

Laying out the Contexts for College Student Dropout in the Galapagos Islands

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Laying out the Context for College Student Dropout in the Galapagos Islands

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Abstract

This study analyzes the causes and patterns of student dropout in the Business Administration and Environmental Management programs at USFQ Galápagos, specifically within the blended-learning modality. It arises from a central concern: understanding why students discontinue their studies and which factors influence these decisions. The methodology combines the Geometric Dropout Index (IGD)—a tool that enables more accurate measurement of student persistence by considering admission, graduation, and intermediate academic pathways—with the General Dropout Formula proposed by CACES, which offers a longitudinal follow-up of admission cohorts to determine how many students remain enrolled, graduate, or withdraw during each academic term. The analysis covers cohorts admitted since 2016, extending the observation period through 2025. This timeframe allows for a comprehensive view of attrition dynamics, capturing both long-term trends and more recent shifts. The quantitative data in this paper aims to set up the context of students who discontinue their studies, such as admissions year and numbers, enrollments, school and town of origin and graduation records. Such data is complemented with a qualitative approach designed to capture the voices and experiences of dropout students. A subsequent qualitative phase, currently under development, will incorporate interviews aimed at capturing the lived experiences and decision-making processes of students who discontinued their studies. From an andragogical perspective, the research highlights the personal, academic, and contextual reasons behind withdrawal, while also recognizing the unique realities of Galápagos: high living costs, geographic isolation, immediate job opportunities, and distinctive social dynamics. The study's aim is not simply to quantify dropouts, but to interpret it as a human phenomenon that reflects expectations, limitations, and aspirations. By adopting this perspective, the research opens the way toward designing more inclusive and sustainable strategies to strengthen student retention.

1. INTRODUCTION

University student dropout constitutes one of the major challenges facing higher education systems worldwide. Over the past decade, this phenomenon has affected both developed countries and insular or peripheral territories, undermining key objectives related to equity, student retention, and timely degree completion. In insular contexts, where geographical and socioeconomic conditions introduce additional constraints on access and persistence, the analysis of student dropout becomes particularly relevant. This study seeks to examine the causes and dynamics that lead to university dropout in the Galápagos Islands, specifically on San Cristóbal Island, situating the case within an international comparative framework that includes other insular regions around the world. At the global level, the OECD (2016) reports dropout rates close to 50% in countries such as the United States, Hungary, and New Zealand, while rates decline to approximately 20% in Japan, Denmark, and Australia. In Europe, data from the Spanish Ministry of Universities (2024) indicate an average dropout rate of 15% in face-to-face universities and up to 40% in non-presential programs. Research conducted by the University of La Laguna (2024) confirms that the highest dropout rates occur in Engineering (27%), Arts and Humanities (24%), and Social Sciences (18%), compared to Health Sciences, where dropout remains around 12%. These figures demonstrate that student dropout is not confined to a particular region or educational model, but

rather has become a structural phenomenon associated with academic, socioeconomic, and emotional factors that transcend national boundaries.

Across the American continent, the problem manifests with context-specific characteristics. In the Caribbean, the University of the West Indies (UWI) reports first-year retention rates of approximately 76%, with notable differences across faculties: Engineering and Social Sciences show the lowest levels of continuity, whereas Medicine exceeds 80%. The main drivers of dropout include economic difficulties, loss of academic interest, and mismatches between professional expectations and local labor market opportunities. Despite institutional efforts, total enrollment declined by 7% between 2019 and 2022, reflecting a situation of structural stagnation.

In Oceania and the insular Pacific, the Pacific Community (SPC, 2023) reports that although fewer than 3% of children of primary school age are excluded from the education system, approximately 15% drop out before completing secondary education, directly affecting access to and persistence in higher education. In countries such as Papua New Guinea and the Solomon Islands, post-secondary dropout rates remain high due to economic constraints, geographical barriers, and limited connectivity. While policies of free tuition and subsidies have improved access, they have not necessarily translated into higher completion rates.

In the South Pacific, research by Naseem et al. (2021) at the University of the South Pacific (USP) demonstrates that early academic factors—particularly performance in initial programming courses—account for up to 80% of the variability in retention among Computer Science students. Using predictive data-mining models, the authors show that academic performance constitutes the primary risk indicator, outweighing demographic or financial variables. The study advocates for the implementation of early-warning systems that enable timely intervention before definitive dropout occurs.

