
TRACING THE CAREER PATHWAYS OF BTLED GRADUATES AS A MAP OF SUCCESS AT CAGAYAN STATE UNIVERSITY PHILIPPINES

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Abstract. This study sought to ascertain the employability and productivity of the Cagayan State University (CSU) Bachelor of Technology and Livelihood Education (BTLED) graduates in the Philippines. A tracer method is employed to ask the various demographic and educational variables. Respondents were 163 who represented a majority of single (76.7%) baccalaureate degree holders (54.8%). High vocational training is evidenced by a high rate of graduates (76.7%) with a National Certificate II. The efficacy of the program in equipping graduates for employment is evidenced by a high employment rate at 71.2% with 49.7% of the graduates having passed the Licensure Examination for Teachers. There are a lot of issues that still exists since a considerable percentage of graduates (41.7%) indicate family responsibilities and lack of experience as obstacles to employment. Further, employment status has been proven to have a strong effect on gross monthly incomes, explaining some 6.3% of the variation in incomes. The study suggests the need for better career counseling and skill development interventions to make sure that educational achievements are more appropriately matched to the needs of the market so as to maximize the income earning capability of BTLED graduates despite a moderate rate of job satisfaction (59.5%).

Keywords: BTLED graduates, employability, job satisfaction, National Certification, productivity

1. INTRODUCTION

Tracing the career path of the Bachelor of Technology and Livelihood Education (BTLED) program graduates is crucial to determine the effectiveness of the program in preparing the graduates for employment. Graduate Tracer Studies (GTS) are an effective tool for monitoring the education background and work status of the graduates. Schomburg (2016) posits that GTS is a standardized post-graduation survey to measure study progress, work change, work career, and use of acquired competencies. It has been found in various studies to be critical in the evaluation of college experience, skill development, and employability (Pentang et al., 2022). The studies have been critical in giving insights into how higher education institutions (HEIs) can re-engineer their curriculum to suit industry needs and prepare graduates with the necessary competencies (Cañizares, 2015; Reusia et al., 2020). Through the examination of the education background and work path of the BTLED graduates, the current study seeks to determine how the program prepares the graduates for employment and economic integration.

Educational institutions always improve their offerings to fit changing labor market requirements. Realizing professional goals by means of acquired knowledge and abilities is one of the key components in assessing graduate achievement (Daguplo et al., 2019). Graduate Tracer Studies guarantees quality assurance in HEI operations by means of their use (Badiru & Wahome, 2016). Moreover, programs for professional growth and training greatly help graduates to acquire necessary skills for the job. Cuadra (2019) underlines the need of talent matching above educational credentials as mismatches in competences could cause work discontent and salary differences. The Commission on Higher Education (CHED) required HEIs in the Philippines to carry tracer studies to evaluate the relevance and sustainability of their academic programs in response to these difficulties (Dela Cruz, 2022). Emphasizing upskilling and reskilling initiatives to raise the caliber of graduate education and match it with the demands of the twenty-first-century employment, the Department of Education (DepEd) has also underlined.

The employability and career advancement of graduates are critical indicators of the effectiveness of the program. HEIs are mandated by CHED to undertake tracer studies as part of the accreditation procedure to assess the employment outcomes of their graduates (Gentova, 2023). Studies have shown that most graduates secure employment in the public sector, specifically in the government institutions, showing that study training is aligned with employment opportunities (Chen, 2017). In another study by Cañizares (2015), the importance of curriculum effectiveness in ensuring graduates gain the skills and knowledge that enable them to secure gainful employment is highlighted. Again, affirming the applicability of the curriculum, Cuadra et al. (2019) show that tracer studies enable institutions to assess the efficiency of their programs and make the necessary adjustments that are aligned with labor market needs. Through tracing career paths and offering customized interventions, the productivity and employability of tertiary education graduates are improved.

Another factor that influences the success of graduates in their careers is their performance on professional examinations. Research suggests that the results of licensure examinations are substantially correlated with academic preparation, intelligence quotient, and institutional support (Balkar, 2022). The success of graduates in professional examinations is influenced by factors such as faculty competency, school facilities, and student support services (Ma'dan et al., 2020; Jardim & Silva, 2018). Job satisfaction has a large impact on the status of one's working career. The University of Negros Occidental-Recoletos (UNO-R) Graduate School has conducted tracer studies to guarantee and assure that its programs improve the quality of service, productivity, and professional development in the workplace (Gentova, 2022). Through appropriate support and awareness of the challenge's students encounter, institutions are responsible and accountable for optimizing the career trajectory and ultimate job satisfaction of graduates (Mutangal et al., 2023). The employment and career advancement of their graduates are indicative of the success of academic programs. According to Cheng et al. (2021), the ultimate criterion for an institution's efficacy is its capacity to generate graduates who are employable and capable of making a positive impact on society. Tracer studies offer institutions the opportunity to enhance their academic programs by acquiring valuable data on the job placement, skill utilization, and career mobility of graduates. The objective of this study is to offer policymakers, educators, and stakeholders the opportunity to improve the design of curricula and guarantee that graduates are able to compete in a constantly changing workforce by examining the professional trajectories of BTLEd graduates at Cagayan State University.

