

# Graduate Outcomes and Employability Study of BS Information Technology Alumni: A Tracer Analysis from 2019 to 2024

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## Abstract

This study investigates the graduate outcomes and employability of Bachelor of Science in Information Technology (BSIT) alumni from J.H. Cerilles State College, Main Campus, spanning cohorts from 2019 to 2024. Anchored on the Human Capital Theory, Employability Framework, and CareerEDGE Model, it evaluates how effectively the BSIT program achieves its Program Educational Objectives (PEOs) through employment status, entrepreneurial engagement, employer feedback, and professional recognition. Using a descriptive quantitative design and tracer methodology, data were collected from alumni and employers via structured surveys. Findings reveal that 85.4% of graduates attained PEOs, with 75.9% employed full-time and 8.2% engaged in entrepreneurship. Employer evaluations rated graduates “Very Satisfactory,” highlighting strengths in ethics and collaboration, but noting areas for improvement in time management and technical depth. Additionally, 20% of alumni received formal awards, and 68.2% reported notable contributions in the IT field. These outcomes affirm the BSIT program’s effectiveness in producing globally competitive professionals, while also identifying gaps in innovation and leadership readiness. The study recommends enhancing curriculum through project-based learning, ethical computing modules, and stronger industry linkages to further align academic preparation with labor market demands.

**Keywords:** Graduate employability, BSIT alumni, Program Educational Objectives (PEOs), Human Capital Theory, CareerEDGE Model, curriculum enhancement

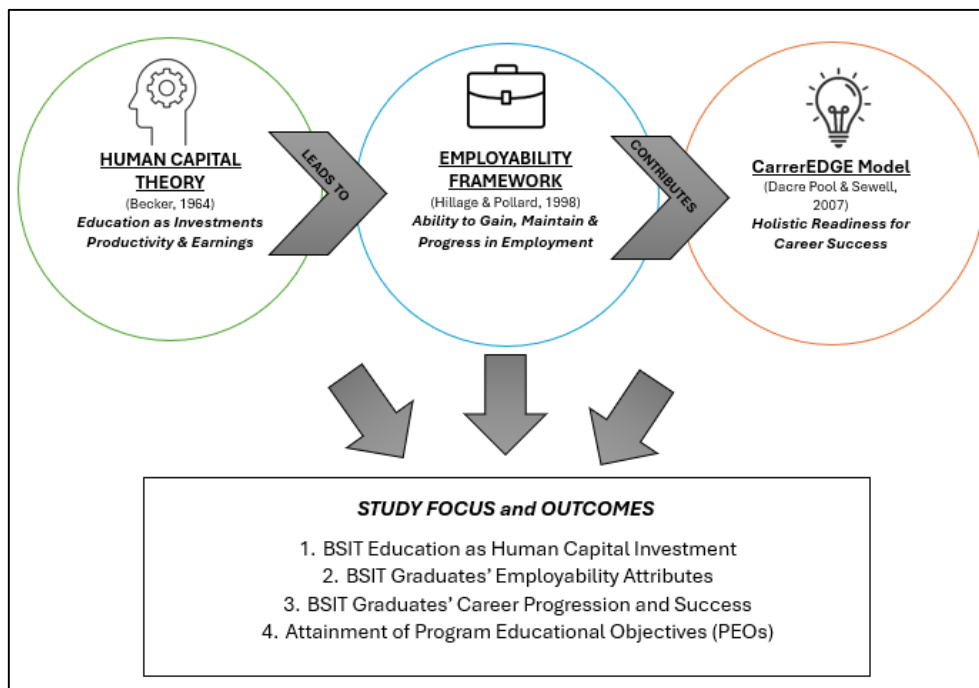
## 1. Introduction

In today’s rapidly evolving digital economy, the employability of Information Technology (IT) graduates has become a critical benchmark for evaluating the effectiveness of higher education programs. As industries increasingly demand professionals who possess not only technical expertise but also adaptability, emotional intelligence, and entrepreneurial acumen, academic institutions face mounting pressure to ensure that their curricula remain responsive to labor market needs (Albina & Sumagaysay, 2020; Demafeliz, 2025).