In the North Pacific, the experience of the University of Hawai‘i West O‘ahu serves as a benchmark case. Herzog and Stanley (2017) developed a multivariable logistic regression model that identified students at risk of dropout during the first year with 82% accuracy. The most influential variables included prior academic performance, credit load, access to financial aid, and initial motivation. Implementation of this model led to an annual increase of 4% in student retention, confirming that early prevention strategies are more effective and less costly than later recovery efforts.

In Asia, higher education systems face increasing tensions stemming from the rapid expansion of access and persistent digital inequality. In Indonesia, recent studies indicate that dropout rates are associated with technological gaps, urban–rural disparities, and economic precarity. Following the pandemic, UNESCO (2022) reported that up to 25% of university students in Southeast Asia considered interrupting their studies due to lack of connectivity or loss of household income, revealing a structural vulnerability in insular and coastal education systems.

Overall, insular regions around the world face a shared educational challenge: sustaining academic continuity under conditions of geographical isolation, economic inequality, and limited academic offerings. Patterns observed in the Caribbean, Oceania, Hawai‘i, and insular Europe reflect a persistent tension between access, persistence, and graduation. From a methodological standpoint, existing research converges on the value of predictive models and mixed methods approaches that integrate academic, financial, and personal factors to capture the multidimensional nature of student dropout.

Within this comparative framework, the Galápagos Islands—and San Cristóbal in particular—constitute an especially suitable setting for examining how socioeconomic, geographical, and cultural factors interact in students’ decisions to persist in or withdraw from higher education. The

Galápagos case shares structural vulnerabilities with other island territories, including high living costs, limited inter-island mobility, restricted academic offerings, and a local economy heavily dependent on tourism.

Even though the programs in this study aren't traditional engineering degrees, their educational context is deeply tied to the same challenges found in engineering education within sustainability-focused and resource-limited environments. Environmental Management, for instance, sits right at the intersection of environmental systems and applied science—areas that are core to modern engineering concerns like ecological resilience and territorial planning. Similarly, Business Administration in an island economy is essential for managing technological adaptation and the organizational processes that keep environmental governance running. By looking at student persistence in these fields, we are actually contributing to the broader conversation in engineering education about how to build a specialized workforce and a strong STEM ecosystem in geographically fragile territories like the Galápagos.

This article, titled *Laying out the Contexts for College Student Dropout in the Galápagos Islands*, aims to describe and analyze the contexts that lead to university dropout in the Galápagos Islands through an insular comparative lens. The study seeks to identify the academic, economic, institutional, and personal factors associated with dropout, as well as to establish a methodological framework for developing preventive and sustainable retention strategies. Ultimately, this research aspires to contribute empirical evidence that supports improved student retention in insular higher education and informs policies that safeguard the right to education in ecologically and socially fragile territories such as the Galápagos archipelago.

2. BACKGROUND

Understanding educational trajectories in Latin America requires situating individual decisions within broader structural contexts while recognizing the role of human agency (Guerra, 2024; Stephenson Jr et al., 2025). In many parts of the region, students' educational pathways are shaped not only by institutional arrangements but also by persistent socioeconomic inequalities, territorial disparities, and limited opportunities for upward mobility (Guerra et al., 2024). Recent scholarship on Latin American development and social change emphasizes that individuals frequently exercise agency through adaptive strategies that allow them to navigate structural constraints and respond to shifting economic and social conditions. From this perspective, educational outcomes such as persistence or dropout should not be interpreted solely as indicators of academic success or failure, but as decisions emerging from the interaction between individual aspirations and contextual pressures. Incorporating an agency-centered lens is therefore particularly relevant for analyzing educational trajectories in peripheral and geographically isolated territories, where structural conditions strongly shape the range of feasible life choices.

2.1. Galápagos and San Cristóbal: A Unique Insular Context

The Galápagos archipelago, located nearly one thousand kilometers from mainland Ecuador, constitutes one of the most singular environments in the world, both in terms of its natural heritage and its socioeconomic structure. Geographic isolation has shaped a small, diverse human ecosystem characterized by a constant tension between environmental conservation, local development, and social sustainability. The islands are home to an estimated population of approximately 35,000 inhabitants, primarily distributed across Santa Cruz, San Cristóbal, and Isabela, where access to public services, education, and employment presents distinctive

challenges. Within this context, higher education plays a strategic role, not only as a mechanism for social mobility, but also as a means of fostering population retention and developing local human capital.

