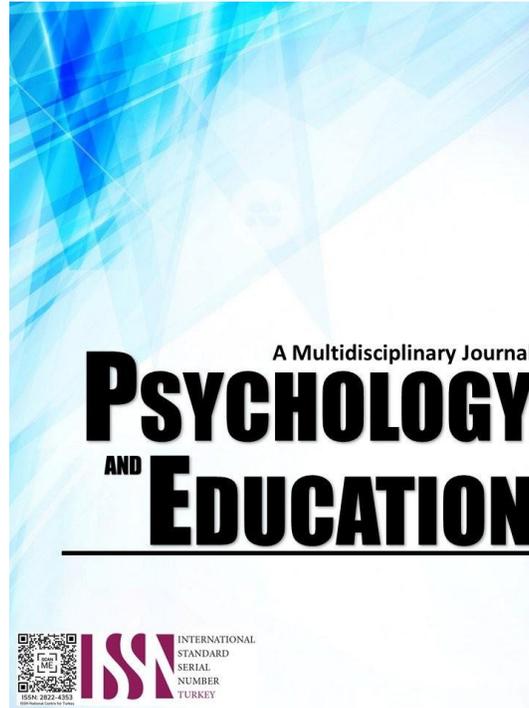


TRACER STUDY ON THE EMPLOYABILITY AND CAREER OUTCOMES OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSIT) GRADUATES



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Tracer Study on the Employability and Career Outcomes of Bachelor of Science in Information Technology (BSIT) Graduates

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Abstract

Graduate employability has become a critical indicator of the effectiveness of higher education institutions, particularly in technology-driven fields such as Information Technology (IT). As the demand for digitally skilled professionals continues to grow, understanding the career trajectories of IT graduates offers valuable insights for academic and workforce development. This tracer study examines the employability and career outcomes of Bachelor of Science in Information Technology (BSIT) graduates from Cotabato State University. The study aims to assess their employment status, the relevance of their jobs to their degree, income levels, and challenges in securing jobs. Data were collected from 106 respondents through a survey, providing insights into their demographics, educational attainment, employment status, and job search duration. Findings indicate that a significant majority (72.6%) of graduates are employed, while 15.1% remain unemployed. Most are employed in government agencies, private institutions, and non-governmental organizations, with a considerable percentage holding contractual or job-order positions. The study also highlights that 39% of respondents earn less than PHP 10,000 per month, while only a few reach higher salary brackets. Additionally, 32.1% found employment within a month, but some took over a year to secure a job. These findings underscore the need for curriculum enhancements, career support services, and stronger industry linkages to improve graduates' employability. The study recommends continuous monitoring of graduate outcomes and further research to align industry demand with skill development initiatives, thereby enhancing the competitiveness of BSIT graduates in the job market.

Keywords: *tracer study, employability, information technology, Cotabato State University, graduate outcomes*

Introduction

In today's knowledge-driven economy, graduates' employability has become a critical metric for assessing the effectiveness of higher education institutions (HEIs), particularly in science and technology. As information and communication technologies (ICT) continue to transform industries, the demand for skilled IT professionals remains robust. In the Philippines, the Higher Education Institutions (HEIs) are increasingly expected to produce graduates who not only meet global standards but also contribute meaningfully to national development goals (Commission on Higher Education [CHED], 2021). The Bachelor of Science in Information Technology (BSIT) program, as offered by Cotabato State University (CSU), seeks to meet this demand by equipping students with both theoretical knowledge and hands-on competencies relevant to the dynamic IT landscape.

Previous studies emphasize the importance of aligning academic curricula with labor market demands to enhance graduate employability. For instance, a tracer study at Nueva Ecija University of Science and Technology (NEUST) reported a high employment rate among BSIT graduates, with many securing regular/full-time jobs, indicating strong curriculum-industry alignment (Mina et al., 2020). Likewise, a study at Sultan Kudarat State University - Kalamansig Campus found that while most BSIT alums were employed, many held temporary positions and identified deficiencies in soft skills, prompting calls for curriculum updates that strengthen employability, leadership, and communication (Demafeliz, 2025). Beyond Luzon and Mindanao centers, the University of Cebu traced BSIT graduates who primarily became software developers or engineers. This study emphasized that key courses—such as Programming, Web Development, and Database Systems—were directly relevant to their jobs and highlighted the need for continuous curricular review in partnership with industry (Basabe et al., 2023). Similarly, Occidental Mindoro State College reported that its BSIT graduates achieved high employability, though gaps in critical thinking were noted. The curricular structure was generally rated as relevant; however, enhancements, particularly in analytical skills, were recommended to improve employment outcomes further (Amahan et al., 2024). Despite this substantial body of evidence on BSIT employability—especially regarding technical curriculum alignment—there is a clear regional gap regarding studies in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). Socioeconomic and employment conditions in BARMM differ significantly from the rest of the Philippines, necessitating localized research. This study aims to fill that gap by conducting a tracer study on CSU's BSIT graduates, allowing regional insights to inform curriculum development and policy interventions.

Despite academic institutions' efforts to enhance program quality and relevance, questions remain about how effectively BSIT graduates transition into the workforce. There is a need to understand whether CSU's IT curriculum adequately prepares its graduates for real-world challenges, and how graduates perceive the value of their education in relation to their employment outcomes. This investigation is crucial for continuous quality improvement, particularly in aligning the institution's academic objectives with regional labor market realities and global IT standards.

This study offers significant contributions to the field of educational research and policy development. For CSU and other regional

HEIs, the findings can serve as a foundation for refining curricula, enhancing career services, and strengthening industry partnerships. For policymakers and accreditation bodies, the data generated will support quality assurance and help align academic programs with current and future workforce demands. Ultimately, the study aims to enhance the employability of BSIT graduates and contribute to the broader goal of inclusive and sustainable development in the Bangsamoro region and beyond.