Tracer studies have emerged as essential tools for assessing graduate outcomes and curriculum relevance. These studies track alumni paths post-graduation, offering empirical insights into employment status, workplace performance, and professional achievements. In the Philippine context, tracer research across state universities reveals that 78–85% of IT graduates secure employment, with approximately 70%

working in roles aligned with their degrees (Albina & Sumagaysay, 2020; Ramos, 2024). However, persistent gaps remain in areas such as soft skills, entrepreneurial readiness, and familiarity with emerging technologies (Villanueva & Binay-an, 2021; Agoylo Jr. et al., 2024).

This study aims to evaluate the extent to which the BSIT program at J.H. Cerilles State College fulfills its Program Educational Objectives (PEOs). It is anchored on three interrelated theoretical frameworks: Human Capital Theory (Becker, 1964), which views education as an investment in productivity and earnings; the Employability Framework (Hillage & Pollard, 1998), which emphasizes the deployment of skills and knowledge within labor market contexts; and the CareerEDGE Model (Dacre Pool & Sewell, 2007), which integrates degree knowledge, generic skills, emotional intelligence, and experiential learning as key components of employability.



**Figure 1. Theoretical Framework**

To achieve these aims, the study pursues the following objectives:

1. Assess the percentage of Program Educational Objectives (PEOs) attained by BSIT graduates from 2019 to 2024.
2. Determine the employment status of BSIT graduates, including the percentage of those who became successful entrepreneurs.
3. Examine employer feedback on the workplace performance, technical competencies, and soft skills of BSIT graduates.
4. Identify the number of BSIT graduates who have received awards or recognition for outstanding performance or contributions in their respective fields or workplaces.
5. Determine the number of prominent BSIT graduates who have made outstanding contributions in the field of information technology.

By examining employment rates, entrepreneurial engagement, employer feedback, and professional recognition among BSIT graduates from 2019 to 2024, this study provides a multidimensional assessment of graduate success. Its findings will inform curriculum enhancement, accreditation compliance, and academic-industry collaboration, ultimately contributing to the development of globally competitive and ethically grounded IT professionals (Orbeta & Abrigo, 2021; Lagrimas et al., 2025).

## **2. Literature Review**

Graduate employability is widely recognized as a key indicator of educational effectiveness, particularly in technology-driven disciplines like Information Technology (IT). Becker's (1964) Human Capital Theory posits that investments in education and training enhance productivity and earnings, a principle validated by tracer studies showing high employment rates among BSIT graduates in Philippine state universities (Albina & Sumagaysay, 2020; Ramos, 2024). However, persistent gaps in adaptability, soft skills, and entrepreneurial readiness suggest that academic preparation does not always translate into long-term career success (Demafeliz, 2025; Villanueva & Binay-an, 2021).

The Employability Framework (Hillage & Pollard, 1998) expands this view by emphasizing the deployment of assets—skills, knowledge, and experience—within real-world contexts. Studies by Agoylo Jr. et al. (2024) and Villegas (2024) affirm that while BSIT curricula provide foundational competencies, continuous curriculum enhancement is needed to meet evolving industry demands. Employer feedback further highlights strengths in ethics and collaboration but notes deficiencies in time management and technical depth (Lagrimas et al., 2025; Whalley et al., 2024).

The CareerEDGE Model (Dacre Pool & Sewell, 2007) offers a holistic lens, integrating emotional intelligence, experiential learning, and self-efficacy as core employability components. Literature shows that entrepreneurial engagement among BSIT graduates remains limited, despite innovation potential (Escototo & de Loyola, 2025; Ramos, 2024). Recognition and prominence—often overlooked in tracer studies—are emerging as meaningful indicators of PEO attainment and societal impact (Basabe et al., 2023; Perlas et al., 2025).

Collectively, these studies underscore the need for multidimensional tracer analyses that assess not only employment outcomes but also leadership, innovation, and ethical practice. This study addresses that gap by integrating theoretical and empirical perspectives to evaluate how BSIT education fosters graduate success across diverse professional trajectories.