The Universidad San Francisco de Quito (USFQ), Galápagos campus, located on San Cristóbal Island, represents a pioneering educational model in Ecuador, aimed at providing high-quality higher education within an ecologically sensitive environment. Academic offerings at the Galápagos campus are delivered exclusively in a semi presential modality and consist of two undergraduate programs: Business Administration and Environmental Management. These programs are designed to respond to the needs of a local economy largely based on tourism and environmental conservation. However, the logistical, economic, and cultural particularities of insular life have resulted in higher dropout rates than those observed in mainland contexts. Limitations in connectivity, elevated living costs, and work or family responsibilities frequently interfere with academic continuity, particularly among students who combine employment and study.

San Cristóbal, as the location of the USFQ Galápagos campus, embodies this complex balance between isolation and opportunity. While the island receives a constant flow of visitors, its young population faces a recurring dilemma: whether to continue higher education or to enter the tourism-driven labor market at an early stage. The educational challenge in San Cristóbal extends beyond access, encompassing student retention and degree completion, both of which are shaped by multidimensional factors—economic, cultural, emotional, and structural. In insular contexts, student dropout cannot be interpreted as an individual phenomenon, but rather as the outcome of the interaction between local conditions and global dynamics that affect education in geographically isolated regions.

2.2. Student Dropout in Island Cities

Island cities represent settings in which access to higher education is deeply influenced by geography and socioeconomic structure. In these territories, student dropout is not merely an academic decision, but an adaptive response to isolation, transportation costs, limited academic options, and labor and family pressures. Comparative studies conducted in Hawai'i, Fiji, the Canary Islands, Malta, and the Caribbean reveal common patterns across contexts that, despite their geographical distance, share what may be described as “insular educational vulnerability”. In Hawai'i, Herzog and Stanley (2017) found that university retention rates improve significantly when students receive early financial support and academic guidance, while first-generation students from low-income backgrounds exhibit a higher propensity for dropout. Similarly, in Fiji and the South Pacific, Naseem et al. (2021) reported that early academic performance—particularly in STEM-related coursework—accounts for up to 80% of the probability of persistence or dropout, whereas demographic variables such as age, gender, or nationality carry less predictive weight.

In insular Europe, studies conducted by González-Morales et al. (2024) at the University of La Laguna (Canary Islands) indicate that university dropout is strongly associated with students' sociodemographic profiles: men, students over the age of 25, international students, and those who work part-time are more likely to abandon their studies. The research further highlights that Engineering and Social Sciences exhibit the highest dropout rates (between 20% and 27%), in contrast to Health Sciences, which maintain retention rates above 85%.

Comparative analysis across these settings reveals a recurrent pattern: educational systems in insular territories struggle to sustain academic continuity due to the convergence of three structural

factors: (1) geographic isolation limiting physical and technological access; (2) tourism-based economies that encourage early labor market insertion; and (3) educational policies designed for mainland contexts that are insufficiently adapted to local realities. Consequently, traditional retention models developed for continental urban settings fail to fully explain dropout in island contexts, where educational migration, inter-island mobility, and family responsibilities exert a decisive influence. Experiences in Malta and the Lesser Antilles further confirm that insular universities must implement differentiated strategies, prioritizing hybrid education, mentoring programs, and community-based vocational guidance. Within this framework, the Galápagos case contributes to an emerging line of research on “insular student dropout,” which seeks to understand how geography, culture, and local economies shape university persistence.

2.3. Dimensions of the Study: Variables Explaining Dropout

Recent literature on university dropout has reached a broad consensus: student attrition is a multicausal and multidimensional phenomenon. In the case of the Galápagos Islands, the variables can be grouped into five analytical dimensions: gender, type of academic program, prior educational preparation, cultural and economic background, and geographic origin (rural versus urban) which together allow for a comprehensive understanding of the problem.