2. CONCEPTUAL FRAMEWORK

The legal frameworks guiding this study are deeply interconnected, shaping its focus on the employability and productivity of BTLEd graduates within the context of technical and livelihood education. Republic Act No. 7796 (TESDA Act of 1994) and its mandate to establish national standards for technical competencies through National Certificates (NCs) form the foundation for assessing the skills and qualifications of graduates. This aligns with the Philippine Qualifications Framework (Republic Act No. 10968), which ensures that TESDA certifications meet national and industry standards. Both laws emphasize the importance of skills-based education, which is directly relevant to the tracer study's focus on career outcomes and employability of BTLEd graduates.

Furthermore, the Enhanced Basic Education Act (Republic Act No. 10533) expands technical-vocational education within the K-12 curriculum, emphasizing job readiness, which ties into the study's analysis of the BTLEd program's effectiveness in preparing students for the workforce. The TESDA circulars and guidelines on competency-based training and assessment provide specific frameworks for evaluating the graduates' technical proficiencies, while the Labor Code (Presidential Decree No. 442) offers insights into job conditions and labor standards, which affect the graduates' productivity and career progression.

Higher Education Act (Republic Act No. 7722) emphasizes the need for higher education programs, such as BTLEd, to remain aligned with labor market demands and national development goals, while the Sustainable Development Goals (SDGs) and Philippine Development Plan (PDP) stress the role of TVET programs in promoting quality education and economic growth.

Collectively, these laws and policies provide a comprehensive framework for this tracer study, ensuring that the research assesses not only the immediate skills and employment outcomes of graduates but also the long-term alignment of the BTLEd program with industry needs and national development priorities.

3. METHODOLOGY

3.1 Research Design

A quantitative descriptive design was utilized in the study. The study considered all the graduates of BTLED since its opening in 2018. Most of the information were provided by the alumni office and registrar's office providing the sampling frames to trace graduates. However, many of the graduates' addresses had been changed overtime making the records unreliable and difficult to trace. To address this concern, the questionnaires were sent to the graduates through email, snail mail, Facebook, messenger and other means of delivery. Another means was by administration of the survey tool to the graduates who visited the school for a purpose. The graduates were informed of the actual study data gathering through a letter attached to the questionnaire and were assured about confidentiality. Based on official records, the Cagayan State University- College of Teacher Education had produced 173 graduates for the past 6 (six) years of operation. Total enumeration sampling with percentage of retrieval was utilized since the study included all the graduates from academic years 2018 to 2024. However, only 163 graduates participated in the study.

3.2 Locale of the Study

The tracer study of BTLED graduates was conducted by the College of Teacher Education at Cagayan State University (CSU), Andrews Campus, situated in Caritan, Tuguegarao City. Andrews Campus, one of CSU's eight campuses, boasts the highest number of BTLED graduates, followed closely by Piat Campus. These two campuses are the only CSU locations that offer the BTLED program through the College of Teacher Education, establishing them as vital centers for technical and livelihood teacher training within the university system.

The study focused primarily on BTLED graduates from Andrews Campus, a key educational institution within CSU that plays an essential role in both the academic and practical skill development of its students. Strategically positioned in Tuguegarao City, Andrews Campus contributes significantly to the local economy by equipping graduates with skills relevant to livelihood education, directly benefiting both the workforce and the broader community. This study serves as an important reflection of the campus's impact on graduate employability and regional socio-economic development.

3.3. Respondents and Sampling Technique

The respondents of this tracer study were BTLED graduates from the College of Teacher Education at Cagayan State University, Andrews Campus. To accurately represent the entire population of these graduates, the study used a total enumeration. This approach ensured comprehensive coverage, aligning with the study's objective of assessing the full scope of BTLED graduate outcomes. It is important to note that the years 2020 and 2021 marked the transition to the K-12 educational program in the Philippines, which added two additional years to the basic education curriculum before students could proceed to college. This transition likely influenced the lower number of respondents from these specific years, reflecting the adjustments made in educational pathways during this period.