## **3. Methodology**

This study employed a descriptive quantitative research design using the tracer study method to evaluate the post-graduation outcomes of Bachelor of Science in Information Technology (BSIT) alumni from J.H. Cerilles State College, Main Campus, covering cohorts from 2019 to 2024. Descriptive research is appropriate for identifying patterns and summarizing observable characteristics, particularly in assessing employment status, entrepreneurial activity, workplace performance, and Program Educational Objectives (PEO) attainment (Creswell & Creswell, 2018).

The tracer study approach, as defined by Schomburg (2016), is widely used in higher education to examine the relevance of academic programs by tracking graduates' career trajectories and societal contributions. This method aligns with the study's goal of evaluating the effectiveness of the BSIT curriculum in preparing graduates for professional success.

Participants included BSIT alumni who were employed, self-employed, or engaged in further studies, as well as employers or supervisors who provided evaluative feedback. The study utilized purposive sampling to ensure representation across employment types and industries. Data were collected through structured survey instruments: one for alumni, assessing employment status, entrepreneurial engagement, and PEO attainment; and another for employers, evaluating graduates' workplace performance in areas such as technical competence, adaptability, and ethics.

| School Year               | Number of Participants |
|---------------------------|------------------------|
| 2019–2020                 | 25                     |
| 2020–2021                 | 32                     |
| 2021–2022                 | 40                     |
| 2022–2023                 | 55                     |
| 2023–2024                 | 68                     |
| <b>Total Participants</b> | <b>220</b>             |

**Table 1. Alumni Participants**

Quantitative data were analyzed using frequency, percentage, and weighted mean to determine trends and levels of attainment. Ethical considerations included informed consent, voluntary participation, and confidentiality of responses. The research adhered to institutional ethical standards and ensured that all participants were treated with respect and transparency throughout the data collection process.

#### **4. Result and Discussion**

The study assessed the employability and professional outcomes of BSIT graduates from J.H. Cerilles State College (2019–2024), focusing on Program Educational Objectives (PEO) attainment, employment status, entrepreneurial engagement, employer feedback, and professional recognition.

##### **4.1 PEO Attainment**

Survey results revealed that 85.4% of graduates achieved the targeted PEOs, indicating a high level of alignment between academic preparation and professional performance. This supports Becker's (1964) Human Capital Theory, affirming that educational investment yields measurable returns in productivity and career advancement.

| PEO Code | Mean Score (1–5) | Attainment % | Status               |
|----------|------------------|--------------|----------------------|
| PEO-01   | 4.30             | 86.0%        | Very High Attainment |
| PEO-02   | 4.25             | 85.0%        | Very High Attainment |
| PEO-03   | 4.28             | 85.6%        | Very High Attainment |
| PEO-04   | 4.20             | 84.0%        | High Attainment      |

|                |             |              |                             |
|----------------|-------------|--------------|-----------------------------|
| PEO-05         | 4.32        | 86.4%        | Very High Attainment        |
| <b>Overall</b> | <b>4.27</b> | <b>85.4%</b> | <b>Very High Attainment</b> |

**Table 2. Attainment of Program Educational Objectives**

#### 4.2 Employment and Entrepreneurship

Among respondents, 75.9% were employed full-time, while 8.2% had launched entrepreneurial ventures. These figures reflect strong labor market absorption, consistent with findings from Albina & Sumagaysay (2020) and Demafeliz (2025). However, the relatively low entrepreneurial engagement suggests a need for enhanced experiential learning and innovation-focused modules, as emphasized by the CareerEDGE Model (Dacre Pool & Sewell, 2007).

| Employment Type               | n          | %           |
|-------------------------------|------------|-------------|
| Full-time                     | 167        | 75.9%       |
| Part-time                     | 35         | 15.9%       |
| Self-employed / Entrepreneurs | 18         | 8.2%        |
| <b>Total</b>                  | <b>220</b> | <b>100%</b> |

**Table 3. Employment Distribution of BSIT Graduates**

#### 4.3 Employer Feedback

Employers rated graduates “Very Satisfactory” overall, with strengths in ethics, collaboration, and adaptability. Weaknesses were noted in time management and technical depth, echoing similar gaps identified by Lagrimas et al. (2025) and Whalley et al. (2024). These findings highlight the importance of integrating industry-based projects and mentorships to reinforce workplace readiness.

