

# Specific Postgraduate Programs and the Transfer of the Panama Canal

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### Abstract

This research examines the relevance and context of postgraduate programs offered by the University of Panama, specifically focusing on the “Master’s Program in Maritime Industries with an Emphasis on Port Management, Multimodal Transportation, and Logistics” offered by the Institute of the Canal and International Studies. The study employs Guillermo Briones’ specific reference model and adapts the “Evaluation Guide for Postgraduate Programs” from the Ibero-American University Postgraduate Association (AUIP). The analysis centers on three dimensions: Academic, linkage, and geographical-political. The results reveal a robust academic relationship between undergraduate and postgraduate programs, with high approval rates from coordinators (66.7%) and students (60%). Regarding linkage, the program demonstrates significant engagement with the business-productive sector, as 40% of respondents indicated. It also exhibits a favorable consideration of international trade rules, with 100% of coordinators affirming that program content incorporates international trade treaties. Furthermore, program graduates reported working in fields related to their education, with more definitive and positive responses than coordinators. This suggests a potential lack of data and ongoing connection between graduates and the institution that provided the program.

### Introduction

The transfer of the Panama Canal to Panamanian hands that occurred on December 31, 1999, was understood, on one hand, as the culmination of a period of colonial enclave and, on the other hand, as an opportunity to bring about profound changes in the quality of life for Panamanians. As Valdés [1] points out, “The main value for the country lies in the fact that it has served as an instrument to exploit our primary natural resource, which is the geographical location.” In general terms, this idea of better days would not have been possible without the determining factors of social changes toward the consolidation of common welfare. One key factor is education; plans, strategies, and educational policies need to be oriented toward high-level training and education. It’s worth remembering that the world was not yet convinced that Panamanians could manage the Canal at that time. This study aims to assess the relevance of specific graduate programs offered by the University of Panama, designed to address the needs arising from the transfer of the Panama Canal. Romero [2] clearly expresses that “The service provided by the canal to maritime transportation is linked to various parallel economic activities,” which demands the expansion of academic offerings in higher education.

An inherent aspect of social psychology and behavior, especially among the middle class with access to specialized studies, that has endured in Panama is related to migrations. Historically, the country has been a transit point, born amid significant projects such as the construction of the canal, the interoceanic railroad, and human transit through the Isthmus following the discovery of the California gold mines. This led to a collective mindset among individuals who arrived to work on these projects—a mindset characterized by detachment from the isthmus land, as they considered themselves migrants. Subsequent generations gradually shifted this perception towards a sense of national belonging, which reached its peak of identity and nationalism in the early 1960s with the events of January 9, 1964. Today, a noticeable social behavior reflects a strong culture that shares values and aspirations for achieving genuine economic independence through education in general and specialized programs in particular. It is essential to remember that the country’s most valuable asset is the interoceanic canal. To comprehensively evaluate a postgraduate program, it is necessary to consider the involved variables. The Ibero-American University Postgraduate Association (AUIP) (2016) has defined eight variables for evaluating postgraduate programs: 1) students, 2) faculty, 3) curriculum, 4) research, 5) management, 6) environment and relevance, 7) graduates and impact, 8) assessment. Attempting to cover all the factors involved is a comprehensive task, which is not the purpose of this study. Instead, this study focuses on evaluating factor 6, namely environment and relevance.

