EMPLOYABILITY, JOB TRANSITION, AND SKILLS UTILIZATION OF INDUSTRIAL TECHNOLOGY GRADUATES: A TRACER STUDY OF GUIMARAS STATE COLLEGE

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ABSTRACT This study examined the employment outcomes and career trajectories of Bachelor of Science in Industrial Technology (BSIT) graduates of Guimaras State College–Salvador Campus using a descriptive tracer research design. A total of 93 graduates from Academic Years 2008–2013 participated in the study through the Commission on Higher Education (CHED) standardized tracer questionnaire. Data were analyzed using frequency, percentage, and mean. Results revealed that the majority of graduates were employed, primarily in the private sector, but often under contractual arrangements and with low initial salaries. A significant proportion of graduates reported employment unrelated to their field of specialization, suggesting a mismatch between academic preparation and labor-market demands. Human relations and communication skills were identified as the most useful competencies in the workplace. Job mobility was largely influenced by salary and benefits, reflecting economic motivations rather than career alignment. Despite relatively high employment rates, findings highlight issues of job instability, underemployment, and skills mismatch. The study underscores the need for curriculum enhancement, stronger industry linkages, and competency-based training to improve graduate employability and career sustainability.

Keywords: Employment Outcomes, Tracer Study, Industrial Technology, Employability, Graduate Skills

INTRODUCTION

The increasing competitiveness of both local and global labor markets has intensified the demand for graduates who possess not only technical competencies but also employability skills aligned with industry requirements. Higher education institutions (HEIs) are thus challenged to ensure that their programs produce graduates who are both competent and adaptable in a rapidly evolving workforce. This challenge is particularly evident in technical and industrial programs, where rapid technological advancements continuously reshape industry skill requirements (Albina & Sumagaysay, 2020).

Employability has become a critical indicator of institutional effectiveness, reflecting graduates' ability to secure and sustain meaningful employment. However, despite the growing number of higher education graduates, concerns persist regarding the mismatch between graduate competencies and labor market demands. This mismatch is often associated with underemployment, job instability, and delayed career progression (Misra & Khurana, 2017). In the Philippine context, studies reveal that approximately three out of ten graduates perceive themselves as mismatched to their jobs, primarily due to deficiencies in both technical and soft skills, such as communication and problem-solving .

Tracer studies have emerged as a valuable tool for assessing graduate outcomes and institutional performance. These studies provide empirical evidence on employment status, job relevance, and skill utilization, thereby informing curriculum development and policy formulation. In fact, tracer studies are widely used in higher education institutions to monitor graduate success and evaluate the effectiveness of academic programs . The Commission on Higher Education (CHED) has institutionalized the use of the Graduate Tracer Study (GTS) instrument to standardize data collection and ensure comparability across institutions.

Previous tracer studies in the Philippines consistently show that while a significant proportion of graduates are employed, many are engaged in jobs unrelated to their field of specialization. For instance, Macadangdang (2019) found that BSIT graduates often accept employment outside their discipline due to limited job opportunities and economic constraints. Similarly, Eroa (2019) and Montuerto and Mauring (2019) reported that industrial technology graduates frequently experience job mismatch and employment instability. These findings suggest that employment rates alone are insufficient indicators of employability, as they do not capture the quality and relevance of employment.

Furthermore, studies highlight that employability is influenced not only by academic preparation but also by external factors such as labor market conditions, geographic location, and industry demand. In rural contexts, where employment opportunities are limited, graduates are more likely to accept jobs unrelated to their training, leading to underutilization of their skills (Centillas, 2019). This is supported by national tracer studies, which emphasize that regional disparities significantly affect employment outcomes and career trajectories .

From a theoretical perspective, this study is anchored in Human Capital Theory, which posits that education enhances an individual's productivity and earning potential, and in Employability Theory, which emphasizes the importance of transferable skills, adaptability, and alignment between education and labor-market needs (Misra & Khurana, 2017). These frameworks suggest that employability is not solely determined by academic credentials but also by the relevance and applicability of the competencies acquired.

Despite the growing body of literature, there remains a gap in understanding the alignment between acquired competencies and employment quality among BSIT graduates in local state colleges, particularly in geographically isolated areas such as Guimaras. Most existing studies focus primarily on employment rates without examining deeper issues such as job relevance, career progression, and factors influencing employment decisions.