Research Questions

The general aim of this study was to evaluate the employability and career outcomes of BSIT graduates from Cotabato State University. Specifically, the study sought to:

1. What is the current employment status of BSIT graduates from 2018 to 2023?
2. What are the graduates' income levels and sectors of employment?
3. What improvements can be made to the BSIT program based on these findings?

Literature Review

Tracer Studies and Graduate Employability in the Philippine ICT Sector: A Regional Perspective

Tracer studies are widely recognized by higher education institutions (HEIs) as a critical tool for evaluating graduates' employability and professional development. These studies enable institutions to assess the effectiveness of their academic programs, identify gaps between educational needs and labor market demands, and develop responsive strategies for curriculum enhancement (Schomburg, 2003). In the Philippine context, tracer studies are often employed by state universities and colleges (SUCs) to assess how graduates transition into the workforce and how well their competencies match the needs of various industries, particularly in the fast-evolving field of Information and Communications Technology (ICT).

A study by Mina, Reyes, and Salas (2020) on BSIT graduates of Nueva Ecija University of Science and Technology revealed a high employment rate and strong alignment of the BSIT curriculum with industry requirements. However, the study also recommended partnerships with government and private institutions to facilitate access to professional certifications and improve job security. This finding aligns with similar studies in other SUCs, such as Salazar (2014), which found that although ICT graduates in Luzon were generally employed, many required additional certifications or on-the-job experience to achieve stable employment.

In the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), where regional development efforts are closely tied to education and digital transformation, such insights are particularly relevant. The demand for ICT professionals in BARMM is increasing due to the expansion of digital infrastructure projects and initiatives aimed at improving e-governance (Mantikayan & Ayu, 2010; Mantikayan & Abdulgani, 2017; Mantikayan & Abdulgani, 2021). However, few studies have examined the career outcomes of ICT graduates in the region, including those from Cotabato State University (CSU). This lack of localized tracer studies creates a knowledge gap that this present study aims to address.

Furthermore, the national graduate tracer study by Orbeta et al. (2020), commissioned by the Commission on Higher Education (CHED), highlights a persistent issue of job skills mismatch among Filipino graduates. While many find employment within a year, their jobs often do not align with their field of study. In ICT-related fields, this mismatch may be due to gaps in soft skills, emerging technology trends, and limited exposure to real-world applications. Strengthening linkages between HEIs and the ICT industry, increasing internship opportunities, and embedding certification tracks in the curriculum were recommended to address these concerns.

International literature also highlights the value of continuous monitoring of graduate performance. Schomburg (2003) and Millington (2001) emphasized that employability depends not only on technical knowledge but also on career guidance, workplace readiness, and adaptability. This aligns with current trends in the global IT workforce, where rapid technological advancements necessitate agility, problem-solving skills, and a commitment to lifelong learning.

In the context of Cotabato State University and the broader BARMM region, there is a compelling need to generate empirical data on how BSIT graduates fare in the job market. Such data can inform institutional planning, regional workforce development, and digital transformation efforts. By synthesizing findings from national and regional studies, this tracer study aims to assess whether the BSIT program at CSU effectively prepares graduates for professional success and to identify areas where the curriculum or institutional support can be strengthened.

Methodology

Research Design

This study employed a descriptive research design to assess the employability and career outcomes of Bachelor of Science in Information Technology (BSIT) graduates from Cotabato State University.

Respondents

Using the alum records, a target population of BSIT graduates from 2018 to 2023 was identified. Purposive sampling was then employed, applying the criteria of having updated contact information, willingness to participate, and availability of relevant

employment data. Potential respondents identified were contacted via email and/or social media with an initial invitation. This correspondence clearly explained the purpose of the study, its voluntary nature, the assurance of confidentiality and anonymity, and the link to the online survey.

Instrument

The structured survey questionnaire, developed in accordance with the study's objectives, was reviewed by experts in the field (e.g., information technology and research methodology) to ensure content validity and clarity. The instrument was pilot-tested with a small group of BSIT graduates who met the criteria but were not included in the final sample. This was done to check for reliability, test the functionality of the online survey platform, and ensure that all questions were clearly understood. Based on the pilot results, minor revisions were made to the phrasing of specific items before the final deployment.

Procedure

Before proceeding to the survey questions, respondents were first directed to the informed consent page. Data collection began only after the respondent affirmatively indicated their understanding and willingness to participate in the study. The survey was administered via online forms (e.g., Google Forms), which facilitated access based on respondents' preferences. The instrument primarily contained closed-ended questions to generate quantifiable data. Data collection was conducted over a period of four weeks. To maximize the response rate, follow-up reminders were sent via email and/or social media to non-respondents at the end of the second and third weeks. Upon the close of the data collection period, the completed questionnaires were downloaded from the online platform, checked for completeness and consistency, and then encoded or prepared for statistical analysis.

Data Analysis

The collected data were securely stored and exclusively used for academic purposes. They were then entered into Microsoft Excel and the Statistical Package for the Social Sciences (SPSS). The data were analyzed using descriptive statistical techniques to meet the study's objectives. Specifically, frequency counts and percentages were generated to describe and identify patterns in the graduates' demographic profiles, employment status, job relevance to their degree, and career progression. This approach provided clear interpretations of employment trends and their implications for the BSIT curriculum.

Ethical Considerations

The research protocol, including the survey instrument and informed consent form, was submitted to the university's Research Ethics Committee (REC) for review and approval. Formal approval was obtained prior to any contact with potential respondents, ensuring that the study aligned with the university's ethical guidelines and APA (American Psychological Association, 2020) standards. A formal letter requesting permission to access the BSIT alum records (academic years 2018-2023) was submitted to the university's Alumni Affairs Office or the relevant administrative unit.

Results and Discussion

This section presents the data relevant to the study's objectives. Corresponding analyses and interpretations of the presented data were discussed using the above-cited statistical tools.

