



Graduate Employability and Career Outcomes: A Comparative Tracer Study of Bachelor of Science in Information Technology and Bachelor of Science in Computer Science Graduates of Negros Oriental State University - Main Campus

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International Journal of Interdisciplinary Viewpoints
Vol. 2, No. 6, Article 1, 2026

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Abstract

This study examined the employability and career outcomes of Bachelor of Science in Information Technology (BSInT) and Bachelor of Science in Computer Science (BSCS) graduates from Negros Oriental State University–Main Campus who graduated between 2022 and 2025. Using a quantitative descriptive-comparative tracer study design, data were collected from 326 graduates through a modified Commission on Higher Education (CHED) Graduate Tracer Study questionnaire administered via online and offline platforms. Descriptive statistics, chi-square tests of independence, and the Mann–Whitney U test were employed to analyze the data. Findings revealed that most graduates were employed, with the private sector serving as the primary source of employment. Both BSInT and BSCS graduates reported positive career outcomes and rated their academic programs highly in developing employability competencies, particularly computer skills, problem-solving abilities, teamwork, and independent work skills. Comparative analyses indicated no significant differences between the two programs in terms of employment status and type of employing organization. However, significant differences were observed in waiting time to first employment and initial monthly income, favoring BSCS graduates. BSCS graduates entered the workforce more quickly and earned higher starting salaries than their BSInT counterparts. The findings suggest that both programs effectively prepare graduates for employment in the technology sector. Nevertheless, continuous curriculum enhancement, stronger industry partnerships, career placement support, and entrepreneurship initiatives are recommended to further improve graduate employability and career success.

Keywords

graduate employability; graduate tracer study; career outcomes; information technology graduates; computer science graduates.

How to Cite

Cofino, C., Cagang, R., Nazareth, D. J., Bensing, A., Carvajal, C. F., Escorial, R., Fulmaran, J., & Gutib, V. R. (2026). Graduate Employability and Career Outcomes: A Comparative Tracer Study of Bachelor of Science in Information Technology and Bachelor of Science in Computer Science Graduates of Negros Oriental State University - Main Campus. *International Journal of Interdisciplinary Viewpoints*, 2(6), Article 1. <https://doi.org/10.64612/ijiv.v2i6.125>

Received: 24 February 2026

Accepted: 25 May 2026

Published: 30 June 2026

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Peer Review Statement

This article underwent a double-anonymous peer review process in accordance with the editorial policies of the *International Journal of Interdisciplinary Viewpoints*. Both authors and reviewers remained anonymous throughout the review process.

Open Access Statement

The *International Journal of Interdisciplinary Viewpoints* is a fully open-access, peer-reviewed journal. All articles are freely available online immediately upon publication without subscription or access fees.

Funding Statement

The authors received no financial support for the research, authorship, and/or publication of this article.

Conflict of Interest

The authors declared no conflicts of interest.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions

The authors contributed to conceptualization, methodology, investigation, writing—original draft preparation, writing—review and editing, and supervision. The authors approved the final manuscript.

Ethics Statement

This study was conducted in accordance with ethical standards.

INTRODUCTION

Graduate employability has become a major concern among universities worldwide as institutions strive to prepare graduates for increasingly competitive and dynamic labor markets. While obtaining employment is an important indicator of educational success, employability extends beyond merely securing a job. Being employed is one thing; however, possessing a high level of employability is what enables college graduates to remain competitive and adaptable in an evolving workforce. Employability, although often associated with the development of generic skills, encompasses career self-management, professional identity, technical competencies, and personal attributes necessary for work readiness (Jackson & Dean, 2023). In the context of higher education (HE), employability refers to the set of characteristics, qualities, and skills that enhance a graduate's capacity to obtain, maintain, and advance in employment (Villanueva & Binay-an, 2021). This includes the ability to secure work aligned with one's field of study, perform effectively in the workplace, and continuously adapt to changing labor market demands. Education serves as a fundamental pathway to employment, and preparing students within specific academic disciplines for participation in the labor market remains one of the primary functions of higher education institutions (Weerathunga & Mallawarachchi, 2020). However, graduating from higher education and earning a degree do not automatically guarantee meaningful employment or long-term career success. Contemporary labor markets increasingly expect graduates to possess the knowledge, competencies, and professional attributes necessary to become highly employable (Cofino et al., 2024). While some graduates demonstrate strong technical expertise and academic proficiency, limited development of soft skills may hinder workplace adaptation and career progression (Jelonek et al., 2020). This issue is particularly significant because employers seek candidates who possess a balanced combination of technical and soft skills, recognizing that these competencies complement one another in ensuring effective job performance and organizational success (Vezi-Magigaba & Utete, 2024).