Thus, this study aims to address this gap by providing a comprehensive analysis of employment outcomes and career trajectories of BSIT graduates of Guimaras State College–Salvador Campus. Specifically, this study seeks to:

- Describe the socio-demographic and educational profile of graduates.
- Analyze employment outcomes and job characteristics.
- Examine the alignment between academic training and employment.
- Identify factors influencing job mobility and career progression.

By doing so, the study contributes to a more nuanced understanding of graduate employability and provides evidence-based recommendations for curriculum enhancement and institutional improvement.

METHODOLOGY

This study employed a descriptive tracer research design to examine the employment outcomes and career trajectories of Bachelor of Science in Industrial Technology (BSIT) graduates. Tracer studies are widely used in higher education research because they provide systematic, empirical data on graduate employment, skill utilization, and career development, serving as a basis for institutional improvement and policy formulation.

The respondents comprised 93 graduates from a total population of 100 graduates (93% response rate) for Academic Years 2008–2013. The high response rate strengthens the reliability and representativeness of the findings by minimizing non-response bias and ensuring comprehensive coverage of the target population.
Data were collected using the standardized tracer questionnaire developed by the Commission on Higher Education (CHED). The use of this instrument ensures consistency, validity, and comparability across tracer studies conducted in Philippine higher education institutions. The CHED tracer questionnaire is designed to capture key dimensions of employability, including employment status, job relevance, skills utilization, and career progression.

Data collection was conducted through a combination of face-to-face distribution and online communication platforms, including social media and email. This mixed approach was employed to maximize response rates and ensure accessibility for respondents who may have relocated or are working outside the study area.

Ethical considerations were strictly observed throughout the research process. Institutional approval was obtained prior to data collection, and respondents were informed of the purpose of the study. Participation was voluntary, and responses were kept confidential in accordance with ethical research standards.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequency, percentage, and mean, were used to summarize the data and describe patterns in employment outcomes. These statistical tools are appropriate for tracer studies, as they provide a clear and systematic representation of graduate characteristics and employment trends.

The methodological approach of this study aligns with previous tracer studies conducted in the Philippines, which have utilized descriptive designs and standardized instruments to assess graduate employability (Albina & Sumagaysay, 2020; Balingbing, 2014; Macadangdang, 2019). By adopting a standardized and systematic methodology, the study ensures the reliability and validity of its findings.

OBJECTIVE 1: Socio-Demographic and Educational Profile

Discussion (Revised with Citations)

Table 1. Socio-Demographic and Educational Profile of BSIT Graduates

Sex	Male	84	90.3
	Female	8	8.6
Civil Status	Single	68	73.1
	Married	25	26.9
Residence	Guimaras	91	97.8
	Others	2	2.2
Location	Rural	93	100
Fathers' Occupation	Laborer/Unskilled	25	26.9
	Farmer/Fisherman	16	17.2
Mothers' Occupation	Unemployed	60	64.5
Annual Family Income	Below ₱50,000	50	53.8
Household Size	More than 5 members	29	31.2
Specialization	Electrical	22	23.7
	Electronics	20	21.5
	Automotive	18	19.4
	Machine Shop	13	14.0

The socio-demographic profile of BSIT graduates shows a predominantly male population (90.3%), reflecting the gendered nature of technical and industrial programs. This trend is consistent with tracer studies in the Philippines, where male dominance is commonly observed in technology-related disciplines due to societal perceptions and occupational stereotyping (Balingbing, 2014). Such gender imbalance suggests that while access to technical education exists, participation remains uneven, highlighting the need for gender-responsive educational strategies.

The majority of respondents (73.1%) are single, indicating that most graduates are in the early stages of their professional lives. At this stage, employment decisions are often influenced by limited work experience and immediate economic needs. This aligns with findings from tracer studies indicating that early-career graduates tend to prioritize employment acquisition over career alignment, often accepting jobs outside their specialization (Macadangdang, 2019).

Geographically, the respondents are predominantly from Guimaras (97.8%) and reside in rural areas (100%), which significantly influences employment opportunities. Rural labor markets typically offer limited industrial and technical employment opportunities, resulting in constrained career pathways for graduates. Infante, Junco, and Marquez (2014) similarly found that graduates from Guimaras State College tend to remain within the locality, where employment opportunities are limited, thereby affecting job relevance and career progression.