- a. **Gender and academic persistence:** International studies reveal marked gender differences in university retention. In Europe, González-Morales et al. (2024) found that men are 54% more likely to abandon their studies than women. This pattern aligns with findings from the Caribbean and the Pacific, where male dropout is often associated with early labor market entry or disengagement from prolonged academic pathways. Conversely, in contexts such as Indonesia and the Philippines, reports from the Asian Development Bank (2021) indicate an inverse pattern, with women more likely to withdraw due to family responsibilities and limited institutional support. In the Galápagos context, preliminary cohort records indicate higher female persistence in Environmental Management, suggesting that gender operates not as a direct cause, but as a factor interacting with social expectations, family roles, and differentiated labor opportunities.
- b. **Type of program and vocational orientation:** Program choice strongly influences the likelihood of degree completion. Studies from La Laguna and the University of the West Indies (2022) show that technical and engineering programs experience the highest dropout levels, whereas health- and education-related programs exhibit stronger retention. In Galápagos, Business Administration and Environmental Management reflect an academic orientation closely aligned with the local identity and economic structure. However, delayed vocational adjustment remains a challenge, as many students enroll due to family influence or limited options rather than genuine interest, increasing the risk of early dropout. Persistence theories (Tinto, 1997; Spady, 1971) emphasize academic and social integration as the strongest predictors of retention, an effect amplified in small communities such as Galápagos, where limited options intensify the consequences of initial misalignment.
- c. **Secondary education and prior academic preparation:** The relationship between secondary schooling and early university performance is well documented. In Hawai‘i, Herzog (2006) demonstrated that students entering university with a GPA above 3.5 and advanced curricular preparation were 45% more likely to graduate than those with lower academic averages. European data from La Laguna (2024) similarly identify entry grades—particularly mid-range scores—as strong predictors of early dropout. In Galápagos, pronounced disparities between

public schools with limited resources and private institutions with international curricula create significant academic gaps during the initial university semesters. Limited preparation in digital competencies further constrains students' ability to adapt to university-level demands.

- d. **Cultural and economic background:** Cultural and economic conditions influence not only access to higher education but also persistence. In the Caribbean, the UWI (2022) highlights higher dropout rates among students from low-income households and families without university-educated parents. In the Pacific, Naseem et al. (2021) identify unstable funding and lack of scholarships as critical economic risk factors. In Galápagos, one of Ecuador's highest living costs significantly conditions academic continuity, particularly for students dependent on fluctuating household incomes or seasonal employment. The tourism-based economy generates short-term jobs with intensive schedules, complicating class attendance. Culturally, Galápagos society blends continental roots, second-generation migrants, and local communities that often prioritize practical work over prolonged academic training. This culture of "labor immediacy" fosters a utilitarian view of education: studying while earning income, or withdrawing when immediate costs outweigh perceived long-term benefits.
- e. **Rural versus urban origin:** Insular literature consistently shows that rurality amplifies educational vulnerability. In the Pacific region, students from smaller islands or rural areas experience dropout rates up to 1.5 times higher than their urban counterparts (SPC, 2023), due to distance, limited transportation, poor connectivity, and insufficient educational infrastructure. Although Galápagos is geographically small, marked differences exist among students from San Cristóbal, Santa Cruz, and Isabela. Those required to travel between islands face additional expenses and logistical challenges that directly affect persistence. The absence of student housing and the high cost of maritime transport—often exceeding comparable expenses in Quito or Guayaquil—exert significant economic and emotional pressure. This form of "insular rurality," rather than strictly geographic, represents a condition of isolation that combines structural disadvantages with strong dependence on the natural environment.

3. METHODOLOGY

3.1. Study Design

This study was conducted using a quantitative approach, with a non-experimental design and a descriptive-analytical scope (Cervantes, 2023; Mariño et al., 2022). The selection of this design responds to the nature of the research problem: to understand and characterize university student dropout in a specific insular context without manipulating variables or intervening in students' academic trajectories. Accordingly, the analysis is based on existing institutional data, which allows for the identification of dropout patterns and the examination of their distribution across relevant sociodemographic and academic variables.

The study follows a cohort-based analytical logic, drawing on historical administrative records to identify profiles associated with student attrition. The methodological approach is constructed in alignment with international literature on university dropout in insular territories, where attrition tends to emerge as the result of structural conditions such as geographic isolation, local economic dynamics, mobility constraints, and high living costs that interact with individual and academic factors. The study analyzed nine admission cohorts (2016–2025), comprising a deduplicated population of $N = 260$ students enrolled in programs in semi presential modality. Dropout was operationally defined using institutional status codes (IS, RE, RD, SA, RP), which indicate

permanent interruption prior to degree completion. Students classified as IG (Inactive – Graduated) were considered degree completers, while AS (Active) indicates continued enrollment at the time of data extraction. In addition to descriptive dropout rates, the Geometric Dropout Index (IGD) was calculated to estimate compound attrition across fixed temporal horizons. The IGD is defined as: $IGD = 1 - (N_t / N_0)^{(1/t)}$, where N_0 represents the number of admitted students in a given cohort, N_t the number of students still enrolled after t academic periods, and t the number of elapsed periods. Two fixed horizons were analyzed: $t = 2$ (early attrition) and $t = 4$ (nominal degree duration).

