

From classroom to career: A tracer study on the post-secondary trajectories and curricular alignment of senior high school graduates in the Philippines

RESEARCH ARTICLE

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Abstract

This tracer study investigates the post-secondary trajectories and academic transitions of graduates from a private secondary institution in the Philippines between 2018 and 2025. Utilizing a mixed-methods concurrent triangulation design, the research evaluates the employment status, tertiary enrollment patterns, and perceived curricular relevance among 195 alumni. Key findings indicate a predominant concentration in the Science, Technology, Engineering, and Mathematics (STEM) strand, with a high propensity for transitions into allied health sciences. At the same time, a significant majority (75%) demonstrated structural alignment between their secondary specializations and tertiary programs; 25% experienced curricular-career mismatch driven by shifting professional interests, academic rigor, and socio-economic constraints. Quantitative assessments yielded a mean significance rating of 3.03 for specialized coursework, highlighting the role of secondary curricula in providing cognitive scaffolding for university-level success. Furthermore, the study identifies a high institutional satisfaction rate (3.44), primarily attributed to pedagogical efficacy, despite identified disparities in physical infrastructure. These findings provide a critical empirical baseline as the Philippine educational landscape transitions toward the flexible, elective-based MATATAG curriculum in SY 2026–2027. By documenting the challenges of the traditional strand-based system, this research underscores the necessity for data-driven career guidance and adaptive counseling to ensure student readiness in an increasingly fluid global academic environment.

Keywords: Alumni tracer study, curricular alignment, higher education transitions, MATATAG curriculum, secondary education, strands

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INTRODUCTION

Tracer studies are essential tools used by educational institutions to monitor graduates' transition from the school campus to the professional world. These studies go beyond tracking employment; they determine how learned skills are applied to help graduates become self-sufficient, globally competitive citizens. By continuously updating programs based on these

findings, institutions ensure their training remains aligned with the evolving needs of the labor market.

According to the European Training Foundation (ETF, 2016), tracer studies are common in both colleges and vocational schools because they provide a long-term view of educational impact, covering areas such as career development, work transitions, and the practical application of competencies.

Literature Review

Their role in policy and accreditation further underscores the relevance of these studies. Egesah and Wahome (2016) noted that tracer studies generate the evidence-based information necessary to improve academic and service programs, even drafting guides for higher education institutions in East Africa. Furthermore, Cuadra et al. (2019) indicated that these tracers serve as proof that schools are producing competent graduates ready for both local and global workplaces. Consequently, tracer studies are vital not only for institutional growth but also to inspire education, training, and employment policies and for providing a clear picture of workforce requirements (ETF, 2016).

In the Philippines, the institutionalization of graduate tracking is driven by centralized mandates from the Commission on Higher Education (CHED) and the Department of Education (DepEd). These regulatory frameworks require educational institutions to monitor graduate outcomes as a primary metric for curriculum efficacy and institutional accountability. Recent scholarship within the Philippine higher education sector has utilized these mandates to drive internal reforms; for instance, specialized studies in engineering and architecture (Saong et al., 2020) and language education (Ayson, 2021) have demonstrated how alum data can inform competency-based curriculum development. Furthermore, the national implementation of DM-CI-2019-00031 exemplifies a systemic effort to evaluate the K to 12 basic education reform through graduate transition data. This national policy has catalyzed various institutional-level investigations into the alignment between secondary school specializations and tertiary academic trajectories (EDCOM 11 2026-2035), highlighting a growing focus on the verticality of the educational system.

Despite the proliferation of tracer studies in higher education, research focusing on the longitudinal outcomes of Senior High School (SHS) graduates remains limited, particularly regarding the structural alignment between secondary specializations and post-secondary career trajectories within private educational contexts.

Theoretical/Conceptual Framework

This study is anchored in Social Cognitive Career Theory (SCCT), Person–Environment Fit Theory, and Tinto's Theory of Student Integration, which collectively explain graduates' post-secondary transitions, educational choices, and preparedness for higher education.

