their career. Based on the results, BSIT graduates have a better employability rate with regular positions. This indicates that the program's curriculum is compatible with the jobs in which IT graduates are employed

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1. INTRODUCTION

Tracer study is a formed method by the school to follow where its graduates went after completing their academic careers. Alumni are at the forefront of the study program since they determine the standard of teaching and learning activities in higher education. With this, alumni data must be acquired since they are an accurate picture academic setting (Hasibuan et al., 2021).The world we live in is changing quickly, and technology is at the forefront. The need for knowledgeable people who can take advantage of its possibilities grows as technology develops. Graduates of the Bachelor of Science in Information Technology (BSIT) program are at the forefront of this need because they possess the expertise required to keep up with the demands of the rapidly evolving tech industry. BSIT graduates are leading this requirement because they possess the skills required to satisfy the expectations of the rapidly evolving IT industry. The top 10 most employable graduates in the Philippines, according to a report by the Commission on Higher Education (CHED), are all BSIT graduates (CHED, 2019). The study conducted by the Philippine Statistics Authority revealed that the information and communication technology (ICT) industry in the Philippines is one of the fastest-growing businesses and is anticipated to produce up to 1.7 million employees by 2022 (Philippine Statistics Authority, 2018).

With the given the rapid-fire pace of the IT sector, it is crucial to carry out studies that track the advancement of BSIT graduates and their employment rate. Tracer studies can help in this situation. Higher

education institutions can track their alumni's professional paths and evaluate their programs' success using tracer studies. Tracer studies are a reliable approach to gauge how well information technology programs prepare graduates for the demands of the industry. The Philippine Qualifications Framework requires agencies like DepEd, CHED, TESDA, PRC, and DOLE to set up a system that makes sure the graduates respond to the socioeconomic situation as their realization of their own goals and plans, rather than just the fulfillment of their parent's wishes. At that time, tracer studies have grown in importance in higher education and have become a key tool for evaluating the strengths and shortcomings of curricula (Dela Cruz, 2022).

Based on previous tracer study in other institution, a notable percentage of graduates obtained their first job related to their program of study. However, challenges such as income, work relevance, and company alignment are common, particularly within the information technology (IT) program. To address these issues, Occidental Mindoro State College has implemented a tracer guide from the Commission on Higher Education (CHED) to track graduates' competence in various areas. This study focuses on examining the employment rate of BSIT graduates, shedding light on both achievements and potential challenges. The results aim to inform adjustments to the BSIT curriculum, ensuring graduates possess the necessary knowledge and skills to thrive in the IT sector (Albina & Sumagaysay, 2020).

The San Jose Campus of Occidental Mindoro State College's Information Technology Department had produced 963 students from 2018 to 2022. The department is dedicated to providing students with an excellent education and the skills and information required for their particular line of employment. To maintain exceptional graduates who can compete both locally and globally, it may be possible to discover the difficulties and even the strengths of the graduates with the aid of the study's findings. The study aims to: (a) determine the demographic profile of graduates based on sex, region of origin, year graduated, and honors received; (b) assess students' educational background regarding reasons for pursuing advanced studies, trainings, and professional examinations; (c) evaluate the employment profile of employed respondents, including time taken to secure their first job and current employment status; (d) identify employment-related aspects such as reasons for unemployment, business sector, job retention factors, job relevance to their course of study, job acquisition, job level, career status, initial gross monthly earnings post-college, alignment of college curriculum with their first job, and competencies acquired during college; and (e) test for significant differences in competency levels among IT graduates across various business sectors.

2.   MATERIALS AND METHOD

The descriptive approach of research was used in the execution of this study. Graduates from the academic years 2018-2022 make up the study's respondents. The OMSC Graduates Tracer Study from the CHED were modified and validated by deans, program directors, and research coordinators from all the College's campuses. The questionnaire was used through Google Forms to collect the data to guarantee its privacy. Also, a Facebook Messenger was used as an additional mechanism of data collection. With the graduates' consent and with the help of the registrar's office, the data were collected.

There are 963 graduates in the academic years of 2018-2022 and there were only 465 people which is 48 percent of the total population reacts on the survey. After gathering the data, the responses were tabulated, analyzed, and interpreted. Likewise, frequency counts, percentages, and ranking were used for descriptive statistics, while T-test analysis was used to test the significant difference of the student's level of competency and chosen career.

3.   RESULTS

3.1. Demographic Profile of the graduates

The study reveals that 53% of respondents are female, while 47% are male. Furthermore, 439 out of 963 graduates are from region 4, with the remainder distributed across nearby regions including region 3, region 6, and the National Capital Region (NCR). The majority of the 129 graduates belong to the 2019-2020 batch, followed by the 2017-2018 and 2018-2019 batches, with the cohort 2021–2022 having the fewest responses. Graduates have been honored with awards such as "tech wizard," "cost economy award," "exemplary award," "recognition for poster making contest," "employee of the month," "excellence awardee," "outstanding performance," "most diligent," and "citizen of the earth" in recognition of their outstanding work and achievements in their respective careers.