Table 1. *Gender*

	<i>Frequency</i>	<i>Percent</i>
Male	65	61.3
Female	41	38.7
Total	106	100.0

Table 1 presents the gender distribution of the 106 respondents. Among them, 65 (61.3%) are male, while 41 (38.7%) are female. The valid percentage values confirm that the proportions of male and female respondents remain consistent across different calculations. The cumulative percentage shows that males make up 61.3% of the total, and when females are added, the total reaches 100%, confirming that all respondents have been accounted for. The data indicate that males constitute a majority (61.3%) of the respondents, while females account for a smaller proportion (38.7%). This suggests a gender disparity in the surveyed population, with a higher representation of males.

The findings may reflect broader trends in the study population, particularly if this data pertains to an academic program or a professional field where male participation is traditionally higher. For instance, male dominance is still evident in many fields of science, technology, engineering, and mathematics (STEM), including information technology, across educational and professional sectors (UNESCO, 2017; World Bank, 2020). However, further investigation would be needed to determine if this gender distribution is a significant trend or simply a characteristic of the sampled group.

Table 2 presents the age distribution of 106 respondents, with 105 valid responses and one missing response (0.9%). The majority of the respondents fall within the 26–30 age group (55.7%), followed by the 20–25 age group (33.0%), the 31–35 age group (9.4%), and the 36–40 age group (0.9%). The valid percent values account only for valid responses, adjusting the proportions accordingly. The



cumulative percent indicates that by the time we include respondents aged 26–30, we have covered 89.5% of the population. Adding the 31–35 age group raises it to 99.0%, and including the 36–40 age group completes the dataset at 100%.

Table 2. *Age*

		<i>Frequency</i>	<i>Percent</i>
Valid	20-25	35	33.0
	26-30	59	55.7
	31-35	10	9.4
	36-40	1	.9
	Total	105	99.1
Missing	System	1	.9
Total		106	100.0

The data show that the majority of respondents (56.2%) are between 26 and 30 years old, suggesting that this age range dominates the surveyed population. This is followed by the 20–25 age group (33.3%), indicating a substantial number of younger individuals. Meanwhile, older respondents (31–35 and 36–40) represent a smaller portion, comprising only 10.5% of the total valid responses. The rate of missing responses (0.9%) is minimal and does not significantly affect the overall findings. This distribution suggests that the surveyed population is primarily composed of young adults, possibly early-career professionals or recent graduates. Similar age-related patterns have been observed in previous graduate tracer studies, in which most respondents were within 5 years of graduation and fell within the 20–30 age range (Commission on Higher Education [CHED], 2017; International Labour Organization [ILO], 2020). The low number of respondents aged 30 or older may indicate that the field or group being studied is more appealing to younger individuals. However, further analysis would be needed to determine the reasons behind this trend.

Table 3. *Civil Status*

		<i>Frequency</i>	<i>Percent</i>
Valid	Single	73	68.9
	Married	33	31.1
	Total	106	100.0

Table 3 presents the distribution of civil status among 106 respondents. Among them, 73 (68.9%) are single, while 33 (31.1%) are married. The valid percent values confirm that these proportions remain consistent across the dataset. The cumulative percentage shows that single respondents make up 68.9%, and when the married group is added, the total reaches 100%, indicating that all respondents are accounted for. The data reveals that the majority of respondents (68.9%) are single, while a smaller proportion (31.1%) is married. This suggests that the surveyed population is predominantly unmarried, which may reflect the respondents' age distribution. Since a significant portion of the respondents falls within the 20–30 age range, it is expected that a larger number are still single. This aligns with national demographic trends, which show that young adults, especially those pursuing higher education or early in their careers, tend to delay marriage (Philippine Statistics Authority [PSA], 2023; United Nations Population Fund [UNFPA], 2020). The relatively lower percentage of married respondents may indicate that the surveyed group consists mainly of young professionals or students who have not yet entered into marriage. Further analysis may be needed to determine whether this distribution aligns with broader societal or professional trends within the specific group being studied.

Table 4. *Educational Attainment*

		<i>Frequency</i>	<i>Percent</i>
Valid	College graduate	98	92.5
	With the master's unit	6	5.7
	Pursued other studies	2	1.9
	Total	106	100.0

Table 4 presents the educational attainment of 106 respondents. The majority, 98 respondents (92.5%), are college graduates, while six respondents (5.7%) have taken master's units. Additionally, two respondents (1.9%) have pursued other studies. The valid percent values remain consistent, and the cumulative percent shows that by including those with master's units, 98.1% of the respondents are accounted for, with the final 1.9% representing those who pursued other studies, bringing the total to 100%. The data indicate that the vast majority of respondents (92.5%) have completed a college degree, highlighting a highly educated population. A smaller proportion (5.7%) has taken some master's-level coursework, suggesting a pursuit of further education but not the completion of a postgraduate degree. Only 1.9% have pursued other studies, which may include vocational training or alternative educational paths. This distribution suggests that the surveyed group primarily consists of individuals with a strong undergraduate academic foundation, with a small percentage seeking advanced studies. This is consistent with national trends in the Philippines, where a large proportion of the professional workforce has at least a bachelor's degree. At the same time, enrollment in postgraduate programs remains relatively low due to financial constraints, employment opportunities, or lack of institutional encouragement (Commission on Higher Education [CHED], 2020; Asian Development Bank [ADB], 2021). The low percentage of respondents with master's degrees may indicate that postgraduate education is not yet a common path for the group, possibly due to career demands, financial constraints, or the lack of necessity in their field.