The SCCT, originally proposed by Lent, Brown, and Hackett in 1994 and subsequently refined by Lent and Brown in 2019 (Diaz, 2023), posits that self-efficacy beliefs, outcome expectations, personal goals, and contextual supports and barriers shape educational and career decisions. The theory emphasizes that students' educational experiences influence their confidence in pursuing specific academic and career pathways.

Complementing SCCT is Holland's Person–Environment Fit Theory. This asserts that individuals are more likely to experience success and satisfaction when their interests, abilities, and values align with their educational or occupational environments (Spokane et al., 2002; Nye et al., 2017). Likewise, Tinto's Theory of Student Integration (1993), which continues to inform contemporary higher education research (Tinto, 2012, 2017), explains that students' prior educational experiences and academic integration significantly influence their successful transition and persistence in higher education.

These theoretical perspectives provide a comprehensive explanation for the findings of the tracer study. The predominance of graduates who pursued tertiary programs aligned with their senior high school specialization reflects the role of positive learning experiences in strengthening students' confidence and academic competencies, consistent with SCCT. Simultaneously, the observed alignment between secondary specialization and college programs demonstrates a strong person–environment fit, indicating that graduates selected educational pathways compatible with their interests and acquired competencies. Moreover, the respondents' positive evaluation of specialized coursework and high institutional satisfaction suggest that the secondary curriculum effectively provided the cognitive foundation necessary for successful transition into higher education, supporting Tinto's proposition that

quality pre-college experiences facilitate academic adjustment and persistence (Lent & Brown, 2019; Nye et al., 2017; Tinto, 2017).

Conversely, the curricular-career mismatch experienced by a portion of the graduates illustrates the dynamic nature of educational and career decision-making. SCCT explains that career pathways evolve as students reassess their interests, self-efficacy, and anticipated outcomes while responding to contextual barriers such as socioeconomic limitations and academic challenges. Similarly, the Person–Environment Fit Theory suggests that educational realignment occurs when individuals perceive that their chosen academic environment no longer corresponds with their personal aspirations or capabilities. From Tinto's perspective, these changes may also reflect students' continuing process of academic integration as they adapt to the demands of higher education. Collectively, these theories underscore the importance of evidence-based career guidance, adaptive counseling, and learner-centered educational planning, particularly as the country's educational system shifts to the flexible, elective-based MATATAG curriculum, where students are expected to navigate increasingly diverse academic and career pathways.

Significance of the Study

While national-level assessments provide a macro-level overview of the K to 12 reform's efficacy, there remains a significant empirical gap in institution-specific data examining the relationship between specialized secondary curricula and graduates' postsecondary educational and career outcomes. Existing monitoring systems provide limited evidence on how senior high school strands influence tertiary education pathways, workforce entry, and long-term career development. This study addresses this scholarly gap by utilizing the University of Baguio High School (UBHS) as a case study to develop an evidence-based understanding of graduates' post-secondary trajectories. By documenting the educational and employment outcomes of its alumni, the research establishes a data-driven framework for evaluating the effectiveness and relevance of the school's academic programs.

More importantly, the findings will directly benefit UBHS by providing empirical evidence to inform

curriculum enhancement, career guidance initiatives, and institutional planning. The results will enable school administrators and curriculum developers to assess the extent to which the existing senior high school strands prepare students for higher education and employment, identify areas of curricular alignment and mismatch, and strengthen academic support services responsive to graduates' evolving needs. Furthermore, the study will serve as a valuable baseline for UBHS as it transitions to the elective-based MATATAG curriculum, enabling the institution to make informed decisions regarding program offerings, student advising, resource allocation, and policy development. Ultimately, the findings will contribute to continuous quality improvement by ensuring that the school's curriculum remains responsive to students' aspirations, labor market demands, and the changing landscape of Philippine education.