3.2. Educational background of the graduates for advance studies

The study observed that graduates are interested in pursuing advanced studies primarily for professional development and promotion. Additionally, they engage in government trainings and graduate programs such as earning a master's degree and obtaining national certification from Technical Education and Skills Development Authority (TESDA), as well as earning education units. The licensure examination for teachers is the most commonly passed professional examination among graduates, with 40.4% passing,

followed by 6.7% passing the National Police Commission (NAPOLCOM) exam, while a minimal percentage passed the career service professional examinations.

3.3. Employment profile of the employed respondents

The study reveals that during the first job of the graduates, 36% stayed for at least one (1) to six (6) months. Whereas 8% of the graduates stayed for less than a month, and it followed by seven (7) to 11 months with 15%. While little percentage among the time duration of one (1) and more than a year. Moreover, the study also found out that 218 respondents is in contractual condition which is not far from the 207 graduates who are in a regular basis. Unfortunately, the study also recorded a 2.58% unemployed status of graduates [Table 1].

Table 1. Duration of first employment.

Time Duration	Frequency (f=465)	Percentage (%)
Less than a month	84	18
1 to 6 months	169	36
7 to 11 months	68	15
1 year to less than 2 years	44	9
2 years to less than 3 years	33	7
3 years to less than 4 years	46	10
5-8 years	21	5

3.4. Reasons for unemployment

Among the 12 graduates recorded as being unemployed, three have explained that they lack work experience. At the same time, two have given the reason for devoting their time to furthering their education. However, others share the same frequency of lack of employment opportunities, being a full-time mother, and health-related issues [Table 2].

Table 2. Reasons for unemployment

Reasons		Frequency (n=12)	Percentage (%)
Family concern and decided not to find a job		1	8.33
Advanced or further study, no job opportunity		1	8.33
Did not look for a job		1	8.33
Full time study		1	8.33
Advance or further study		2	16.67
Lack of work experience		3	25.00
No job opportunity		1	8.33
Health-related reason(s)		1	8.33
Taking care of my 4 months old baby		1	8.33
	Total	**12**	**100**

3.5. Reasons for staying on the current employment

Most respondents are employed in the educational sector, followed by sectors such as public administration and defense, financial intermediation, and other community and social organizations. Within the information technology industry, graduates commonly work in technical support, software programming, system analysis, web and mobile development, and security management, with fewer in network management roles. The study revealed that many respondents stay in their jobs primarily to gain more experience, while 20% cite alignment with their course of study as a reason for staying. Additionally, 18.71% mention salaries and benefits as their motivation for remaining in their current positions [Table 3].

Graduates perceive the college curriculum as "somehow relevant" to their work, with 158 responses, while 118 responses indicate neutrality, and 102 responses deem it "very relevant." Regarding acquired skills, communication skills are most commonly cited, while problem-solving and entrepreneurial skills are least emphasized among graduates.

Table 3. Reasons for staying on the current employment.

Reaasons		Frequency	Percentage
Salaries and benefits		87	18.71
Career challenge		15	9.09
Related to special skill		63	13.55
Related to course or program of study		93	20.00
Proximity to residence		37	7.96
Peer influence		18	3.87
Family influence		21	4.52
For experience		35	7.52
Gain more experience		96	20.65
	Total	**465**	**100**

3.6. Student's level of competency to the business line of IT graduate career

Results show the level of competency and the business line of IT graduate career. It shows that the computed value is 0.5 which means that there is no significant difference between the two variables declared. [Table 4].

Table 4. Relationship in level of competency and the business line of it graduates career.

Year Graduated	Average Weighted Mean of Level of Competency	Average Weighted Mean of Business Line of IT Graduates Career	Computed Value
2021-2022	20.2	27	0.5
2020-2021	14	14.6	
2019-2020	16.8	17.2	
2018-2019	33.4	21.2	
2017-2018	8.6	13	

4. DISCUSSION

The Information Technology Program of Occidental Mindoro State College, San Jose campus, has a total of 963 graduates from the year 2018 to 2022. 53% of respondents were female, and most were from the mainland of Occidental Mindoro, which belongs to Region 4-B. The batch of 2019-2020 actively engaged in the survey of the study, while batch 2021-2022, which is the latest batch graduates found to have the least responses. As shown by the results of the study, a little percentage of the graduates received awards during their stays in the workplace, parallel to the study of (Kumari et al., 2021) that awards should be reinforced as this serves as the motivation for an employee to be more effective than their usual performances. The good thing is that awards of the graduates can be seen from any of the multidisciplinary areas of showcasing their technical skills from the core subjects, being diligent, being an outstanding performer, being a resource speaker, being engaged in the activities of a universal state of the earth, and even on how to engage on research. The studies of (Andari et al., 2021; Antiojo, 2023) strongly emphasized that the importance of these competencies should be manifested in the outputs of the graduates as these are the important requirements of employers. These competencies become the intervening variables that graduates must be observed as these are the manifestations of the totality of human interactions towards their employability (Mina, 2020).