Table 5. Disability Status

		<i>Frequency</i>	<i>Percent</i>
Valid	Yes	3	2.8
	No	103	97.2
	Total	106	100.0

Table 5 presents the disability status of 106 respondents. The vast majority, 103 respondents (97.2%), reported having no disability, while only three respondents (2.8%) indicated having a disability. The valid percent values remain consistent with the overall proportions. The cumulative percent shows that 2.8% of respondents with disabilities are accounted for first, and when those without disabilities are added, the total reaches 100%, confirming the completeness of the data. The data indicate that a tiny percentage (2.8%) of the respondents have a disability, while the overwhelming majority (97.2%) do not. This suggests that individuals with disabilities represent a minor portion of the surveyed population. The low number of respondents with disabilities may reflect either the general demographic distribution within the studied group or potential barriers to participation, such as accessibility challenges in education, employment, or societal inclusion. In the Philippines, persons with disabilities (PWDs) continue to face systemic obstacles in higher education and professional settings, including limited accessible infrastructure, inadequate policy enforcement, and societal stigma (Department of Education [DepEd], 2021; Philippine Institute for Development Studies [PIDS], 2019). Further analysis could be conducted to understand the specific needs and experiences of respondents with disabilities, as well as to explore potential inclusivity measures within the surveyed group.

Table 6. Indigenous People

		<i>Frequency</i>	<i>Percent</i>
Valid	Yes	13	12.3
	No	93	87.7
	Total	106	100.0

Table 6 presents the status of Indigenous Peoples (IP) among 106 respondents. Among them, 13 respondents (12.3%) identified as Indigenous People, while the majority, 93 respondents (87.7%), did not. The valid percent values confirm that these proportions remain consistent. The cumulative percent indicates that Indigenous respondents make up the first 12.3%, and when non-Indigenous respondents are added, the total reaches 100%, confirming the completeness of the data. The data shows that a minority (12.3%) of the respondents belong to Indigenous communities, while the majority (87.7%) do not. This suggests that the representation of Indigenous People within the surveyed population is relatively low. The presence of Indigenous respondents, though limited, highlights diversity within the group and may indicate the need for inclusive policies or support systems to ensure equal opportunities for Indigenous individuals. In the Philippines, Indigenous Peoples often face structural barriers to access and success in both education and employment, including geographic isolation, limited access to resources, and cultural marginalization (National Commission on Indigenous Peoples [NCIP], 2021; United Nations Development Programme [UNDP], 2022). Further analysis could explore their specific experiences, challenges, and opportunities within the educational or professional context of the study.

Table 7. Tribe Affiliation

		<i>Frequency</i>	<i>Percent</i>
Valid	Maguindanaon	63	59.4
	Maranao	4	3.8
	Tausug	5	4.7
	Christian	17	16.0
	Iranon	17	16.0
	Total	106	100.0

Table 7 presents the tribe affiliation of 106 respondents. The majority, 63 respondents (59.4%), identify as Maguindanaon, followed by Iranon (16.0%) and Christian (16.0%) communities. The Tausug (4.7%) and Maranao (3.8%) groups have smaller representations. The valid percent values remain consistent, and the cumulative percent indicates that by including Maguindanaon respondents, we account for 59.4% of the total. Adding Maranao and Tausug respondents increases coverage to 67.9%, and incorporating Christian and Iranon respondents brings the total to 100%, confirming the completeness of the data. The data show that the Maguindanaon tribe constitutes the majority (59.4%) of the surveyed population, as expected given that Maguindanaon is one of the region's dominant ethnic groups (Bangsamoro Planning and Development Authority [BPDA], 2022). The Iranon (16.0%) and Christian (16.0%) groups also have significant representation, suggesting a diverse mix of ethnic backgrounds within the respondents. The Tausug (4.7%) and Maranao (3.8%) groups have relatively smaller numbers, which may reflect the geographical distribution of these tribes or the specific composition of the surveyed group. This distribution highlights the cultural diversity of the population, with a significant representation of Indigenous and non-Indigenous groups. The presence of various tribes suggests the importance of culturally inclusive policies, particularly in education and employment, to ensure equal opportunities and representation across all groups. In BARMM, equitable access and culturally responsive programming are central to fostering unity among ethnically diverse communities (United Nations Development Programme [UNDP], 2021). Further analysis could explore whether tribal affiliation influences access to resources, employment opportunities, or educational attainment within the study population.



Table 8. Residence of conflict Affected Geographical Area

		Frequency	Percent
Valid	Armed Conflict Area	78	73.6
	GIDA	28	26.4
	Total	106	100.0

Table 8 presents the distribution of 106 respondents by residence in conflict-affected areas. A majority, 78 respondents (73.6%), reside in Areas Affected by Armed Conflict, while 28 respondents (26.4%) are from Geographically Isolated and Disadvantaged Areas (GIDA). The valid percent values confirm these proportions, and the cumulative percent indicates that 73.6% of respondents come from Armed Conflict Areas, while adding those from GIDA brings the total to 100%, ensuring data completeness. The data indicate that a significant majority (73.6%) of respondents live in Areas Affected by Armed Conflict, suggesting that conflict-affected regions constitute a substantial share of the surveyed population. The remaining 26.4% reside in GIDA, which is known for its remoteness, lack of access to basic services, and infrastructure challenges.

This distribution underscores the potential challenges faced by the respondents, including security risks, displacement, limited access to education, healthcare, and employment opportunities. In the Philippines, and particularly in BARMM, communities in conflict-affected and GIDA locations often experience systemic disadvantages due to decades of armed conflict, poverty, and weak infrastructure (Department of Health [DOH], 2022; Bangsamoro Planning and Development Authority [BPDA], 2023). The high number of individuals from conflict-affected areas suggests that interventions such as livelihood programs, education support, and peacebuilding initiatives may be necessary to improve their socioeconomic conditions. Further analysis could examine how these geographical factors affect respondents' education, employment, and overall well-being.

Table 9. Province

		Frequency	Percent
Valid	BARMM	99	93.4
	Region 12	5	4.7
	Region 11	1	.9
	Others	1	.9
	Total	106	100.0

Table 9 presents the province of residence of 106 respondents. The majority, 99 respondents (93.4%), reside in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), while a smaller percentage live in Region 12 (4.7%), Region 11 (0.9%), and other unspecified areas (0.9%). The valid percent values confirm these proportions, and the cumulative percent indicates that adding Region 12, Region 11, and other locations brings the total to 100%, ensuring data completeness. The data show that an overwhelming majority (93.4%) of respondents are from BARMM, as expected given the region's demographics and administrative scope. The presence of respondents from Regions 12 (4.7%) and 11 (0.9%) suggests some level of migration, employment, or educational engagement outside the BARMM. The 0.9% of respondents categorized as "Others" may represent individuals from regions not explicitly listed in the survey.