| Employer | Mean Rating | Feedback Summary                                                  |
|----------|-------------|-------------------------------------------------------------------|
| 1        | 4.11        | Strong work ethic and effective communication.                    |
| 2        | 2.95        | Needs improvement in meeting deadlines and time management.       |
| 3        | 4.32        | Highly adaptable and willing to learn new technologies.           |
| 4        | 4.78        | Demonstrates leadership potential and initiative.                 |
| 5        | 2.48        | Shows a weak technical foundation and requires close supervision. |
| 6        | 4.29        | Shows creativity in handling technical challenges.                |
| 7        | 4.82        | Excellent professionalism and consistent performance.             |
| 8        | 4.44        | Communicates effectively and collaborates well.                   |
| 9        | 3.05        | Performance is inconsistent, with limited initiative at times.    |
| 10       | 4.61        | Highly dependable with strong ethical values.                     |

**Overall****4.04**

Generally positive ratings with noted strengths and areas for improvement.

**Table 4. Employer Feedback on BSIT Graduate Performance****4.4 Awards and Recognition**

Approximately 20% of graduates received formal awards for academic or professional excellence. While rarely documented in tracer literature, such recognitions serve as external validations of PEO attainment and reflect the culmination of integrated employability attributes (Demafeliz, 2025; Basabe et al., 2023).

| Awards / Recognition | n          | %           |
|----------------------|------------|-------------|
| Yes (Awardees)       | 44         | 20.0%       |
| No (non-awardees)    | 176        | 80.0%       |
| <b>Total</b>         | <b>220</b> | <b>100%</b> |

**Table 5. Awards and Recognition of BSIT Graduates****4.5 Prominent Contributions**

Notably, 68.2% of graduates reported significant contributions in IT, including leadership roles, innovations, and community impact. These outcomes illustrate the highest level of return on educational investment, aligning with the Employability Framework's emphasis on career progression and societal relevance (Hillage & Pollard, 1998).

| Prominent Contribution | n          | %           |
|------------------------|------------|-------------|
| Yes (Prominent)        | 150        | 68.2%       |
| No (Not Prominent)     | 70         | 31.8%       |
| <b>Total</b>           | <b>220</b> | <b>100%</b> |

**Table 6. Prominent BSIT Graduates with Outstanding Contributions**

Overall, the results affirm that the BSIT program effectively prepares graduates for professional success, while also identifying areas for curricular enhancement—particularly in entrepreneurship, innovation, and technical specialization.

**5. Conclusion and Recommendation**

This tracer study of BSIT alumni from J.H. Cerilles State College (2019–2024) demonstrates that the program effectively fulfills its Program Educational Objectives (PEOs), with 85.4% of graduates attaining the expected competencies. Employment outcomes are strong, with 75.9% securing full-time positions and 8.2% engaging in entrepreneurial ventures. Employer feedback highlights graduates' strengths in ethics, collaboration, and adaptability, while identifying areas for improvement in time management and technical specialization. Recognition and contributions in the IT field further validate the program's relevance and impact. Overall, the BSIT curriculum has proven effective in producing globally

competitive and ethically grounded professionals, though continued enhancement is needed to address gaps in innovation and leadership readiness.

Based on the findings, the following recommendations are proposed:

1. Curriculum Enhancement – Integrate project-based learning, ethical computing modules, and innovation-focused coursework to strengthen technical depth and entrepreneurial readiness.
2. Industry Linkages – Expand partnerships with IT companies to provide internships, mentorships, and collaborative projects that reinforce workplace competencies.
3. Soft Skills Development – Incorporate structured training in time management, communication, and leadership to complement technical expertise.
4. Recognition and Tracking – Establish mechanisms to document alumni achievements and contributions, ensuring continuous feedback for program improvement.
5. Future Research – Conduct longitudinal and mixed-method tracer studies to capture qualitative insights into graduate experiences and evolving industry demands.

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#### **Competing Interests**

The authors declare that they have no competing financial, professional, or personal interests related to this study.

#### **Consent for Publication**

The authors confirm their consent for the publication of this research work.