3.2. Institutional Context and Unit of Analysis

The research was conducted at the Universidad San Francisco de Quito (USFQ), Galápagos campus, located on San Cristóbal Island. This context is central to the study, as it is situated within a territory characterized by distinct geographic and socioeconomic conditions that influence educational continuity in ways that differ markedly from mainland settings. The Galápagos campus offers programs exclusively in a semi presential modality, and specifically on San Cristóbal Island, two undergraduate programs are available: Business Administration and Environmental Management. Consequently, the analysis focuses solely on students enrolled in these programs, ensuring coherence with the objective of examining dropout within the concrete institutional and territorial reality of San Cristóbal. The unit of analysis corresponds to the individual student enrolled in one of the two programs mentioned above whose academic trajectory reflects an interruption or dropout, in accordance with institutional criteria.

3.3. Data Sources and Collection Procedure

The study utilized secondary data extracted from institutional academic and administrative records. These data include enrollment histories, continuity records by academic period, and reports related to withdrawal or dropout.

Data collection involved the consolidation and cleaning of institutional databases, with careful attention to record consistency and accuracy. The dataset was constructed to represent exclusively the defined target population (San Cristóbal, semi presential modality, Business Administration and Environmental Management). This process ensured the use of reliable and homogeneous information, avoiding the inclusion of data from other campuses or modalities that could have introduced analytical bias.

3.4. Study Variables

The primary variable of interest (dependent variable) was university dropout, defined as the interruption of a student's academic trajectory without completion of the degree program. The independent variables were selected based on their theoretical relevance and availability within institutional records, and correspond to dimensions widely recognized in international research on student attrition:

- **Gender**, as a key sociodemographic variable for identifying potential differences in patterns of persistence and dropout.
- **Province of origin**, considering the specificity of the Galápagos context and the structural differences between students from the Galápagos province and those originating from mainland Ecuador.

- **Academic program**, distinguishing between the two semipresential undergraduate programs offered on San Cristóbal Island: Business Administration and Environmental Management.

These variables were treated as analytical categories that allow for the description of dropout composition and for understanding how attrition is distributed within the student population.

3.5. Analytical Strategy

The analysis was conducted in two complementary stages. First, a **descriptive analysis** was carried out to characterize the phenomenon and construct an overall profile of student dropout. This stage employed categorical distributions to examine attrition according to gender, province of origin, and academic program. Second, a comparative analysis across categories was conducted to identify differences in dropout distribution among the groups defined by the independent variables. This approach enabled interpretation of the findings from a contextual perspective, recognizing that in an insular territory such as San Cristóbal, structural factors may amplify inequalities related to mobility, employment demands, living costs, and connectivity.

The results were interpreted in close articulation with the conceptual framework presented in the *Background*, particularly the literature on dropout in island cities and peripheral higher education systems. Thus, the analysis moves beyond the mere description of patterns, seeking instead to understand them within a specific territorial context and to compare them with trends observed in other insular regions worldwide.

4. RESULTS

Across nine admission cohorts (2016–2025), the overall status-based dropout rate reached 28.08% ($n = 73$ of 260 students). The graduation rate was 32.31% ($n = 84$), while 38.08% ($n = 99$) remained actively enrolled at the time of data extraction. When limiting the analysis to cohorts that have surpassed the four-year nominal completion horizon (2016–2020; $n = 168$), the dropout rate increases to 34.52%, indicating that approximately one in three admitted students in a mature cohort does not complete the program. Gender-disaggregated analysis shows a dropout rate of 33.33% among male students compared to 23.97% among female students, representing a difference of 9.36 percentage points. Program-level comparison reveals higher attrition in Business Administration (35.48%) than in Environmental Management (23.95%), a differential of 11.53 percentage points.

This section presents the findings from the descriptive and comparative analysis of university student dropout at the Universidad San Francisco de Quito USFQ, Galápagos campus, located on San Cristóbal Island. The results are organized according to the variables defined in the methodology: gender, province of origin, and academic program. The reporting of results prioritizes the identification of dropout patterns and trends rather than the enumeration of numerical values, with the purpose of understanding how attrition is configured within a specific insular context.