Numerous studies have identified a persistent gap between graduate employability and the demands of contemporary industries, highlighting the need to strengthen employability as a core mission of higher education. In this regard, higher education extends beyond imparting academic knowledge and seeks to ensure graduates' readiness for the workforce (Cheng et al., 2022). Furthermore, the increasing emphasis on employability is driven by globalization, technological advancement, workforce transformation, and the growing need for individuals to adapt to innovation and continuously improve their competencies (Pardo-Garcia & Barac, 2020). These developments have challenged universities and colleges to conduct tracer studies to evaluate graduate outcomes and improve curriculum alignment with labor market requirements (Abdulgani & Bandila, 2025). Tracer studies have become valuable mechanisms for assessing the effectiveness of academic programs in preparing graduates for employment. These studies examine employment status, job relevance, skills utilization, and career outcomes while providing evidence for curriculum improvement and institutional development. Previous tracer studies involving Information Technology Education (ITE) graduates have demonstrated the importance of evaluating graduate outcomes in relation to employability and workforce preparedness (Albina & Sumagaysay, 2020a). Such studies have assessed employment status, job relevance, skills application, and curriculum effectiveness in preparing graduates for professional practice.

Employability should not be viewed solely as the ability to obtain employment. Behle (2020) and Okolie et al. (2020) emphasized that employability pertains not only to gaining employment but also to performing effectively, developing professionally, and progressing within a chosen career. Consequently, employability continues to be a significant issue due to persistent concerns regarding job mismatch, underemployment, and the disconnect between educational qualifications and industry expectations. Within the field of computing education, employability has become increasingly important due to the rapid advancement of digital technologies, artificial intelligence, software development, cybersecurity, cloud computing, and data analytics. As industries continue to undergo digital transformation, employers seek graduates who possess both specialized technical expertise and transferable employability skills. Consequently, higher education institutions offering Information Technology and Computer Science programs are expected to ensure that graduates acquire competencies aligned with current and emerging workforce demands.

The study conducted by Yasi et al. (2025) provided significant insights into the employability outcomes of Negros Oriental State University (NORSU) graduates across academic programs from 2021 to 2024. The findings revealed a weak relationship between curriculum preparation and job performance, suggesting potential gaps in digital literacy, entrepreneurial competencies, and program-level alignment with labor market requirements. While the study offered important institutional-level evidence, limited research has specifically compared the employability outcomes of graduates from the Bachelor of Science in Information Technology (BSInT) and Bachelor of Science in Computer Science (BSCS) programs. Therefore, this study seeks to comparatively assess the employability and career outcomes of BSInT and BSCS graduates of Negros Oriental State University Main Campus from 2022 to 2025. Specifically, the study examines employment status, waiting time to first employment, type of employing organization, job positions, initial salary levels, and graduates' perceptions regarding the contribution of their academic programs to the development of employability competencies. Furthermore, the comparative nature of this investigation aims to identify program-specific strengths and areas for

improvement in curriculum responsiveness. The findings are expected to provide empirical evidence that can support curriculum enhancement, institutional planning, industry-academe collaboration, and initiatives designed to improve graduate workforce readiness within the rapidly evolving technology sector.

METHODOLOGY

Design

A retrospective research design using a quantitative, descriptive-comparative tracer study methodology was employed to assess the employability and career outcomes of graduates from the Bachelor of Science in Information Technology (BSInT) and Bachelor of Science in Computer Science (BSCS) programs at the Negros Oriental State University (NORSU) Main Campus. A cross-sectional survey methodology was employed in this research design to analyze the employability and career outcomes of graduates from the two degree programs during the academic years 2022 and 2025. The descriptive component of the study was utilized to create a descriptive profile of graduates with regard to demographic characteristics, employment status, and career outcomes (e.g., waiting time for first employment, type of employment, salary range, sector of employment, degree-job relevance, professional certifications, and career advancement). Additionally, the comparative component was used to compare the employability and career outcomes of BSInT and BSCS graduates, taking into consideration the different curricula and standards of competencies for each of the two programs.

Collection

A cross-sectional survey design, which used the modified and adapted Commission on Higher Education (CHED) standardized Graduate Tracer Study questionnaire. The modifications and adaptations to the CHED Graduate Tracer Study questionnaire to capture the indicators related to the computing discipline (e.g., technical competencies, digital skills, accreditation, relevance of curriculum, and advancement along the career path) were successfully completed while maintaining the integrity of the CHED Graduate Tracer Study framework through similar construct and content validity.