Having an advanced degree allows everyone to experience a higher sense of value, for it continues an individual's engagement with the motivation to fulfill ultimate goals. The study revealed that about 60.7% believed that being engaged in any training and/or advanced studies can be an added factor for them to be more professionally honed. Parallel to the study of (Shahriar et al., 2021), where the pandemic struck in the year 2019 and eventually affected the graduates of batch 2020 also chose to advance the study to continuously hone their complete strategies of engaging themselves to the battle of the working condition of the industry.

Noted in the study that there were 97% of the respondents are currently employed. Wherein the majority of their reasons for staying in their job are to gain more experience. This conforms to their reasons for taking an advanced study for the reason of improving their professional development. Here, students felt the scarcity of completing their totality since the pandemic captured the most important moments of IT graduates, which is the exposure from classes and laboratories. The study of Markel and Guo (2021) added sufficient time for the postponed laboratory periods of the students, and it continually improved and developed the lapses in students' competencies. As Basten et al. (2021) stated that less time of exposure in the laboratory may lead to poor critical thinking. This is in relation to the competencies learned by the students wherein graduates also dropped down their confidence level on the problem-solving skills were critical skills.

Fortunately, because graduates felt the relevance of their curriculum to their first job, 106 graduates are engaged in teaching relevant to their course. It followed by businesses like trades, logistics, and repairs and as technical support both in public and private sector. With those businesses, as noted in the study majority of the graduates landed on a clerical position. Although less of numbers are shown in the employment status of data analyst, systems analyst, software programmers, mobile developers, and security management, still the graduates are performing well as the majority of them claimed that their first job is relevant to their course.

In the end, the study also shows that the level of a student's competency against the alignment of their job with their course shows no significant difference, everyone in the IT community is still trying to climb up the hill towards the global ICT development agenda that everyone must be equipped with the following: basic digital skills and standard digital skills. This became the issue of ICT to the country to hit

the targets as the report of (Rahman, 2016; Staskevica, 2019) is telling everyone that we are still far beyond these technical issues.

5. CONCLUSION

The employment status of Bachelor of Science in Information Technology at San Jose Campus of Occidental Mindoro State College, Philippines is a great manifestation of the effectiveness of the program. It was found out that most of the graduates are currently employed relevant to their curriculum and course. Luckily, out of 465 respondents 453 are employed and majority of them are into their regular status of employment having the gross earnings in between ₱10,000 to ₱15,000. It is also good to know that most of the graduates are engaged in educational sector wherein graduates have showcased their skills in teaching the computer technicalities which are still relevant to their course.

Unluckily, batch 2019-2020 noted to have the least respondents in the study. Way back were pandemic strikes on the same year, students were opting to visit their physical school environment. They chose to use laboratories where they could develop their critical thinking. Due to the student's low proficiency in problem-solving and critical thinking skills, the study discovered a substantial impact of reducing the number of hours they spent in their laboratories. Graduates' motives for staying on the job, which is to get more experience, are being materialized because they felt decrease in their physical exposure to the institution. This contributes to the fact that when they were able to land their first employment, 36% of them stayed for between one and six months.

Furthermore, as CHED implies that BSIT graduates belong to the topmost employable graduates in the Philippines, it is significant to visit and trace student graduates to know where their career landed at. In this, the study shows that the level of a student's competency and the business line of IT graduate career shows no significant difference. A conclusion that shows the curriculum map anchors with the student's career.

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Dr. Ailen B. Garcia was born on November 23, 1983 at Libertad, Misamis Oriental, Philippines. Graduated with a Bachelor of Science in Computer Science at Misamis University in 2006. She pursued her Master in Information Technology at Mindanao University of Science and Technology in 2012 and a Doctor of Education major in Educational Management at Occidental Mindoro State College in consortium with the Mindoro State University in 2018. Currently, she is pursuing Doctor in Information Technology at Technological Institute of the Philippines and is in her dissertation writing phase 1. She worked as an Instructor at Misamis University and later became a Program Chair of Information Technology. In 2014, for family reasons, she transferred to Occidental Mindoro State College under the Information Technology Department as Instructor I. At present, she was designated as Program Chair in the Master of Arts major in Educational Management program in the Graduate School department holding Associate Professor IV plantilla.