Table 1. Distribution of the Target Respondents of the Study.

GRADUATION YEAR	NUMBER OF RESPONDENTS
2024	22
2023	25
2022	31
2021	2
2020	1
2019	53
2018	39
Total	173

3.4 Research Instruments

In accordance with Board Resolution No. 130, s. 2022, the tracer study tool was recommended and used as the primary research instrument for this study. This tool was specifically developed to collect comprehensive data on BTLED graduates, enabling an in-depth analysis of their employment status, skill utilization, and other significant post-graduation outcomes.

3.5 Data Gathering Procedure

The data were collected using a Google Form link distributed through the Messenger accounts of the BTLED graduates. This method facilitated efficient communication and ensured that participants could easily access the survey from their devices. Additionally, batch group chats were

utilized to further streamline the data gathering process, allowing for real-time engagement and support among participants.

The Google Form was specifically designed to capture essential information regarding the graduates' employment status, skill application, and other relevant post-graduation metrics. To enhance response rates, reminders were sent via Messenger and through the group chats to encourage participation and ensure a comprehensive data set.

The list of graduates was provided by the registrar following a formal request from the study leader, who is the Dean of the College of Teacher Education. This collaboration ensured that all eligible respondents were reached accordingly.

3.6 Data Analysis

The data analysis for the tracer study involved several systematic steps to ensure comprehensive insights into the outcomes of BTLED graduates. Initially, the data collected from the Google Form were organized and coded for ease of analysis. Descriptive statistics were employed to summarize the demographic characteristics of the respondents, such as civil status and employment status.

Quantitative data, including employment rates and skill application, were analyzed using statistical software to determine trends and patterns. Multiple Regression Analysis was used to explore relationships between profile of the respondents and their productivity, allowing for a deeper understanding of factors influencing employability. The findings were then interpreted in the context of the broader educational and labor market landscape, ensuring that the results contribute valuable knowledge to stakeholders and policymakers.

4. RESULTS AND DISCUSSION

4.1 Profile of the Respondents

Figure 1. Demographic and qualification profile of respondents in terms of civil status, educational attainment and employment status

The respondents' civil status, educational attainment, training and certification, and employment status are all highlighted in Figure 1, which also provides their demographic and qualification profile. The majority of respondents are single (76.7%) and possess a baccalaureate degree (54.8%). Additionally, a substantial number (44.2%) have pursued postgraduate studies. The majority of respondents (76.7%) have an NCII certification, while a lesser percentage have NCI (1.8%) or TM1 (3.1%) certifications. Additionally, 18.4% have no certifications. The employment data indicates that 71.2% of the respondents are employed, while 28.8% are still unemployed. This suggests that, despite the fact that the majority have assimilated into the workforce, there is still a need for additional career development support. In general, the data indicate that the respondent group is well-educated, has a strong preference for vocational certifications, and has a relatively high employment rate.