Analysis

Research data collected from this tracer study were analyzed using a quantitative research methodology. The researchers used descriptive statistics (e.g., frequency counts, percentages, weighted means, and standard deviations) to report on the characteristics of graduates, employment characteristics, and employment outcomes. The researchers used inferential statistics to determine the existence of statistically significant differences between graduates of BSInT and BSCS. To complete this analysis, the researchers used the Chi-Square Test and Mann-Whitney U Test to identify any statistically significant differences between the employment outcomes and characteristics of graduates of these two academic programs.

Ethical Considerations

The ethical considerations in completing this tracer study included but were not limited to informed consent; voluntary participation; privacy and confidentiality of individual responses; appropriate handling of collected information; and compliance with all provisions of the Philippines Data Privacy Act of 2012 (Republic Act No. 10173).

Limitations and Rigor

Due to accessibility barriers, low response rates, and the desire to be inclusive in receiving data from graduates of BSInT and BSCS, the researchers employed a multiple-channel data collection method. While the majority of data for the survey was collected through Google Forms, specialists used various methods (such as text messages (SMS), emails, and Facebook Messenger) to communicate with former students to issue invitations to participate in their study and to communicate reminders. In addition, graduates who were located in remote areas with either little or no internet access received paper surveys for completion.

RESULTS AND DISCUSSION

The purpose of this section is to report and discuss the study findings, including the employability patterns, career results, and differences between BSInT and BSCS graduates from Negros Oriental State University Main Campus.

The distribution of respondents by graduation year is shown in the figure. The greatest number of respondents is from the class of 2025 ($n = 125$), followed by equal numbers from classes 2023 and 2024 ($n = 77$ each). The class of 2022 accounted for 47 respondents. Respondents who have just graduated are well represented in the data, and they are likely to have been contacted due to more recent updates to alumni lists and ongoing digital outreach activities.

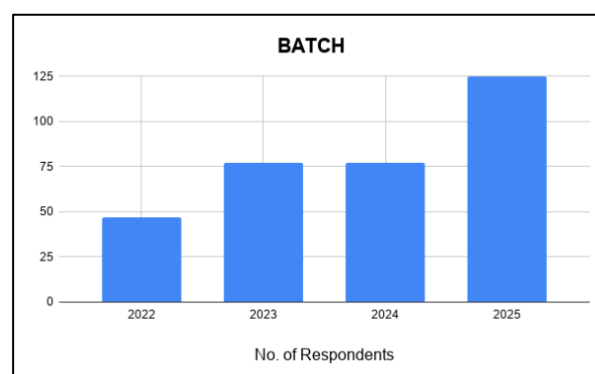


Figure 1. Distribution of Respondents by Graduation Batch

The Bachelor of Science in Information Technology is the most common background of participants at 75.46%, while 24.54% will have a Bachelor of Science in Computer Science. The largest group of respondents was from the graduating class of 2025 (38.34%), and the response rates for the most recent cohorts have also increased.

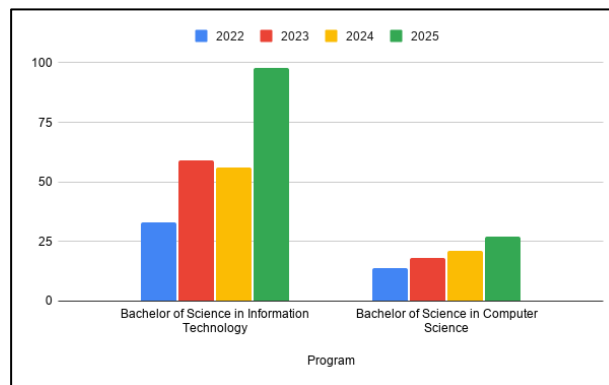


Figure 2. Distribution of Respondents by Programs

Most of the respondents (55.52%) were males from computing programs. In addition, most of the respondents were unmarried (94.79%), which is anticipated as many of them just graduated and are still beginning their careers.

Table 1
Background of the Respondents (N = 326)

Variable	Category	n	%
Gender	Male	181	55.52
	Female	143	43.87
	Prefer not to say	2	0.61
Civil Status	Single	309	94.79
	Married	14	4.29
	Separated/Divorced	0	0.00
	Widow/Widower	0	0.00
	Single Parent	3	0.92
Educational Attainment	BSInT	246	75.46
	BSCS	80	24.54
Year Graduated	2022	47	14.42
	2023	77	23.62
	2024	77	23.62
	2025	125	38.34

Note. Percentages may not total exactly 100 due to rounding.