Objectives of the Study

The primary objective of this study is to investigate the post-secondary trajectories and academic transitions of secondary education graduates within a private institutional context in the Philippines.

Specifically, the research seeks to:

1. profile the longitudinal academic and professional pathways of graduates in terms of curriculum track completion, tertiary program enrollment, and immediate labor market entry;
2. evaluate the structural articulation and alignment between specialized secondary strands and subsequent post-secondary pursuits, including tertiary majors and vocational roles;
3. assess the perceived significance of specialized secondary curricula in facilitating the acquisition of core competencies required for tertiary-level academic performance; and
4. examine the holistic institutional experience of graduates, focusing on the efficacy of pedagogical instruction and support services in fostering academic and professional readiness.

METHODOLOGY

Study Design

This study utilized a mixed-methods concurrent triangulation design, incorporating both quantitative

descriptive-survey and qualitative-descriptive approaches. This methodology is particularly effective for tracer studies, as it enables statistical profiling of graduate trajectories while capturing the nuanced, lived experiences of alumni (Creswell & Plano Clark, 2018). By integrating these paradigms, the research provides a holistic evaluation of objective career pathways and participants' subjective retrospective assessments of their secondary education.

Sample/Population of the Study

The study involved 195 alumni from a private secondary institution in the Philippines, with data collection spanning from July 2023 to January 2025. Although the sample size represents a specific subset of the total graduate population since 2018, purposive sampling ensured that the respondent pool maintained proportional representation of the school's demographics. Notably, the distribution aligned with historical enrollment trends, with the Science, Technology, Engineering, and Mathematics (STEM) strand as the majority cohort and the Sports strand as the minority.

Data Gathering Tools

Data were gathered using a structured, researcher-developed instrument administered via an encrypted digital platform. The survey was divided into thematic modules: academic/professional profiling, curricular alignment, and institutional satisfaction.

The instrument underwent rigorous content validation by a panel of three experts in pedagogy and psychometrics to ensure alignment with the research objectives. To establish internal consistency, a pilot test was conducted with 30 non-participating respondents. The instrument yielded a Cronbach's alpha coefficient of 0.87, signifying high reliability and stability in measuring the intended constructs.

Data Gathering Procedures

The survey was distributed through institutional communication channels and facilitated by class advisers to ensure that it reached the intended respondents. To maximize participation, continuous follow-ups were conducted over the course of one year. Invitations were disseminated through various platforms, including social media, email, and alumni networks, while efforts were also made to locate

graduates who were no longer actively connected with the institution. Data collection was terminated after repeated follow-up attempts yielded no further participant responses. The gathered data were then analyzed and interpreted.

Treatment of Data

A dual-analytic approach was employed; specifically, for the quantitative analysis, the descriptive statistics, including frequencies and percentages, were utilized to map academic and professional transitions. Weighted means and standard deviations were calculated to interpret the perceived significance of specialized coursework based on a localized four-point Likert scale. For the qualitative analysis, responses to open-ended queries were analyzed using inductive thematic analysis. This involved a systematic process of initial coding and theme categorization to identify recurring patterns in student experiences and institutional perceptions.

Ethical Considerations

Ethical protocols were strictly observed in accordance with the Data Privacy Act of 2012. All participants were required to complete a digital informed consent form detailing their rights to voluntary participation, anonymity, and withdrawal. All raw data were anonymized and stored in a secure, password-protected repository to serve as a longitudinal baseline for future institutional research.

RESULTS AND DISCUSSION

Profile of the academic and professional pathways of graduates in terms of curriculum track completion, tertiary program enrollment, and immediate labor market entry

The respondent distribution (N=195) reflects broader enrollment trends observed since the national implementation of specialized secondary curricula in 2016. Data indicates a significant concentration of students within the Science, Technology, Engineering, and Mathematics (STEM) strand, followed by Humanities and Social Sciences (HUMSS) and the Accountancy, Business, and Management (ABM) strand. Conversely, niche tracks such as Arts and Design and Sports were underrepresented.