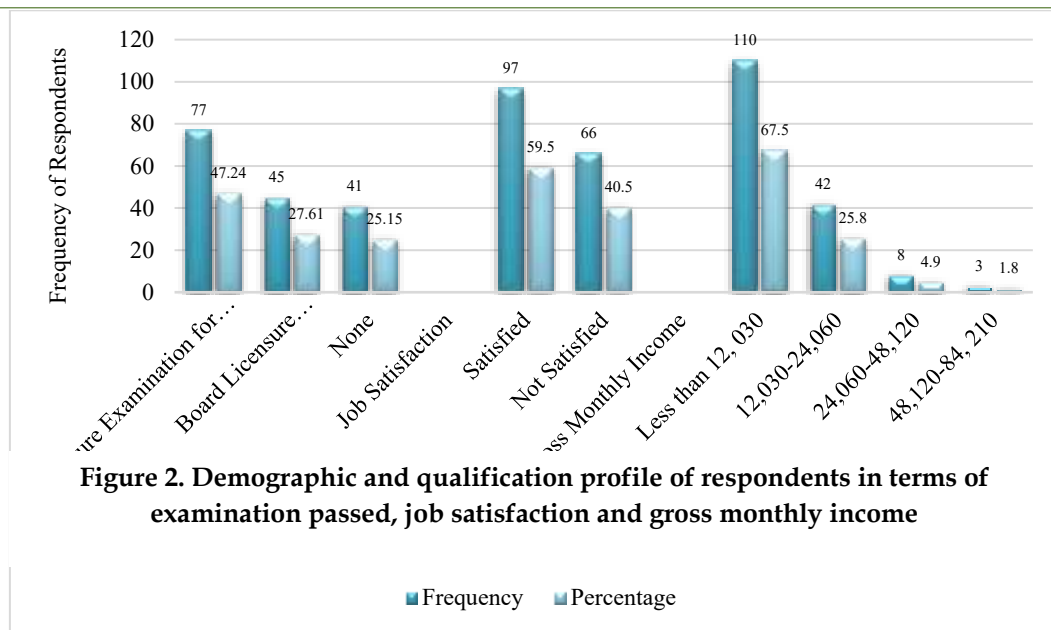


Figure 2. Demographic and qualification profile of respondents in terms of examination passed, job satisfaction and gross monthly income

The respondents' aggregate monthly income, job satisfaction, and examination results are illustrated in Figure 2. The data suggests that 47.24% of respondents successfully completed the Licensure Examination for Teachers (LET), 27.61% passed the Board Licensure Examination for Professional Teachers (BLEPT), and 25.15% did not pass any licensure exams. In terms of employment satisfaction, the majority (59.5%) reported being content with their existing positions, while 40.5% were dissatisfied. According to the income distribution, 67.5% of individuals earn less than ₱12,030 per month, while 25.8% earn between ₱12,030 and ₱24,060 monthly. The comparatively low earnings of the majority of respondents, despite their professional qualifications, are underscored by the fact that only a tiny percentage (6.7%) earn above ₱24,060. The data indicates that financial stability continues to be a challenge, potentially impacting overall job satisfaction, despite the fact that a substantial number of individuals have obtained licensure and are employed.

4.2 Relationship Between the Profile of BTLED Graduates and their Productivity (Monthly Income)

Table 2 reveals the test of relationship between the profile of BTLED graduates and their productivity. The result of the Multiple Regression Analysis emphasized the importance of employment status, explaining approximately 6.3% of the variance in gross monthly income ($R^2 = .063$). Although this may seem modest, the statistically significant F-statistic ($F(1, 161) = 10.915, p < .001$) indicates that

Table 2. Stepwise Multiple Regression Analysis of the Profile of the Respondents and their Productivity

Model	Variables Entered	R	R ²	Adjusted R ²	Std. Error of Estimate	Durbin-Watson	F	p	B	SEB	β	t	p	95% CI for B	VIF
1	Employment Status	0.25	0.063	0.058	8210.23	2.12	10.915	<.001	4690.09	14.20	0.33	3.31	<.001	[1882.5, 7493.56]	1

*Significant at $\alpha = 0.05$

employment status is a crucial predictor of income among BTLED graduates. Findings that for each unit increase in employment status, gross monthly income is expected to rise by 4690.09 Philippine Pesos (PHP), is echoed in research study published in the International Journal of Evaluation and Research in Education examined the job-seeking experiences of BTLED graduates. It reported that most of these graduates secured employment within a year after graduation, primarily in education-related roles. The findings indicated that employed graduates often earned

modest salaries, with many reporting monthly incomes below Php 20,000. This study emphasizes the importance of employment status as a predictor of income, highlighting that those who are not employed experience financial instability and report no income (Gumbao et al., 2022).

A tracer study conducted by Batangas State University revealed that those who were unemployed faced significant challenges in finding jobs that matched their qualifications, further illustrating the stark contrast in financial outcomes between employed and unemployed graduates (Batangas State University, 2022). Other demographic factors such as civil status, highest educational attainment, and job satisfaction did not significantly contribute to the model, as shown by their exclusion during stepwise regression analysis. This suggests that while educational qualifications are essential, they may not be as impactful on income as employment status itself. The findings align with previous research indicating that BTLED graduates predominantly secure teaching-related positions shortly after graduation, often facing challenges related to job satisfaction and financial stability (Gumbao et al., 2023). This study makes a big contribution to the critical role of securing relevant employment for BTLED graduates and suggests the need for targeted employment support initiatives within educational programs. While educational training is vital, the analysis reinforces the belief that employment status is a crucial determinant of financial outcomes for BTLED graduates.

6. CONCLUSION

The study concluded that the BTLED program is effective in preparing graduates for employment, as evidenced by the high employment rate and the attainment of NC2 certifications and LET licenses. The alignment of the curriculum with industry demands leads to moderate job satisfaction among graduates. However, regional disparities in job availability remain a challenge for some graduates, especially those in rural areas.

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