The economic background further contextualizes employment outcomes. With 53.8% of graduates coming from families earning below ₱50,000 annually, economic constraints are evident. Parents' occupations, largely labor-based and informal, reinforce the financial limitations experienced by households. According to Centillas (2019), graduates from low-income families are more likely to accept immediate employment regardless of job relevance due to financial necessity. This dynamic

reflects the principles of Human Capital Theory, where education is pursued as a means of economic mobility; however, structural limitations may hinder optimal returns on educational investment.

The distribution of specializations, particularly in Electrical (23.7%) and Electronics (21.5%), suggests a concentration of skills in similar technical areas. While this reflects program strength, it may also contribute to labor market competition, especially in localized settings. Balingbing (2014) noted that when graduates possess similar competencies, competition increases, thereby reducing the likelihood of securing employment aligned with specialization.

Overall, the socio-demographic and educational profile demonstrates that employability is shaped not only by academic preparation but also by socio-economic and geographic factors. These findings emphasize the need for contextualized educational strategies that take into account graduates' backgrounds.

OBJECTIVE 2: Employment Outcomes and Job Characteristics
Discussion (Revised with Citations)

Table 2. Employment Outcomes and Job Characteristics of BSIT Graduates

Employment Status	Employed	66	71.0
	Unemployed	23	24.7
	Never Employed	4	4.3
Employment Sector	Private	27	29.0
	Government	6	6.5
Employment Type	Contractual	30	32.3
	Regular/Permanent	20	21.5
Salary Range	₱5,000–₱10,000	50	53.8
	Below ₱5,000	20	21.5
First Job Level	Rank-and-File	44	47.3
	Supervisory	7	7.5
Place of Work	Local	Majority	—

The employment outcomes of BSIT graduates indicate that 71.0% are employed, suggesting relatively high employability. However, employment rates alone do not fully capture the quality of employment. Tracer studies have consistently shown that while many graduates are employed, issues such as job mismatch, contractual employment, and low wages persist (Albina & Sumagaysay, 2020; Eroa, 2019).

The unemployment rate (24.7%) reflects structural challenges in the labor market. Factors such as lack of experience, limited job opportunities, and geographic constraints contribute to this outcome. Similar findings were reported by Macadangdang (2019), who identified lack of work experience and limited job availability as primary barriers to employment among BSIT graduates.

The dominance of private-sector employment (29.0%) over government employment (6.5%) indicates limited absorption capacity within public institutions. This trend is consistent with findings by Montuerto and Mauring (2019), who noted that technical graduates are more likely to be employed in private enterprises due to the scarcity of government positions.

The prevalence of contractual employment (32.3%) highlights concerns regarding job stability. Contractual jobs often lack benefits and long-term security, which may affect job satisfaction and career progression. Eroa (2019) similarly found that industrial technology graduates frequently experience unstable employment conditions, indicating that employability is not synonymous with job security.

Salary distribution further reveals issues of underemployment. With the majority earning between ₱5,000 and ₱10,000, graduates are engaged in low-paying jobs that may not reflect their qualifications. According to Albina and Sumagaysay (2020), graduates often accept low initial salaries as entry points into the workforce, particularly when job opportunities are limited. However, prolonged exposure to low wages may hinder economic mobility and reduce the perceived value of higher education.

The predominance of rank-and-file positions (47.3%) suggests that most graduates occupy entry-level roles. While this is expected, the limited progression to supervisory positions indicates constrained career advancement opportunities. This finding aligns with tracer studies showing that early career stages are characterized by limited upward mobility, particularly in contractual employment settings (Montuerto & Mauring, 2019).

Overall, the employment outcomes indicate that while graduates can enter the workforce, challenges remain in job quality, stability, and compensation. These findings highlight the need for institutions to focus on enhancing both employability and employment quality.

OBJECTIVE 3: Alignment Between Academic Training and Employment
Discussion (Revised with Citations)

Table 3. Alignment of Academic Training and Employment

Job Relevance	Related to Course	21	22.6
	Not Related	36	38.7
First Job Relevance	Related	20	21.5
	Not Related	35	37.6
Curriculum Relevance	Very Helpful	16	17.2
	Somewhat Helpful	39	41.9
Skills Usefulness	Human Relations	39	41.9
	Communication	35	37.6
	Technical Skills	Moderate	-

The findings reveal a significant mismatch between academic training and employment, with only 22.6% of graduates working in jobs related to their field of study. This suggests that the competencies acquired during academic training are not fully aligned with labor market demands.