The high density of STEM respondents underscores a shift in student preferences. While early assessments of the K–12 reform noted a reluctance toward STEM due to perceived academic difficulty (Dumapias & Tabuzo, 2018), current data suggests a reversal driven by increased student confidence and the perceived "competitive edge" provided by specialized coursework in Chemistry and Biology. This preparedness is particularly vital for those transitioning into allied medical sciences, echoing findings from Rafanan et al. (2020) on the high motivation of STEM graduates to persist in high-demand tertiary fields.

The HUMSS and ABM cohorts represent the primary alternatives to technical-vocational tracks. Qualitative analysis revealed that some students selected the HUMSS strand as a strategic "math-avoidance" measure; however, a subset of these graduates, who are termed "shifters" — eventually transitioned into health sciences. These alumni viewed their social science foundation as "complementary knowledge" rather than a curricular error. In contrast, the ABM cohort demonstrated robust career alignment, heavily influenced by familial professional legacies. The decision to pursue business-related strands was often a foundational step toward specialized degrees in accountancy or corporate law, reflecting a high degree of intentional career mapping influenced by socio-economic backgrounds.

The negligible representation in Sports and Arts tracks reflects a systemic institutional realignment. Data indicates that low enrollment density often leads to the phasing out of niche specializations to optimize institutional resources. This underscores the challenge private secondary institutions face in maintaining diverse curricular offerings amid fluctuating market demand.

This shows that graduates from the 2018 cohort were significantly more likely to participate in tracking efforts than recent graduates. This phenomenon can be attributed to temporal distance and professional maturity. By 2024, the 2018 graduates had largely completed tertiary education and entered the labor market, providing them with sufficient distance to evaluate their secondary education through a reflective lens. As Carter (2023) suggests, established alumni

often exhibit higher institutional loyalty and a greater inclination toward alumni tracking, as they recognize the long-term value of their foundational education.

Evaluation of the structural articulation and alignment between specialized secondary strands and subsequent post-secondary pursuits, including tertiary majors and vocational roles

Among those who pursued higher education, 7% (n=13) reported shifting programs during their tertiary stay. The drivers of this realignment are synthesized in Table 1.

Table 1. *Qualitative Categorization of Factors Influencing Post-Secondary Academic Realignment*

Theme	Descriptive Indicators	Frequency
Academic Performance	Failure to meet retention requirements or grade thresholds.	3
Curricular Difficulty	Perceived high complexity of specialized coursework.	2
External Influence	Familial pressure or legacy expectations.	2
Spontaneous Realignment	Subjective "change of heart" or shift in personal interest.	2
Systemic Constraints	Pandemic-related disruptions or lack of program availability in their locality.	2
Personal Variables	Health-related factors or scholarship mandates.	2

The findings reveal a predominant transition to higher education, with 97% (190 of 195 participants) of graduates pursuing tertiary degrees immediately upon completion. A marginal 3% opted for alternative pathways, including vocational training, entrepreneurship, or temporary leaves of absence.

This overwhelming preference for the academic track underscores a deeply ingrained cultural value where degree attainment is perceived as the primary vehicle for socio-economic mobility (Faller, 2019). This trajectory aligns with recent global surveys where college graduates view specialized education as a critical prerequisite for high-tier employment (Ramos et al., 2025; Ramos, 2024).

While the high tertiary enrollment rate suggests a successful vertical articulation of the academic track, a critical analysis of the marginal workforce entry rate reveals a systemic tension within the national educational framework. Although the K–12 reform was intentionally designed to produce labor-market-ready

graduates, the low workforce participation among respondents suggests that, within this institutional context, immediate employment is perceived as a survivalist strategy or a deliberate hiatus rather than a definitive exit from the curriculum. This trend indicates that the academic pathway remains the primary vehicle for professional advancement, effectively rendering the vocational promise of secondary education as a secondary safety net rather than a primary destination.