This distribution suggests that most respondents are heavily concentrated in BARMM, making it the primary area of concern in terms of governance, service delivery, and socioeconomic opportunities. However, the presence of respondents from neighboring regions highlights potential inter-regional mobility, which may be driven by factors such as education, employment, or displacement due to conflict and socioeconomic conditions. Previous studies have shown that internal migration among residents of Mindanao, including those from BARMM, is often influenced by access to higher education institutions, job opportunities, and security conditions (Philippine Statistics Authority [PSA], 2020; International Organization for Migration [IOM], 2021). Further analysis could explore whether respondents from outside BARMM maintain strong ties with the region or have permanently relocated for better opportunities.

Table 10. Year Graduated

		Frequency	Percent
Valid	2018	2	1.9
	2019	27	25.5
	2020	21	19.8
	2021	30	28.3
	2022	9	8.5
	2023	17	16.0
	Total	106	100.0

Table 10 presents the graduation years of 106 respondents. The largest group, comprising 30 respondents (28.3%), graduated in 2021, followed by 27 respondents (25.5%) who graduated in 2019, and 21 respondents (19.8%) who graduated in 2020. The most recent graduates from 2023 account for 16.0% (17 respondents), while graduates from 2022 and 2018 account for 8.5% (9 respondents) and 1.9% (2 respondents), respectively. The cumulative percent shows that by including graduates up to 2021, we already account for 75.5% of the total, while adding 2022 and 2023 brings the total to 100%, confirming the completeness of the data.



The data suggests that the majority of respondents (73.6%) graduated between 2019 and 2021, reflecting a concentration of relatively recent graduates. The high percentage of 2021 graduates (28.3%) may indicate an increase in enrollment or graduation rates during that period, possibly due to educational program expansions or adjustments related to the COVID-19 pandemic.

During this time, many institutions adopted flexible learning modalities and mass promotion policies to mitigate disruptions (Commission on Higher Education [CHED], 2021; UNESCO, 2022). The lower numbers for 2018 (1.9%) and 2022 (8.5%) suggest fewer respondents from those years, which could be due to smaller batch sizes, academic delays, or migration of graduates. This distribution highlights the importance of examining employment trends, career pathways, and further studies among graduates from different years. A deeper analysis could examine whether earlier graduates (e.g., 2018–2019) have more stable employment than recent graduates (2022–2023), and how external factors, such as the pandemic or economic conditions, have influenced their career trajectories (Asian Development Bank [ADB], 2021).

Table 11. *Eligibilities*

		<i>Frequency</i>	<i>Percent</i>
Valid	Civil Service	10	9.4
	RA PD 907	1	.9
	RA 1080 (LPT)	2	1.9
	None	93	87.7
	Total	106	100.0

Table 11 presents the eligibility qualifications of 106 respondents. The majority, 93 respondents (87.7%), reported having no eligibility, while 10 respondents (9.4%) hold Civil Service Eligibility. A small number of respondents qualify under RA PD 907 (0.9%), which grants eligibility to honor graduates, and RA 1080 (1.9%), which covers Licensed Professional Teachers (LPTs). The cumulative percentage shows that by including those with Civil Service Eligibility, the total reaches 9.4%. Adding those under RA PD 907 and RA 1080 brings the cumulative percentage to 12.3%, with the remaining 87.7% classified as "None."

The data indicate that a significant majority (87.7%) of respondents do not meet the eligibility requirements for government employment, which may limit their career opportunities, particularly in the public sector. The 9.4% with Civil Service Eligibility are qualified for various government positions.

In comparison, the small number of RA PD 907 (0.9%) and RA 1080 (1.9%) holders suggests a minimal presence of honor graduates and licensed professionals among the respondents. This distribution highlights a potential gap in professional certification and qualifications among graduates. It suggests a need for greater encouragement and support for eligibility examinations, such as the Civil Service Examination and licensure exams, to enhance employability in both the public and regulated sectors. In the Philippines, possessing eligibility is a key requirement for permanent government positions and is often linked to job security and promotion opportunities (Civil Service Commission [CSC], 2021; Commission on Higher Education [CHED], 2022). Further research could explore whether the lack of eligibility affects job placement rates, career progression, and professional development opportunities.

Table 12. *Nature of Employment*

		<i>Frequency</i>	<i>Percent</i>
Valid	Employed	77	72.6
	Self-Employed	13	12.3
	unemployed	16	15.1
	Total	106	100.0

Table 12 presents the employment status of 106 respondents. The majority, 77 respondents (72.6%), are employed, while 13 respondents (12.3%) are self-employed. Meanwhile, 16 respondents (15.1%) are unemployed. The cumulative percent shows that, by including employed and self-employed respondents, the total reaches 84.9%, with the remaining 15.1% unemployed. The data indicates that a significant portion (72.6%) of the respondents have secured employment, reflecting a relatively high employability rate. Additionally, 12.3% of respondents are self-employed, which suggests the presence of entrepreneurial initiatives among graduates. However, the 15.1% unemployment rate indicates that many graduates are still seeking employment or facing barriers to employment.

This distribution suggests that most graduates are successfully entering the workforce; however, there remains a need to support entrepreneurship and job creation to accommodate those who are currently unemployed. In the Philippine context, graduate employability is influenced by factors such as skills mismatch, lack of industry experience, and regional disparities in job availability (International Labour Organization [ILO], 2020; Commission on Higher Education [CHED], 2021).