The results show in table 2 that 72.39% of respondents worked (employable), suggesting that the employability results for BSInT and BSCS graduates are positive, as evidenced by past tracer studies of computer graduates indicating that Computer and Information Technology graduates generally have positive employability rates due to the demand for digital Technical skill sets in today’s workforce (Albina & Sumagaysay, 2020b; Andaya et al., 2024). The percentage of self-employed respondents was 5.83%, with 7.98% of participants indicating being underemployed, while 13.80% of the participants were unemployed. Although newly employed graduates were successful in finding a job, underemployment and unemployment demonstrate a need for ongoing career services assistance and curriculum alignment.

Table 2
Employment Status of BSInT and BSCS Graduates

Employment Status	2022	2023	2024	2025	Total
Employed	38	61	59	78	236
Self-employed	4	3	2	10	19
Underemployed	3	4	6	13	26
Unemployed	2	9	10	24	45
Total	47	77	77	125	326

Table 3 reveal that the majority of graduates secured employment within three months or less after graduation, indicating favorable employability outcomes among BSInT and BSCS graduates. The finding that most graduates secured employment within three months or less after graduation aligns with the study of (Andaya et al., 2024), which reported favorable employability outcomes among computing graduates, attributing rapid labor market absorption to the increasing demand for technical and digital competencies in the technology sector. Similarly, (Albina & Sumagaysay, 2020b) found that Information Technology graduates were able to secure employment within a relatively short period after graduation,

although some experienced delays attributed to labor market mismatch and employment availability. However, the presence of graduates who took more than one year to obtain employment in the present study suggests that certain graduates may still encounter barriers in workforce entry, including competition, job alignment issues, or limited opportunities.

Table 3
Distribution of Respondents According to Waiting Time to First Employment

Waiting Time	2022 n (%)	2023 n (%)	2024 n (%)	2025 n (%)
Three months and below	22 (46.81)	38 (49.35)	40 (51.95)	54 (43.20)
More than 3 to 6 months	7 (14.89)	11 (14.29)	20 (25.97)	32 (25.60)
More than 6 to 9 months	3 (6.38)	6 (7.79)	5 (6.49)	21 (16.80)
More than 9 to 12 months	4 (8.51)	5 (6.49)	5 (6.49)	12 (9.60)
More than 12 to 15 months	0 (0.00)	7 (9.09)	2 (2.60)	5 (4.00)
More than 15 months	11 (23.40)	10 (12.99)	5 (6.49)	1 (0.80)
Total	47 (100)	77 (100)	77 (100)	125 (100)

Note. Percentages are based on the number of graduates in each cohort.

According to Table 4, the primary employer for BSInT and BSCS graduates (Balingbing, 2014) has always been the private sector, consistently representing 68%-73% of total employment opportunities across all cohorts. The second most common option for graduates was government institutions, with the rest being freelance work, demonstrating the increasing importance of flexible employment options and digital labor platforms within the technology industry. There were also a number of graduates engaged in freelance work, which could indicate increasing influence from digital labor platforms and flexible employment models (Gussek & Wiesche, 2024) as they are permeating and transforming available job opportunities in technology-related jobs.

Table 4
Distribution of Employed Respondents According to Type of Organization

Type of Organization	2022 n (%)	2023 n (%)	2024 n (%)	2025 n (%)
Private	32 (68.09)	56 (72.73)	54 (70.13)	88 (70.40)
Freelancer	5 (10.64)	8 (10.39)	9 (11.69)	18 (14.40)
Government	10 (21.28)	13 (16.88)	13 (16.88)	19 (15.20)
International	0 (0.00)	0 (0.00)	1 (1.30)	0 (0.00)
Total	47 (100)	77 (100)	77 (100)	125 (100)

As illustrated in Table 5, usual work engagement occurs among the first two groups of graduating classes from both the BS CS and the BSInT programs. The earlier cohort graduates have similar findings, which indicate how successful these programs have been for this particular cohort of graduates to obtain regular employment. In general, there were many other studies that also identified that graduates from a publicly funded university in the Philippines and others found stable employment and hired many regular employees very shortly after being hired (Albina & Sumagaysay, 2020b; Basabe et al., 2023). Additionally, newly graduated employees (specifically, employees from the 2025 graduating cohort) working as temporary/casual employees reflect that many of those employees are starting their careers as temporary/casual employees prior to being offered full-time status as regular employees, as also supported by (Yahya et al., 2024) where most computing graduates enter the workforce on a temporary or flexible basis due to rapid technological changes and market demands for employees.