This finding aligns with the Philippine Business for Education (PBE, 2024) and Chi (2024) reports, which highlight a persistent degree ceiling in the Philippine labor market; despite possessing technical competencies in areas such as IT or Cookery, SHS graduates are frequently relegated to entry-level service roles. Consequently, the longitudinal data suggests that the K to 12 promise of immediate employability is often superseded by the reality that a college diploma remains the minimum prerequisite for professional advancement. This explains why even those who initially entered the workforce eventually realigned toward degree programs, treating their high school training as a socio-economic safety net rather than a definitive career destination (National University, 2024).

The tendency to shift majors is an internationally documented phenomenon often rooted in career uncertainty or a desire to maximize employability (Jaradat, 2017; Drysdale, 2015). Locally, this "quality of match" issue, in which students realign their paths upon discovering their actual academic aptitudes, is a primary driver of shifts (Wiswall & Zafar, 2014). Furthermore, external macro-pressures, such as the COVID-19 pandemic, introduced unique constraints including financial hardships and travel restrictions, forcing students to settle for more accessible or less expensive academic alternatives (Schenker, 2020; Dayagbil et al., 2021).

Assessment of the perceived significance of specialized secondary curricula in facilitating the acquisition of core competencies required for tertiary-level academic performance

To measure the perceived utility of the secondary curriculum, respondents evaluated the significance of

their specialized coursework in relation to their current academic or professional demands. The study yielded a grand mean of 3.03 (Significant), suggesting that the majority of graduates found their specialized lessons and activities to be foundational to their post-secondary success.

Table 2. *Scale for the Perceived Significance of Specialized Subjects*

Theme	Descriptive Indicators	Frequency
Academic Performance	Failure to meet retention requirements or grade thresholds.	3
Curricular Difficulty	Perceived high complexity of specialized coursework.	2
External Influence	Familial pressure or legacy expectations.	2
Spontaneous Realignment	Subjective "change of heart" or shift in personal interest.	2
Systemic Constraints	Pandemic-related disruptions or lack of program availability in their locality.	2
Personal Variables	Health-related factors or scholarship mandates.	2

The qualitative data reinforces the quantitative findings, with prior academic background emerging as a dominant theme. STEM graduates, in particular, identified specialized sciences (Physics, Chemistry, and Biology) as indispensable scaffolds for university-level health sciences. This aligns with the vision of the PBE, which posits that specialized secondary tracks should function as a bridge to tertiary readiness.

While a weighted mean of 3.03 confirms institutional efficacy, its position at the lower threshold of the "Significant" bracket warrants scholarly scrutiny. This result indicates a utility gap: approximately 25% of the curricular content is perceived as redundant or nonessential by the time students reach the tertiary level. This phenomenon may be explained by the theory of selective attention (Wickens, 2021): graduates exhibit a cognitive bias toward information with immediate, high-stakes application in their chosen careers, while disregarding subjects deemed peripheral.

This perception of redundancy aligns with recent reviews by the Department of Education (DepEd) and the Commission on Higher Education (CHED), which describe the previous basic education curriculum as "overcrowded" and plagued by subject repetition. To address this, the Strengthened Senior High School Program Shaping Paper (DepEd, 2025) directed the full

implementation of a revised curriculum starting in SY 2026–2027. The reform includes reducing core subjects from 15 to just five: Effective Communication, Life Skills, General Mathematics, General Science, and Philippine History and Society. The DepEd intends to allow for deeper mastery and eliminate overlaps with tertiary-level general education.

Furthermore, the full rollout marks the removal of strands in favor of flexible elective clusters. This shift allows learners to explore broader subject areas tailored to their specific career goals, effectively addressing the highlighted need for greater curricular articulation in the 3.03 mean. By streamlining core requirements, the new curriculum aims to ensure that high school depth aligns with university expectations, effectively bridging the gap between foundational secondary skills and the specialized demands of higher education.