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## References

1. Agoylo Jr., J. C., Docena, F. V., Paulin, M. C., & Subang, K. N. (2024). Career outcomes and employability of IT graduates: A tracer study from Southern Leyte State University–Tomas Oppus (2018–2023). *Wisdom Journal of Humanities and Social Sciences*, 1(5), 41–60.
2. Albina, A. C., & Sumagaysay, L. P. (2020). Employability tracer study of Information Technology Education graduates from a state university in the Philippines. *Social Sciences & Humanities Open*, 2(1), Article 100055. <https://doi.org/10.1016/j.ssaho.2020.100055>
3. Basabe, N., Estella, S., Ferolino, H., & Cataraja, G. C. (2023). A tracer study of Bachelor of Science in Information Technology (BSIT): A case study of graduates of the University of Cebu, Philippines. *Journal of Learning and Development Studies*, 3(2), 43–61. <https://doi.org/10.32996/jlds.2023.3.2.5>
4. Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. National Bureau of Economic Research/Columbia University Press.
5. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
6. Dacre Pool, L., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49(4), 277–289. <https://doi.org/10.1108/00400910710754435>
7. Demafeliz, R. E. (2025). A tracer study on employment outcomes and career progression of BSIT graduates: Basis for enhancing institutional reputation and graduate employability. *IJMABER*, 6(6)
8. Escototo, E., & de Loyola, R. (2025). From Classroom to Industry: A Tracer Study Assessing Career Outcomes and Industry Alignment of CICT Graduates of STI West Negros University. *Kalamboan*, 2(1).
9. Hillage, J., & Pollard, E. (1998). *Employability: Developing a framework for policy analysis* (Research Report No. RR85). Department for Education and Employment.
10. Lagrimas, J. C., Ballado, R. S., & Giray, Y. G. E. (2025). Feedbacks of employers on graduates of a state university's external campus in the Philippines. *Journal of Research in Education and Pedagogy*, 2(3), 387–395. <https://doi.org/10.70232/jrep.v2i3.32>
11. Lagrimas, J. C., Ballado, R. S., & Giray, Y. G. E. (2025). Feedbacks of employers on graduates of a state university's external campus in the Philippines. *Journal of Research in Education and Pedagogy*, 2(3), 387–395. <https://doi.org/10.70232/jrep.v2i3.32>
12. Orbeta, A. C., & Abrigo, M. R. M. (2021). Assessing the employability of higher education graduates in the Philippines (PIDS Discussion Paper Series No. 2021-26). Philippine Institute for Development Studies. <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2126.pdf>
13. Perlas, H. N., Montalban, L. J. T., Flejoles, R. P., Fufunan, S. A., Ea, H. C., & Mendoza, J. A. (2025). Career Pathways and Employment Outcomes of BSIT Graduates: A Tracer Study of ISATU Miagao Campus Alumni. *Asian Journal of Education and Social Studies*, 51(9), 207–216. <https://doi.org/10.9734/ajess/2025/v51i92357> mail.journalajess.com
14. Ramos, M. C. M. (2024). Graduate tracer study: Exploring the relationship between education and employment. *Asia Pacific Journal of Management and Sustainable Development*, 12(1), 108–117. <https://doi.org/10.13140/rg.2.2.19468.53127>
15. Schomburg, H. (2016). *Carrying out tracer studies: Guide to anticipating and matching skills and jobs*. International Labour Organization. [https://www.ilo.org/global/publications/WCMS\\_552798/lang--en/index.htm](https://www.ilo.org/global/publications/WCMS_552798/lang--en/index.htm)



16. Villanueva, G. R. Jr., & Binay-an, L. W. (2021). A tracer study on the employability of Information Technology graduates of Ilocos Sur Polytechnic State College, Tagudin Campus. *Psychology and Education Journal*, 58(2). <https://doi.org/10.17762/pae.v58i2.3007>
17. Villegas, C. (2024). A systematic review of research on soft skills for employability. *Advanced Education*, 25, 50–62. <https://doi.org/10.20535/2410-8286.314064>
18. Whalley, J., Imbulpitiya, A., Clear, T., & Ogier, H. (2024). From student to working professional: A graduate survey. *arXiv*. <https://arxiv.org/abs/2410.07560>