Table 5
Distribution of Employed Respondents According to Tenurial Status

Tenurial Status	2022 n (%)	2023 n (%)	2024 n (%)	2025 n (%)
Contractual	9 (19.15)	12 (15.58)	22 (28.57)	49 (39.20)
On Probation	4 (8.51)	9 (11.69)	6 (7.79)	18 (14.40)
Trainee	0 (0.00)	3 (3.90)	1 (1.30)	3 (2.40)
Part-time	3 (6.38)	5 (6.49)	1 (1.30)	9 (7.20)
Regular	29 (61.70)	48 (62.34)	47 (61.04)	46 (36.80)
Job Order	2 (4.26)	0 (0.00)	0 (0.00)	0 (0.00)
Total	47 (100)	77 (100)	77 (100)	125 (100)

The majority of BSInT and BSCS graduates were in entry-level positions in the workplace, as shown in Table 6. This is normal for recent graduates. Based on (Albina & Sumagaysay, 2020b), this would also make sense, since the majority of IT graduates began their careers starting as entry-level or operational employees and worked their way up over time.

Table 6
Distribution of Employed Respondents According to Job Position

Job Position	2022 n (%)	2023 n (%)	2024 n (%)	2025 n (%)
Staff	37 (78.72)	63 (81.82)	64 (83.12)	93 (74.40)
Managerial or Executive	0 (0.00)	4 (5.19)	3 (3.90)	12 (9.60)

Job Position	2022 n (%)	2023 n (%)	2024 n (%)	2025 n (%)
Supervisory	4 (8.51)	3 (3.90)	3 (3.90)	5 (4.00)
Self-employed	6 (12.77)	7 (9.09)	7 (9.09)	15 (12.00)
Total	47 (100)	77 (100)	77 (100)	125 (100)

Note. Percentages are rounded to two decimal places.

Figure 3's results show that most BSInT and BSCS graduates hold jobs in technology and/or digital service sectors. The greatest concentration of BSInT and/or BSCS graduates is found in business process outsourcing (BPO), IT technical support, IT personnel, data entry/encoding, graphic design, software development, and web (and/or app) development positions. The presence of so many graduates employed in these specialty positions indicates a high degree of correlation between the academic programs (i.e., BSInT/BSCS) and the current needs of the labor market for computing professionals. The fact that these same graduates also hold employment in various areas of specialty, such as technical, academic, management, and entrepreneurship, within different career paths, also illustrates the flexibility and employability of computing graduates within a wide variety of career paths.

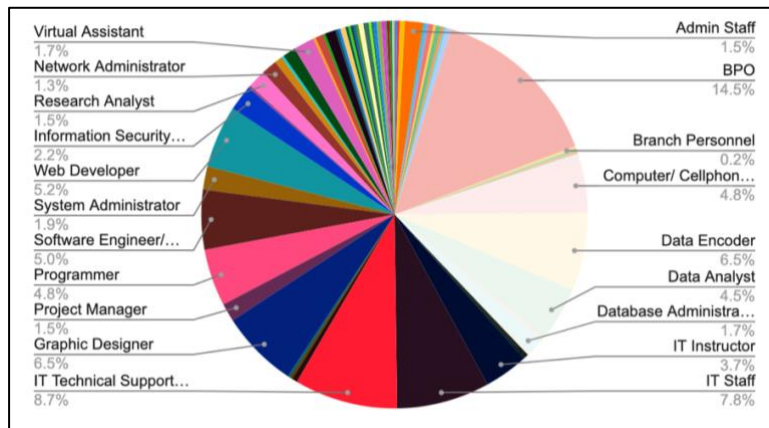


Figure 3. Distribution of Employed Respondents According to Specific Job Positions

The data in Figure 4 indicates that the majority of graduates from both BSInT and BSCS earned a monthly base gross income of ₱10,001-₱20,000 at the time of starting to work. It is therefore likely that most respondents received an entry-level salary for a computing-related job. A large number of graduates also earned a monthly gross income of between ₱20,001 and ₱30,000 when they first started to work. Therefore, some graduates have been able to obtain very good compensation for the work they were doing at the time due to there being many specialized technical positions available. These findings align with the work of (Bonjan & Madlos, 2026), who reported that new graduates in the Philippines who completed post-secondary studies in Information Technology would begin their employment with a modest but competitive salary due to the employment conditions they faced.