Meanwhile, the rise in self-employment among graduates reflects a growing trend of digital freelancing and microenterprise among youth, especially in areas with limited formal job markets (Department of Labor and Employment [DOLE], 2023). Further analysis could explore factors influencing employment, such as the relevance of skills, job market demand, and the impact of professional eligibility on securing employment. Additionally, examining the specific industries or sectors in which graduates are employed can provide insights into workforce trends and potential career development opportunities.



Table 13. *Employment Status*

		<i>Frequency</i>	<i>Percent</i>
Valid	Permanent	18	17.0
	Temporary	19	17.9
	Casual / Job Order	34	32.1
	Contractual	35	33.0
	Total	106	100.0

Table 13 presents the employment status of 106 respondents who are employed. Among them, the largest group, comprising 35 respondents (33.0%), is in contractual employment, followed closely by 34 respondents (32.1%) in casual or job-order employment. Meanwhile, 19 respondents (17.9%) hold temporary positions, and only 18 respondents (17.0%) have permanent employment. The cumulative percent shows that adding contractual and casual/job order employees accounts for 67.0%, while including temporary employees brings the total to 84.9%, leaving only 17.0% of respondents in permanent positions.

The data reveal that most employed respondents (65.1%) hold non-permanent positions, including contractual (33.0%) and casual/job order (32.1%) roles, which often lack long-term job security, benefits, and stability. This suggests that many graduates are engaged in short-term or project-based employment rather than holding stable positions in the government or private sector. The 17.0% with permanent employment represent a relatively small share of the workforce, indicating that securing long-term, stable jobs remains a challenge for many graduates. The 17.9% in temporary employment may have the potential to transition into more secure positions depending on performance and available opportunities.

This trend underscores the need for greater job security and career advancement opportunities for graduates. In the Philippine labor market, particularly in the public sector, job order and contractual hiring remain prevalent due to budget constraints and hiring caps, which limit the availability of permanent positions (Civil Service Commission [CSC], 2022; International Labour Organization [ILO], 2020). The prevalence of such arrangements suggests that, while jobs are available, they may not offer long-term sustainability or upward mobility. Further investigation could explore whether job permanency is linked to eligibility, skills matching, or industry demands, and whether graduates face barriers in securing permanent roles, such as a lack of experience, professional certifications, or competition in the job market (Commission on Higher Education [CHED], 2021).

Table 14. *Nature of Work Office Assignment*

		<i>Frequency</i>	<i>Percent</i>
Valid	Government Agencies	44	41.5
	non-government Agencies	18	17.0
	Local Government Units	8	7.5
	Agricultural Industry	2	1.9
	Academe	4	3.8
	Private Agencies	29	27.4
	other	1	.9
	Total	106	100.0

Table 14 presents the nature of work office assignments of the 106 employed respondents. The highest proportion, 44 respondents (41.5%), are working in government agencies, followed by 29 respondents (27.4%) in private agencies. Meanwhile, 18 respondents (17.0%) are employed in non-government organizations (NGOs), while eight respondents (7.5%) are in Local Government Units (LGUs). A smaller percentage of respondents work in the academe (3.8%) and the agricultural industry (1.9%), while one respondent (0.9%) is categorized under "other."

The data suggests that the majority of graduates (41.5%) have entered government service, indicating that public sector employment remains a significant career path. The 27.4% working in private agencies suggests that many graduates are also finding opportunities in the corporate sector. The 17.0% in NGOs highlights that some graduates are engaged in advocacy-driven or development-oriented work. This aligns with national labor trends, where government employment remains attractive due to its perceived job stability and benefits, while private sector roles offer more dynamic growth and opportunities for skill application (Commission on Higher Education [CHED], 2021; Department of Labor and Employment [DOLE], 2022).

The presence of graduates in the academe (3.8%) and agriculture (1.9%) suggests limited participation in these sectors, which may reflect either fewer available roles for IT graduates or a lower preference for careers in education and agriculture. The 7.5% employed by LGUs indicates some engagement with local governance, although it remains smaller compared to national agencies. This trend shows that government agencies remain the leading employers of graduates, followed by the private sector and NGOs.

Further analysis could examine the job roles within these sectors, career growth opportunities, and whether graduates are employed in IT-related positions or have shifted to other fields. Understanding these factors is crucial to aligning academic programs with workforce needs and enhancing the relevance of ICT competencies in various employment sectors (Philippine Institute for Development Studies [PIDS], 2020).



Table 15. *Location of Current Work*

		<i>Frequency</i>	<i>Percent</i>
Valid	National	23	21.7
	Local	80	75.5
	Foreign	3	2.8
	Total	106	100.0

Table 15 presents the location of employment of the 106 employed respondents. The majority, 80 respondents (75.5%), are working locally, within their respective regions or communities. Meanwhile, 23 respondents (21.7%) are employed at the national level, which may include government agencies, corporate offices, or industries operating nationwide. A small number, three respondents (2.8%), have found employment abroad (foreign work). The data suggests that most graduates (75.5%) remain in local employment, likely contributing to regional development and workforce needs. This could indicate that local job opportunities are available, though their nature and stability require further exploration.

The 21.7% working at the national level indicates that some graduates have found opportunities in national government agencies, corporations, or other sectors operating on a broader scale. The low percentage (2.8%) of graduates working abroad may indicate limited international job opportunities or a preference to work locally due to personal, cultural, or economic reasons. It may also reflect barriers such as a lack of globally competitive credentials, language requirements, or international certifications needed for overseas ICT employment (Philippine Overseas Employment Administration [POEA], 2020; International Labour Organization [ILO], 2022). Additionally, the low international employment rate among IT graduates may suggest that while digital skills are in demand globally, further upskilling and alignment with international standards are needed to expand overseas opportunities.

Overall, the findings highlight that most IT graduates are employed within their localities or at the national level, with minimal migration for work abroad. This is consistent with national data showing that Filipino graduates, especially in regions like BARMM, tend to stay close to home unless compelled by better opportunities (Commission on Higher Education [CHED], 2021). Further studies could explore the quality of employment, job satisfaction, and whether graduates are working in IT-related fields to assess if their education aligns with their career paths. Additionally, factors influencing graduates' decisions to stay local versus seeking national or international employment could provide insights for future policy recommendations on workforce development and international mobility.