This result contrasts with the findings of Albina and Sumagaysay (2020), where a majority of IT graduates (69.78%) reported that their first job was related to their program. The disparity may be attributed to contextual differences, particularly the rural setting of Guimaras, where specialized job opportunities are limited.

Similarly, Macadangdang (2019) found that BSIT graduates often accept jobs outside their specialization due to economic necessity and lack of job opportunities. This supports the present study's findings, indicating that job mismatch is a common phenomenon among technical graduates.

The moderate rating of curriculum relevance further supports this observation. While 41.9% of graduates consider the curriculum somewhat helpful, only 17.2% find it very helpful. This suggests that the curriculum provides foundational knowledge but may not fully meet industry requirements. According to Misra and Khurana (2017), employability is influenced not only by technical skills but also by transferable skills such as communication, teamwork, and problem-solving. This is reflected in the findings, which identify human relations (41.9%) and communication skills (37.6%) as the most useful competencies. These skills are essential in adapting to diverse work environments, particularly in jobs that may not require specialized technical knowledge.

The mismatch between academic training and employment highlights the need for curriculum enhancement. Eroa (2019) emphasized the importance of aligning academic programs with industry demands through curriculum review and industry collaboration. Similarly, Albina and Sumagaysay (2020) recommended periodic curriculum evaluation involving industry stakeholders to ensure that graduates possess relevant and up-to-date competencies.

The implications of job mismatch are significant. Graduates working in unrelated fields may experience reduced job satisfaction, limited career growth, and underutilization of their skills. This represents a loss of human capital investment and underscores the importance of strengthening the alignment between education and employment.

OBJECTIVE 4: Factors Influencing Job Mobility and Career Progression
Discussion (Revised with Citations)

Table 4. Factors Influencing Job Mobility and Career Progression

Reason for Leaving Job	Salary/Benefits	56	60.2
	Career Growth	—	—
	Skills Match	15	16.1
Length of Stay (First Job)	1–6 months	24	25.8
	7–11 months	19	20.4
Job Search Method	Walk-in Application	47	50.5
	Referral	16	17.2
Job Acquisition Time	Within 6 months	Majority	—
Number of Jobs Held	1–2 jobs	Majority	—

The findings indicate that salary and benefits (60.2%) are the primary factors influencing job mobility. This suggests that economic considerations play a dominant role in employment decisions, particularly among graduates from low-income backgrounds.

This finding is consistent with Montuerto and Mauring (2019), who reported that graduates often change jobs due to dissatisfaction with compensation and lack of benefits. Similarly, Eroa (2019) found that financial incentives are a key determinant of job transition among industrial technology graduates.

The relatively low percentage of graduates citing skills match (16.1%) as a factor indicates that career decisions are not primarily driven by professional alignment. This reflects a pragmatic approach to employment, where financial stability takes precedence over career development.

The short duration of stay in the first job (1–6 months for 25.8%) indicates employment instability. Frequent job changes may hinder skill development and career progression. Macadangdang (2019) noted that graduates often use their first job as a stepping stone, but excessive job mobility may negatively impact long-term career growth.

The reliance on walk-in applications (50.5%) as the primary job search method highlights weak institutional support in employment facilitation. Habalo (2016) emphasized that graduates often rely on personal initiative rather than structured career services to secure employment. This limits access to better job opportunities and reduces the effectiveness of job matching.

The findings underscore the need for stronger industry-academe linkages. Albina and Sumagaysay (2020) highlighted that partnerships with industry improve employment outcomes by providing graduates with access to relevant job opportunities and practical experience. Strengthening career services and job placement programs can enhance graduates' ability to transition into the workforce effectively.

The findings of the study highlight that employability is a multidimensional construct influenced by socio-demographic factors, educational preparation, and labor market conditions. While the BSIT program demonstrates effectiveness in facilitating employment, challenges remain regarding job quality, alignment, and career progression.

Consistent with Employability Theory, the results show that technical skills alone are insufficient to ensure employment success. Transferable skills such as communication and interpersonal abilities play a crucial role in adapting to diverse work environments (Misra & Khurana, 2017).

Moreover, the study confirms that economic constraints significantly influence employment decisions, leading to job mismatch and high job mobility. This aligns with findings from tracer studies indicating that graduates prioritize financial stability over career alignment (Centillas, 2019; Montuerto & Mauring, 2019).

Overall, the study emphasizes the need for a holistic approach to employability, integrating curriculum enhancement, industry collaboration, and career support services to improve both employment outcomes and quality.

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