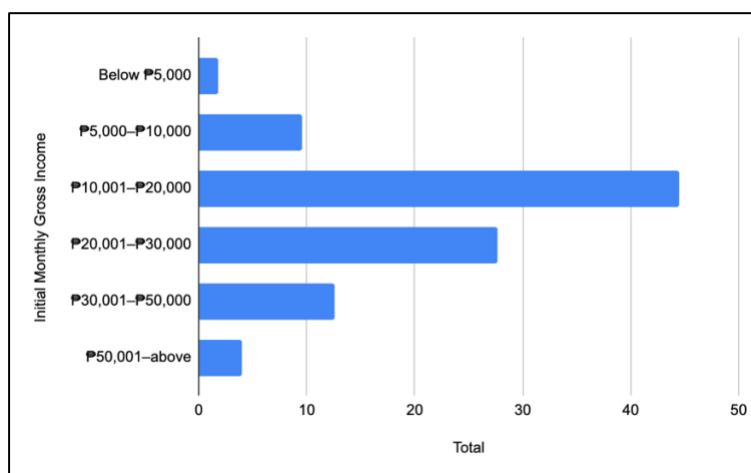


Figure 4. Initial Monthly Gross Income of Employed BSInT and BSCS Graduates

Research has shown that the main reasons for the high numbers of unemployed graduates in the BSInT and BSCS programs include: a lack of available jobs; continuing education; and personal reasons and/or family obligations. With many more graduates who are unemployed in the most recent cohort than before, many graduates are transitioning from school to work by becoming unemployed for a period of time while they find a much more appropriate job after graduation. This is consistent with (Zamfir et al., 2020), whose findings suggest that graduate unemployment is not solely due to labor-market constraints but can also be caused by other factors, including graduating into an easing economy. These additional reasons for unemployment can include personal factors, higher education, and delays in job matching.

Graduate employability involves not only securing employment but also developing the competencies needed for workplace success. Higher education institutions play a vital role in equipping graduates with essential technical, interpersonal, and problem-solving skills required by the labor market. Table 7 presents the graduates' assessment of the contribution of the BSInT and BSCS programs to the development of key employability competencies relevant to professional practice.

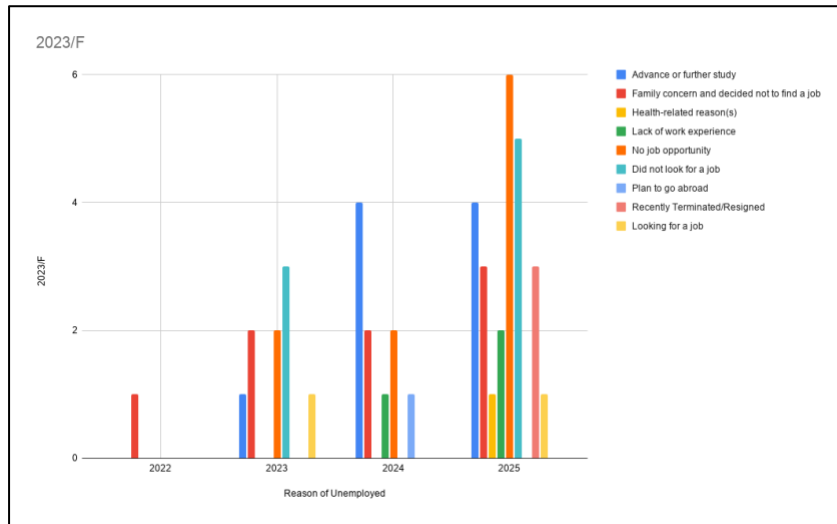


Figure 5. Distribution of Unemployed Respondents According to Reasons for Unemployment

Table 7 presents that both the BSInT and BSCS alumni regarded the efficacy of their academic training as being very good or excellent for developing the core competencies needed for employment in the field of technology. This is particularly true for computer skills, problem-solving ability, teamwork and collaboration, the ability to work independently, and the ability to perform under stress; thus, this supports the view that the curriculum is well developed and aligned with the required technical and professional competencies for technology-related jobs.

By contrast, the lower perceived level of writing ability suggests that this may be an area where the curriculum could be improved. The results are in alignment with the findings of (Mohammed & Ozdamli, 2024) regarding the fact that graduates of computing programs are heavily impacted by the breadth of their technical competency, along with problem-solving skills and interpersonal skills necessary to compete successfully in the rapidly changing world of digital workplaces.

Table 7
Assessment of the Academic Program's Contribution to Graduate Employability Skills