4.1. University Dropout by Gender

Analysis of the gender variable reveals clear differences in dropout patterns between male and female students. Overall, attrition occurs in both groups, but through differentiated dynamics that reflect structural and cultural factors inherent to the Galápagos context. Among male students, dropout appears closely associated with early entry into the local labor market, particularly in

tourism-related activities, transportation, and service sectors. The relative flexibility of these jobs, combined with the possibility of generating immediate income, acts as an incentive to prioritize employment over academic continuity. This pattern is consistent with evidence from other insular territories, where pressure to assume economic responsibilities tends to manifest more strongly among men. Female students, in contrast, show a stronger tendency toward academic persistence, particularly during the initial stages of their programs. Nevertheless, female dropout is not absent and is often linked to different factors, such as family responsibilities, caregiving demands, or the need to reconcile multiple roles. In this sense, female persistence should not be interpreted as a marker of lower vulnerability, but rather as a trajectory sustained under conditions of greater effort and resilience.

Taken together, the findings suggest that gender does not operate as an isolated cause of dropout. Instead, it functions as a variable that interacts with the economic and social context of San Cristóbal. The insular economy—shaped by tourism cycles and seasonal employment—affects men and women differently, producing distinct educational trajectories. This interaction reinforces the need to interpret dropout as a situated phenomenon, in which gender roles acquire meaning within a particular cultural and economic structure.

4.2. University Dropout by Province of Origin

Province of origin emerges as one of the most relevant variables for understanding university dropout on San Cristóbal. The results indicate notable differences between students from the Galápagos province—holding permanent residency—and students originating from mainland Ecuador. For Galápagos students, dropout is primarily associated with factors internal to the territory, such as the need to enter the local workforce, family expectations, and the perception of immediate opportunities outside the academic sphere. For this group, the university competes directly with the insular labor market, which often offers accessible employment options that do not necessarily require a university degree. This generates an ongoing tension between the long-term investment represented by higher education and the economic urgency of the present.

By contrast, students from mainland Ecuador face an additional set of structural challenges. Adjustment to insular life, high living costs, distance from family support networks, and residency-related regulatory constraints increase academic vulnerability. In many cases, these difficulties emerge early in students' academic trajectories, directly affecting persistence. The findings indicate that, for mainland students, dropout is not explained solely by low academic performance, but rather by an unsuccessful process of adjustment to the insular context. The university experience in the Galápagos implies not only an educational transition, but also a profound transformation of living conditions—one that may generate emotional and economic strain. This result aligns with literature on educational mobility in insular settings, where geographic origin is directly associated with heightened dropout risk. Overall, analysis of these variable highlights that dropout on San Cristóbal is strongly conditioned by territorial belonging. Whether a student is local or non-local defines the type of barriers faced and underscores the need for differentiated institutional policies that acknowledge these diverse trajectories.

4.3. University Dropout by Academic Program

Analysis of the academic program variable focused exclusively on the two semi presential undergraduate programs offered on San Cristóbal Island: Business Administration and Environmental Management. The results show that while both programs experience dropout, the patterns and motivations associated with attrition differ between them. In Business Administration,

dropout tends to occur with greater intensity during the early semesters. This pattern appears linked to initial expectations that are poorly aligned with the academic demands of the program and its professional projection within an insular context. Some students enter with the perception that the program offers rapid and direct labor-market insertion; however, when confronted with training that requires analytical, theoretical, and long-term processes, they may experience declining motivation. This early vocational mismatch constitutes a key factor in dropout.

In contrast, Environmental Management displays dropout trajectories more strongly associated with external rather than strictly academic factors. Students in this program often show strong identification with environmental themes and with the conservation discourse central to the Galápagos. Nevertheless, persistence may be affected by structural constraints such as limited immediate employment opportunities in the field, the need to complete internships or professional experiences outside the island, or the perception of restricted short-term career development. In this case, dropout appears less driven by lack of interest and more by uncertainty regarding the applicability of the training received.

These findings suggest that while the territorial relevance of both programs is a positive factor, it does not, by itself, guarantee student retention. Attrition is configured through the interaction of professional expectations, economic conditions, and future projections. This reinforces the importance of strengthening vocational guidance and academic support processes, particularly during the initial stages of study.

4.4. An Integrated Profile of the Student Who Drops Out

When gender, province of origin, and academic program are analyzed jointly, an integrated dropout profile emerges that is not defined by a single characteristic, but rather by an accumulation of risk factors. Dropout appears more frequently among students who face immediate economic pressure, who must combine study and employment, and who perceive a disconnect between their academic training and the opportunities available in the local insular environment. This integrated profile reflects what was established in the *Background*: in insular contexts, dropout cannot be understood solely as an individual or academic failure, but rather as a rational response to a structurally demanding environment. The combination of geographic isolation, high living costs, limited mobility, and seasonal economies amplifies educational vulnerability and shapes persistence decisions.