Table 16. *Duration of Finding a Job*

		<i>Frequency</i>	<i>Percent</i>
Valid	Less than a Month	34	32.1
	2 to 6 months	26	24.5
	7 to 11 months	13	12.3
	1 year to less than 2 years	26	24.5
	3 years to less than 4 years	6	5.7
	above 4 years	1	.9
	Total	106	100.0

Table 16 presents the duration it took for graduates to secure employment after graduation. The most significant proportion, 34 respondents (32.1%), found a job within a month, indicating a relatively quick employment process for some graduates. Meanwhile, 26 respondents (24.5%) found employment within 2 to 6 months, while another 26 respondents (24.5%) took 1 year or less to secure a job. A smaller group of 13 respondents (12.3%) found employment between 7 and 11 months after the initial survey. Additionally, 6 respondents (5.7%) took 3 to 4 years or less to find a job, and only 1 respondent (0.9%) took more than 4 years.

The data suggests that more than half (56.6%) of the graduates found employment within 6 months of graduation, indicating moderate job-market demand for their skills. The 32.1% who secured jobs within a month may have benefited from internships, strong networking, or immediate hiring needs in their respective industries. This aligns with national data showing that timely employment is often facilitated by institutional linkages, on-the-job training, and proactive career services (Commission on Higher Education [CHED], 2021).

However, a significant portion (24.5%) took 1 to 2 years or less to secure employment, while some took over 3 years (6.6%). This may indicate challenges in job availability, skills mismatch, or a competitive job market. According to the International Labour Organization (ILO, 2020), delays in graduate employment in the Philippines are often attributed to limited job readiness, weak employer connections, and a lack of alignment between academic qualifications and industry needs. Factors such as lack of experience, limited IT-related job openings in certain regions, or graduate preferences for specific work conditions may also contribute to longer waiting periods.

The findings highlight the importance of strengthening career support programs, job-matching services, and industry-academia partnerships to improve employment outcomes. Further research could investigate whether graduates are employed in IT-related fields and assess the relevance of their education to their jobs, providing insights for curriculum improvements and skills development initiatives (Philippine Institute for Development Studies [PIDS], 2021).



Table 17. *Gross Monthly Income*

		<i>Frequency</i>	<i>Percent</i>
Valid	Below 10k	41	38.7
	10k - 20k	40	37.7
	21k - 30k	21	19.8
	31k - 40k	3	2.8
	Total	105	99.1
Missing	System	1	.9
Total		106	100.0

Table 17 presents the gross monthly income of employed graduates. Among the 105 valid respondents, the majority, 41 graduates (39.0%), earn below PHP 10,000 per month. Meanwhile, 40 graduates (38.1%) earn between PHP 10,000 and PHP 20,000, while 21 graduates (20.0%) earn between PHP 21,000 and PHP 30,000. Only three graduates (2.9%) reported a monthly income between PHP 31,000 and 40,000. One respondent's data is missing from the dataset.

The data indicate that 77.1% of the graduates earn PHP 20,000 or less, suggesting that many entry-level positions offer relatively modest salaries. The high percentage (39.0%) of graduates earning below PHP 10,000 may reflect the prevalence of low-paying jobs, contractual employment, or job-order positions—common in government and NGO sectors at the start of one's career (Department of Labor and Employment [DOLE], 2022). This is consistent with national trends, which show that new graduates often start with wages below the average regional minimum wage, especially in regions outside Metro Manila (Philippine Statistics Authority [PSA], 2023). Meanwhile, only 22.9% of graduates earn more than PHP 20,000, suggesting that higher salaries are attainable but require more experience, specialized skills, or employment in high-paying sectors such as ICT firms, finance, or national-level government agencies. This income disparity reflects the segmentation of the labor market. It may also indicate barriers to wage progression, such as a lack of eligibility, limited career advancement pathways, or regional economic conditions (Asian Development Bank [ADB], 2021).

The findings suggest the need for strengthened career development programs, salary standardization efforts, and stronger partnerships between industry and academia to enhance graduates' earning potential. Further research could examine whether salary levels align with job roles, industry standards, and the cost of living, and explore opportunities for salary growth, upskilling, and promotion over time.

Table 18. *First Job Level Position*

		<i>Frequency</i>	<i>Percent</i>
Valid	Rank or Clerical (Admin)	71	67.0
	Technical	25	23.6
	Supervisory	6	5.7
	Managerial	2	1.9
	Executive	1	.9
	others	1	.9
	Total	106	100.0

Table 18 presents the first job level positions of graduates upon entering the workforce. The majority, 71 graduates (67.0%), were employed in rank or clerical (administrative) positions, while 25 graduates (23.6%) secured technical roles. A smaller proportion, six graduates (5.7%), started in supervisory positions, while only two graduates (1.9%) were hired in managerial roles. Meanwhile, one graduate (0.9%) reached an executive-level position, and another (0.9%) was classified under "others".

The data suggests that most graduates initially enter the workforce in entry-level clerical or technical roles, indicating that career progression typically begins at the lower tiers before advancing to supervisory or managerial levels. This is consistent with national data showing that recent graduates in the Philippines are often hired in positions requiring minimal experience, and advancement depends on tenure, skill development, and performance (Commission on Higher Education [CHED], 2021; Department of Labor and Employment [DOLE], 2022).

The limited number of graduates (8.5%) who started in supervisory, managerial, or executive roles suggests that such positions require higher qualifications, leadership capabilities, and work experience, which are typically acquired over time. This finding underscores the significance of professional development, specialized training, and upskilling initiatives in supporting career advancement. Employers and academic institutions can play a vital role by offering mentorship, internships, and leadership development programs to equip graduates with the competencies necessary for promotion (Asian Development Bank [ADB], 2021).