Employability Skill	Very High n (%)	High n (%)	Medium n (%)	Low n (%)	Very Low n (%)	Total
Organization Skills	115 (35.3)	151 (46.3)	55 (16.9)	2 (0.6)	3 (0.9)	326
Problem-Solving Skills	120 (36.8)	160 (49.1)	42 (12.9)	1 (0.3)	3 (0.9)	326
Leadership Skills	109 (33.4)	141 (43.3)	68 (20.9)	5 (1.5)	3 (0.9)	326
Ability to Work Independently	159 (48.8)	130 (39.9)	32 (9.8)	2 (0.6)	3 (0.9)	326
Creativity/Creative Thinking	129 (39.6)	150 (46.0)	40 (12.3)	2 (0.6)	5 (1.5)	326
Teamwork/Team Orientation	156 (47.9)	119 (36.5)	46 (14.1)	3 (0.9)	2 (0.6)	326
Time Management	144 (44.2)	138 (42.3)	41 (12.6)	0 (0.0)	3 (0.9)	326
Initiative/Risk Taking	126 (38.7)	142 (43.6)	52 (16.0)	2 (0.6)	4 (1.2)	326
Writing Skills	97 (29.8)	144 (44.2)	72 (22.1)	8 (2.5)	5 (1.5)	326
Communication/Interpersonal Skills	134 (41.1)	129 (39.6)	54 (16.6)	6 (1.8)	3 (0.9)	326
Computer Skills	170 (52.1)	113 (34.7)	34 (10.4)	6 (1.8)	3 (0.9)	326
Decision-Making	137 (42.0)	140 (42.9)	43 (13.2)	4 (1.2)	2 (0.6)	326
Ability to Work Under Pressure	169 (51.8)	121 (37.1)	30 (9.2)	3 (0.9)	3 (0.9)	326

Note. Values are presented as frequency and percentage.

The comparative analysis revealed in figure 8 stating that both BSInT and BSCS graduates demonstrated strong employability outcomes, with the majority of respondents in both programs being employed. BSCS graduates exhibited a slightly higher employment rate (80.00%) than BSInT graduates (77.24%), while differences in self-employment, underemployment, and unemployment remained relatively small.

Table 8
Comparative Analysis of Employment Status Between BSInT and BSCS Graduates

Employment Status	BSInT	BSCS
Employed	172	64
Self-employed	40	5
Underemployed	21	5
Unemployed	13	6
Total	246	80

According to Table 9, both BSCS and BSInT graduates had positive employment outcomes, with the majority of both groups securing jobs within a matter of months. However, BSCS graduates have much faster job placement than BSInT graduates. Approximately 70.00% of BSCS graduates found work within three months or less, while 39.84% of BSInT graduates found employment.

Table 9
Comparative Analysis of Waiting Time to First Employment Between BSInT and BSCS Graduates

Waiting Time to First Employment	BSInT	BSCS
Three months and below	98	56
More than 3 to 6 months	60	10
More than 6 to 9 months	32	3
More than 9 to 12 months	21	5
More than 12 to 15 months	14	0
More than 15 months	21	6
Total	246	80

Table 10 presents that private sector was the dominant employment destination for both BSInT and BSCS graduates, with the majority employed in private organizations, followed by freelance and government employment. BSCS graduates exhibited a slightly higher concentration in private-sector employment, while BSInT graduates showed greater representation in government employment.

Table 10
Comparative Analysis of Type of Employing Organization

Organization Type	BSInT	BSCS
Private	169	61
Freelancer	30	10
Government	46	9
International	1	0
Total	246	80

Table 11 reflects the results of the Chi-square analysis, where employment status and hiring organization type were compared between BSInT and BSCS graduates. Employment status and type of hiring organization show no statistically significant differences between the two computing programs; therefore, both programs have prepared their respective graduates equally well for employment. This does not, however, account for any differences observed in the time taken to secure first employment, as it appears that BSCS graduates are entering the job market at a much faster rate than BSInT graduates. While both the BSInT and BSCS programs have done an adequate job of preparing their graduates for employment, job market entry rates may vary based on the program of study.

Table 11
Comparative Analysis of Employability Outcomes

Employability Outcome	χ^2	df	p	Interpretation
Employment Status	6.134	3	.105	Not Significant
Waiting Time to First Employment	25.447	5	<.001	Significant
Type of Employing Organization	2.803	3	.423	Not Significant

Note. Significance level set at $\alpha = .05$.

A noteworthy distinction between the salaries of BSInT and BSCS Graduates. 52.25% said they had their starting salary between ₱10,001– ₱20,000 (the majority amount) which is the normal entry-level salary for computer professions BSInT, by comparison; BSCS had more of its graduates at a higher salary level with 32.69% in ₱20,001–₱30,000, 21.15% in ₱30,001–₱50,000 and 7.69% above ₱50,000, so BSCS graduates not only have a higher % of graduates working in higher-paid jobs but also therefore typically earn more overall.