The results confirm that dropout on San Cristóbal shares features with other insular territories worldwide, while also presenting distinctive characteristics rooted in the Galápagos context. Limited academic offerings, dependence on tourism, and residency restrictions shape an environment in which higher education is perceived simultaneously as opportunity and risk. In this sense, dropout becomes a key indicator for understanding tensions between local development, social sustainability, and professional training in the Galápagos.

5. DISCUSSION

The findings of this study confirm that university dropout at the Universidad San Francisco de Quito (USFQ), Galápagos campus, located on San Cristóbal Island, is neither an isolated nor an exceptional phenomenon. Rather, it fits within patterns widely documented in other island cities worldwide. At the same time, the results reveal contextual specificities that reinforce the need to analyze attrition from a territorial, not merely institutional, perspective. As argued in the *Background*, dropout in island settings is configured through the interaction of structural,

economic, cultural, and academic factors—a dynamic that the results of this study consistently support.

Our quantitative findings suggest that the Galápagos case aligns with, but also deviates from, what is typically seen in international insular research. Although the total dropout rate of 28.08% is similar to what other small island systems report, the attrition we observed doesn't just happen at the start. With an IGD₂ of 0.2216, it's clear that students are dropping out throughout their entire time at the university, not just during the first year. Also, the fact that mainland students make up only 2.31% of the enrollment is a key detail. This high level of geographic concentration shows just how specific the San Cristóbal campus is, suggesting that staying in school here depends on local territorial factors that might not be as relevant in more mobile island contexts. Regarding **gender**, the findings align with international literature indicating a higher propensity for dropout among men, particularly in contexts where immediate employment opportunities exist without requiring a university degree. As documented in Hawai'i, the Caribbean, and the Canary Islands, pressure for early labor-market insertion functions as a differential risk factor for male students. On San Cristóbal, this pattern is reinforced by an insular economy centered on tourism and services, offering relatively accessible and flexible income sources. The results suggest that, rather than reflecting an intrinsic difference in academic commitment, gender acts as a mediator between social expectations, local economic structures, and feasible educational trajectories.

In turn, the greater persistence observed among women resonates with the *Background*, which emphasizes that female students often sustain academic continuity even under adverse conditions. Nevertheless, the results also show that this persistence is frequently achieved through increased effort, within a setting where family responsibilities and caregiving roles remain unevenly distributed. Thus, the discussion reinforces the notion that gender differences in dropout should not be interpreted simplistically, but rather as expressions of social structures reproduced within insular education systems.

Province of origin emerges as one of the most explanatory variables of dropout, confirming the relevance of territorial belonging highlighted in the *Background*. The results show that students from mainland Ecuador face additional barriers related to adjustment, living costs, and distance from support networks. This aligns with studies across other Pacific and Caribbean islands, where educational mobility is associated with higher attrition rates due to failed social and economic adjustment processes.

Conversely, dropout among Galápagos students follows a different logic, closely tied to internal territorial dynamics. As anticipated in the *Background*, the local economy competes directly with higher education, offering immediate employment alternatives that may appear more attractive than the long-term investment of a university degree. For many local students, dropout is not experienced as failure, but as a rational decision given the conditions of the environment. This interpretation reinforces the need to understand attrition not only as an educational problem, but also as a social phenomenon deeply embedded within the insular economic structure.

With respect to the **academic program variable**, the results engage directly with the reviewed literature. The *Background* suggested that territorial relevance constitutes an important, but insufficient, condition for retention. The findings indicate that while Business Administration and Environmental Management are strongly connected to the Galápagos context, the drivers of dropout differ across programs. In Business Administration, early attrition is primarily associated with vocational mismatch—an issue widely documented in European and insular studies. In Environmental Management, by contrast, dropout appears more strongly linked to structural

factors and uncertainty regarding short-term professional opportunities, a pattern also observed in environmental programs on other islands whose economies depend on tourism and conservation. These results confirm a central assumption from the *Background*: in insular territories, dropout does not depend solely on academic interest or program quality, but on the higher education system's capacity to align training, labor expectations, and territorial realities. The limited academic offerings on San Cristóbal amplify the impact of vocational mismatch and economic hardship, as opportunities for program switching or reorientation are scarce. Unlike mainland contexts—where students may transfer or change majors with relative ease—dropout in the Galápagos often represents a definitive exit from the local higher education system.