The holistic institutional experience of graduates, focusing on the efficacy of pedagogical instruction and support services in fostering academic and professional readiness

The final objective examined the efficacy of the institutional environment, ranging from pedagogical instruction to physical infrastructure. The findings indicate a robust total weighted mean of 3.29 (Very Significant), with an overall institutional satisfaction rating of 3.44 (Very Satisfied).

Table 3. *Descriptive Statistics for Institutional Performance Indicators (N=195)*

Theme	Descriptive Indicators	Frequency
Academic Performance	Failure to meet retention requirements or grade thresholds.	3
Curricular Difficulty	Perceived high complexity of specialized coursework.	2
External Influence	Familial pressure or legacy expectations.	2
Spontaneous Realignment	Subjective "change of heart" or shift in personal interest.	2
Systemic Constraints	Pandemic-related disruptions or lack of program availability in their locality.	2
Personal Variables	Health-related factors or scholarship mandates.	2

The highest-rated indicator was Faculty/Teachers (3.41). Graduates identified "pedagogical competence" and "approachable instruction" as primary drivers of their academic preparedness. According to Bardach and

Klassen (2020), teacher effectiveness is a dynamic process of fostering adaptive learning environments. The graduates' retrospective recognition of their instructors confirms that the institution's human capital significantly mitigated the challenges posed by the rigorous curriculum.

A critical disparity exists between the "people-centric" indicators and the "physical" infrastructure. While instruction was rated highly, Facilities (3.07) and Student Services (3.13) received the lowest scores, with the highest standard deviations (.86 and .79). Qualitative feedback cited logistical challenges, including technological limitations in classrooms and laboratory accessibility issues.

The institution strategically addressed this infrastructure gap by commissioning a specialized facility in January 2024, designed to centralize laboratories and student services. This institutional responsiveness validates the alumni critiques, highlighting that while pedagogical quality can sustain an institution, the physical environment serves as a vital motivational tool that enhances the student's overall academic engagement. The data further revealed that student satisfaction is tied to symbolic validation. Critiques regarding graduation awards and the lack of ceremonial milestones during the pandemic highlight that institutional efficacy is measured not only by academic delivery but by the school's ability to provide a cohesive social and ceremonial identity.

CONCLUSION AND RECOMMENDATION

The transition from secondary education to the professional and academic world is a complex period of adaptation, influenced by curricular alignment, institutional efficacy, and socio-economic resilience. This study demonstrates that while the STEM strand remains the dominant preference and a strong predictor of tertiary persistence, the narrative of graduate success is often punctuated by academic realignment. The identified 25% curricular mismatch and 7% shifting rate are not merely indicators of student indecision but rather systemic reflections of the quality-of-match challenges inherent in a rigid, strand-based system.

Furthermore, the study highlights a Perception vs.

Proficiency gap. While graduates overwhelmingly value the foundational knowledge provided by their teachers—as evidenced by high faculty efficacy ratings—the "Significant" utility of the curriculum (3.03) suggests that academic articulation between high school and university still requires further optimization. Ultimately, the high institutional satisfaction (3.44) confirms that the "human capital" of an institution—its faculty and support systems—is the most critical factor in student retention. As the Philippine educational landscape shifts toward the MATATAG reforms, this research serves as a definitive baseline, proving that for a curriculum to be truly effective, it must move beyond rigid specializations and toward a more flexible, data-driven framework that empowers student agency.

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Declaration of Generative AI use in the Writing Process

During the preparation of this manuscript, the authors used generative AI technologies solely to enhance the text's linguistic clarity, structural organization, and scholarly tone. After using this service, the authors reviewed and edited the content as needed and take full responsibility for the accuracy, integrity, and originality of the final manuscript, including the verification of all data and citations. The authors confirm that the AI was not used to generate, analyze, or interpret original research data, nor did it influence the research conclusions or core findings. The final version of this paper was thoroughly vetted to ensure that all ideas and interpretations remain the authors' original intellectual property.

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