Table 12
Comparative Analysis of Initial Monthly Gross Income

Initial Monthly Gross Income	BSInT n (%)	BSCS n (%)
Below ₱5,000	4 (1.80)	2 (1.92)
₱5,000–₱10,000	22 (9.91)	9 (8.65)
₱10,001–₱20,000	116 (52.25)	29 (27.88)
₱20,001–₱30,000	56 (25.23)	34 (32.69)
₱30,001–₱50,000	19 (8.56)	22 (21.15)
Above ₱50,000	5 (2.25)	8 (7.69)
Total	222 (100.00)	104 (100.00)

According to Table 13, there is a statistically significant difference between BSInT and BSCS graduates' initial monthly gross income ($U=8,412.00$, $p<.001$). This difference is statistically significant as BSCS graduates have higher salary levels than BSInT graduates at the time of their employment. Graduates of BSInT are highly concentrated in the first and second pay brackets of the ₱10,001–₱20,000 range, while graduates of BSCS show greater proportionate representation in all the higher-income brackets.

Table 13
Inferential Analysis of Initial Monthly Gross Income Between BSInT and BSCS Graduates Using Mann-Whitney U Test

Variable	Program	n	Mean Rank	Sum of Ranks	U	z	p	Interpretation
Initial Monthly Gross Income	BSInT	222	149.39	33,165.00	8,412.00	-4.19	<.001	Significant
	BSCS	104	193.62	20,136.00				

Note. Mann-Whitney U test indicates a statistically significant difference in initial monthly gross income between BSInT and BSCS graduates, with BSCS graduates obtaining higher salary ranks.

Summary

The discussion highlights that both the Bachelor of Science in Information Technology (BSInT) and Bachelor of Science in Computer Science (BSCS) programs of Negros Oriental State University–Main Campus successfully prepared graduates for employment in the technology sector, as evidenced by the high overall employability rate of 72.39%. Most graduates obtained employment within three months after graduation, indicating strong labor market demand for computing professionals and the effectiveness of the university's curriculum in developing industry-relevant competencies (Albina & Sumagaysay, 2020; Andaya et al., 2024). The findings further revealed that the private sector remains the primary employer of computing graduates, while the growing number of freelancers reflects the increasing influence of digital labor platforms and flexible work arrangements within the information technology industry (Balingbing, 2014; Gussek & Wiesche, 2024).

The results also demonstrated that most graduates began their careers in entry-level positions with regular or contractual employment and earned initial salaries typical of entry-level computing professionals. However, BSCS graduates generally secured employment more quickly and received significantly higher starting salaries than BSInT graduates, suggesting differences in labor market demand and compensation despite comparable employment rates. Nevertheless, both programs produced graduates with positive employment outcomes, indicating that each curriculum effectively equips students with competencies valued by employers (Albina & Sumagaysay, 2020; Bonjan & Madlos, 2026).

Furthermore, graduates perceived that their academic programs made substantial contributions to the development of essential employability skills, particularly in computer proficiency, teamwork, problem-solving, independent work, and the ability to perform under pressure. Writing skills received comparatively lower ratings, suggesting an area where curriculum enhancement may be beneficial. These findings support previous studies emphasizing that while technical expertise remains the primary strength of computing graduates, communication and professional soft skills are equally critical for long-term career success in the rapidly evolving digital economy (Mohammed & Ozdamli, 2024; Vezi-Magigaba & Utete, 2024).

Overall, the findings affirm that both BSInT and BSCS programs effectively prepare graduates for the workforce while highlighting opportunities for continuous curriculum improvement. Strengthening industry partnerships, expanding internship and career placement opportunities, integrating emerging technologies such as artificial intelligence, cybersecurity, cloud computing, and data analytics, and enhancing communication-related competencies can further improve graduate employability and ensure that future graduates remain competitive in an increasingly technology-driven global labor market (Jackson & Dean, 2023; Yahya et al., 2024; Cheng et al., 2022).

Conclusion and Recommendations

This study concludes that BSInT and BSCS graduates of Negros Oriental State University Main Campus generally demonstrated positive employability and career outcomes, reflecting the effectiveness of both academic programs in preparing graduates for the labor market. While both programs showed comparable employment status and sectoral employment patterns, BSCS graduates exhibited significantly faster workforce entry and higher initial salary outcomes, whereas BSInT graduates demonstrated stronger engagement in self-employment and flexible work arrangements. The findings highlight the relevance of both programs in developing employable computing professionals while emphasizing the need for continued curriculum enhancement and stronger industry linkage to address employment transition and compensation disparities.

Given the continuous advancement of artificial intelligence (AI), automation, data-driven technologies, cybersecurity, cloud computing, and other emerging digital innovations, there is a pressing need for both programs to continuously review and enhance their curricula to ensure that graduates remain adaptive, technologically competent, and responsive to the

evolving demands of the global workforce. Accordingly, the university are encouraged to strengthen industry partnerships, internship and career placement programs, integrate emerging technologies and AI-related competencies into the curriculum, and promote entrepreneurship and lifelong learning initiatives to better prepare future graduates for an increasingly dynamic and technology-driven employment landscape.

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