Further research could explore the factors influencing upward career mobility among ICT graduates, including the roles of soft skills, certifications, work environment, and industry-specific trends. Understanding these elements can inform the development of more targeted career support programs and curriculum enhancements that align with labor market demands.

Table 19 illustrates the types of jobs occupied by graduates in the workforce. The highest proportion, 37 graduates (34.9%), are employed in Information Communication roles, followed by 26 graduates (24.5%) working as Technical Support Specialists. A considerable percentage, 22 graduates (20.8%), fall under the "Other" category, indicating diverse job roles beyond those listed.



Table 19. *Type of Job*

		<i>Frequency</i>	<i>Percent</i>
Valid	Web & Applied Developer	1	.9
	Database Admin	6	5.7
	System Admin	2	1.9
	Information S	2	1.9
	IT Audit Assistant	3	2.8
	Technical Support Specialist	26	24.5
	System Analyst	3	2.8
	Computer Programmer	4	3.8
	Information Communication	37	34.9
	other	22	20.8
	Total	106	100.0

Smaller proportions of graduates hold specialized IT roles, such as Database Administrators (5.7%), System Analysts (2.8%), IT Audit Assistants (2.8%), Computer Programmers (3.8%), System Administrators (1.9%), and Information Security personnel (1.9%). Additionally, only one graduate (0.9%) works as a Web and Applied Developer.

The data suggests that most graduates are employed in general IT-related roles, particularly in Information Communication and Technical Support, rather than in highly specialized fields such as web development, cybersecurity, or system administration. This trend reflects the current labor market demand, which heavily favors operational IT support and communication-based roles, particularly in the business process outsourcing (BPO) and public service sectors in the Philippines (Department of Information and Communications Technology [DICT], 2023; Asian Development Bank [ADB], 2021).

Furthermore, the relatively small number of graduates in development- and security-focused roles may highlight a gap between academic preparation and industry expectations. As global demand for professionals in cybersecurity, software engineering, and systems management grows, it becomes essential for academic institutions to strengthen their curriculum components related to programming, database management, and network security (Commission on Higher Education [CHED], 2021; International Labour Organization [ILO], 2022). Enhancing programs with industry-aligned certifications, internships, and hands-on training could significantly improve graduates' competitiveness and expand their access to higher-value IT roles.

Conclusions

The tracer study of Bachelor of Science in Information Technology (BSIT) graduates of Cotabato State University provides a comprehensive overview of their employment status, job placement, and career progression. The findings reveal that while the majority of graduates (72.6%) are employed, many hold casual, contractual, or temporary positions, indicating a need for better job security and career advancement opportunities. The dominance of technical support and information communication roles suggests that graduates are primarily engaged in IT support services. At the same time, specialized fields such as system administration, database management, and web development continue to be underrepresented.

Moreover, the salary distribution highlights a concern, as a significant portion (38.7%) earns below PHP 10,000 per month, underscoring the need for higher compensation and career growth opportunities in the industry. The study also reveals that while many graduates secure jobs within six months, some take up to 2 years to find employment, highlighting potential challenges such as limited job availability, skill mismatches, or industry demand.

These results underscore the need to strengthen curriculum alignment with industry needs, enhance internship and training programs, and foster stronger industry-academia linkages. Cotabato State University must continue to equip its IT graduates with specialized skills, certifications, and opportunities for professional development to improve employability and career sustainability. Additionally, policymakers and stakeholders should focus on creating better employment opportunities, increasing industry partnerships, and advocating for fair compensation in the IT sector.

Ultimately, the study serves as a vital tool for continuous curriculum improvement, policy formulation, and career development programs, ensuring that BSIT graduates from Cotabato State University remain competitive and well-prepared for the evolving demands of the IT industry.

The findings of the tracer study provide significant insights into the employment status, job preferences, and career trajectories of BSIT graduates from Cotabato State University. The study highlights that while a majority of graduates are employed, a notable percentage remain unemployed or underemployed, indicating the need for stronger job placement initiatives. Additionally, a significant number of graduates are employed by government and private agencies, underscoring the demand for IT professionals across sectors. However, the fact that most graduates hold rank-and-file or clerical positions suggests a potential skills gap or limited opportunities for career advancement.

The study also indicates that a significant proportion of graduates earn below PHP 20,000 per month, raising concerns about wage competitiveness and job market saturation. Furthermore, the relatively long job search duration for some graduates implies challenges

in labor market integration, particularly for those from geographically isolated and disadvantaged areas (GIDA) and conflict-affected zones.

Based on the findings, several improvements can be made to the BSIT program to enhance graduate employability and career development. First, the curriculum and skills development components should be strengthened by regularly updating the BSIT curriculum to align with current industry trends, with emphasis on in-demand skills such as cybersecurity, data analytics, cloud computing, and artificial intelligence. Additionally, the program should enhance hands-on training opportunities, offer industry-recognized certifications, and expand internship programs to ensure that graduates are well-prepared for the job market.

Second, stronger industry linkages and job placement programs should be established. This can be achieved by building partnerships with IT companies, government agencies, and private organizations to create more employment opportunities for graduates. The university can also organize job fairs, career counseling sessions, and professional networking events to connect students with potential employers.

Third, the program should promote entrepreneurship and innovation by supporting graduates who wish to start their own IT-related businesses through mentorship programs, startup funding, and incubation hubs. Moreover, addressing employment disparities is crucial; targeted interventions should be implemented for graduates from disadvantaged areas by providing specialized training, scholarships, and career development programs tailored to their needs. Gender inclusivity in IT can also be encouraged through mentorship initiatives for female graduates.

Finally, the university should continuously monitor graduate career progression by conducting periodic follow-up studies to track employment trends, job satisfaction, and emerging skill requirements. By implementing these recommendations, Cotabato State University can further enhance the employability of its BSIT graduates and strengthen its contribution to the region's IT sector growth and development.

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