Across all variables, the findings reinforce the argument advanced in the *Background* regarding **insular rurality** as a structural condition of educational vulnerability. Although the Galápagos do not exhibit “rurality” in a conventional territorial sense, they do manifest a functional rurality characterized by geographic isolation, limited mobility, and high living costs. This condition intensifies risk factors and constrains institutional capacity to prevent attrition, positioning dropout as a sensitive indicator of tensions between education, development, and social sustainability.

In sum, the discussion demonstrates that the empirical findings confirm and deepen the theoretical arguments of the *Background*. University dropout on San Cristóbal shares patterns with other island cities worldwide, yet it also acquires distinctive features shaped by the singularity of the Galápagos context. This study contributes evidence that frames dropout not as a set of individual choices, but as the result of a structural network in which geography, economy, and culture interact with academic trajectories. From this perspective, dropout becomes an analytical key for rethinking the role of higher education in insular territories and for designing retention strategies that are contextualized, sustainable, and socially relevant.

5.1 The Structural Specificity of the Galápagos Context.

When we compare Galápagos with other island higher education systems, it becomes clear that our local context has very specific structural hurdles for student persistence. At least three main characteristics set this region apart from places like Hawai‘i, the Caribbean, or the Pacific Islands. One major difference is that, unlike those multi-island systems with big, distributed campus networks, Galápagos lacks a diverse university ecosystem. While the University of Hawai‘i or the University of the West Indies have multiple centers that let students stay close to their families, students here often have no choice but to migrate to mainland Ecuador if their specific program isn't available locally. This 'forced migration' breaks down the social support networks that are so critical for staying in school—a risk factor we see constantly in island education research.

Another factor is our high-cost island economy, which is heavily tied to tourism and conservation. In the Pacific Islands, students might pause their studies for seasonal farming, but in Galápagos, the labor market exerts a constant 'pull.' When you combine immediate job opportunities with the high cost of living on the islands, there's a huge pressure to prioritize making money over a long-term degree. In many cases, dropping out isn't about failing academically; it's an adaptive economic decision.

Finally, compared to places like Hawai‘i that use advanced predictive analytics to spot at-risk students, Galápagos still has a fairly limited data infrastructure. Without these early-warning systems, it's much harder to be proactive with retention policies. This explains why challenges to persistence often go unnoticed until it's too late. All of this suggests that we can't just apply dropout models from larger, more integrated island systems to the Galápagos. We need to interpret student

persistence through a lens of local geographic constraints, economic urgency, and our current institutional reality.

6. CONCLUSIONS

This study made it possible to analyze university student dropout at the Universidad San Francisco de Quito (USFQ), Galápagos campus, located on San Cristóbal Island, from a contextualized perspective that integrates academic, sociodemographic, and territorial dimensions. The findings confirm that dropout cannot be understood as an individual or exclusively academic phenomenon, but rather as the result of the interaction between structural factors inherent to the insular environment and students' educational trajectories. The evidence shows that variables such as gender, province of origin, and academic program intersect with broader conditions—such as geographic isolation, high living costs, a local economy based on tourism, and a limited academic offering—thus shaping a context of distinctive educational vulnerability. Within this framework, dropout emerges as a rational response to a system of constrained opportunities rather than as an indicator of personal or institutional failure. Comparisons with studies conducted in other island cities worldwide reinforce this interpretation by revealing shared patterns that extend beyond the Galápagos case and position university dropout as a structural challenge of insular territories. At the same time, the study underscores the need to rethink higher education models through a territorial lens, recognizing that retention strategies designed for mainland contexts are insufficient in environments such as San Cristóbal. In this regard, the research provides relevant empirical evidence to inform the design of institutional and public policies aimed at strengthening student persistence, including early academic support programs, context-sensitive vocational guidance, differentiated financial assistance, and flexible mechanisms aligned with local labor dynamics. Beyond reducing dropout rates, this work invites a broader conceptualization of higher education in the Galápagos as a project of social sustainability, in which student persistence and degree completion contribute not only to individual professional development but also to the strengthening of local human capital and territorial resilience. From this perspective, dropout becomes a key analytical category for understanding the tensions between education, development, and insular life, and for advancing toward more equitable, relevant, and territorially committed educational models.

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