### The AUIP (2016) describes environment and relevance as follows:

The way in which the postgraduate program is connected to its environment and impacts academic quality. This includes elements such as the institution’s mission and objectives, the scope of influence of the program, and the effective relationships the program maintains with other academic, social, scientific, productive, and service entities at regional, national, and international levels. It is also crucial how the postgraduate program responds to the social demands of the environment in which it is situated. (p.25). According to Castellanos (2017), the relevance of the sublevel of postgraduate education is defined as “The relevance category applied to Higher Education has primarily referred to the degree of correspondence between the nature and offerings of universities and the needs of their environment.” (p.143)



**UNESCO (1998) defines relevance in higher education as:**

“Pertinence in higher education is primarily considered in terms of its content and place in society, its functions in relation to teaching, research, and related services, its connections with the world of work in a broad sense, with the State and public financing, and its interactions with other levels and forms of education.” (p.19)

**Erick Miñan Ubillús (2014), concerning the relevance of postgraduate programs, states:**

A master’s program is relevant if its objectives align with the training needs of students if it aligns with the university’s interests, and if it solves problems in the socio-economic context, contributing to the development of its local and national community (p.1). Regarding the definition of postgraduate programs, or graduate programs, Castro [3] distinguishes a clear difference within postgraduate education: “The offering aimed at training producers of knowledge is distinct from that aimed at updating the knowledge of those who organize other production processes – whether goods or services – within and outside the university” (p.140). Indeed, Panamanian universities, with little tradition in offering education at this sublevel, primarily focus on knowledge-updating programs, neglecting the value of research-oriented structures typical of postgraduate programs.

**Menacho Luis P. (2008) [4], regarding postgraduate education, explains:**

“What we now know as postgraduate or graduate education, advanced studies, or fourth-level studies, emerged in the 19<sup>th</sup> century in Germany, Russia, and the United States... But the ultimate experience in the process of the emergence, definition, and consolidation of postgraduate education is undoubtedly the creation of Graduate Schools in the United States, beginning in 1860 at Yale University” (p.18). According to AUIP (2016), one of the fundamental purposes of postgraduate programs is “The training of working professionals who return to universities to update themselves or address new areas of knowledge demanded by the continuous evolution and flexibility in work, in the economic and social context” (p.19).

The first Panamanians to graduate abroad from specific postgraduate programs were achieved between the 1970’s and 1980’s. In this regard, Barleta [5] asserts, “The Inter-American Development Agency (AID) used to grant four to five annual scholarships for us to send young professionals, mainly to American universities but also to countries like Chile, to obtain master’s and doctorate degrees, especially in economics and finance.” (p.142). As for the first postgraduate programs at the University of Panama, Morales [6] states, “The first postgraduate-level programs at the University of Panama date back to the specialization courses created in the late 1960s and early 1970’s in the areas of administration, supervision, educational planning, and nursing...” (p.1). The creation of the first postgraduate program related to the transfer of the Panama Canal was supported by Agreement No. 22-98 of 1998, issued by the Institute of the Canal and International Studies. It was named “Studies on the Interoceanic Region and the Panama Canal.” After two promotions, this master’s program was modified to make it more competitive and was renamed “Panama Canal and International Maritime Industry.” Currently, the Institute offers a master’s program in International Maritime Industry, emphasizing Multimodal Transportation and Logistics.

As of January 2017, five academic units at the University of Panama offered specific postgraduate programs in response to the requirements posed by the transfer of the Panama Canal.

**Table n°1 :** Specific postgraduate programs, by academic unit and approval date at UP.

Academic Unit	Postgraduate Program Title	Approval Date
Faculty of Economics	Master’s in Maritime Transportation Economics	N°04-99 de 1999
Faculty of Business Administration and Accounting	Business Administration with Emphasis in:	N° 7-93 del 24/03/93
	·International Commerce	
	·Maritime Management	
Faculty of Public Administration	Master’s in Public Management with Emphasis in Customs Management	N°55-95 de 1995
Faculty of Law and Political Sciences	Master’s in Maritime Sector Law with Emphasis in:	N°21-91 de 1991
	·Ports and Canals	
	·Companies and Shipping	
Canal Institute and International Studies	Master’s in International Maritime Industry with Emphasis in:	C.F.T.C.N.N°10-12 de 25/09/12
	·Port Administration	
	·Multimodal Transportation and Logistics	

**Source:** Vice Chancellor’s Office for research and postgraduate studies - University of Panama (UP).

One of the clearest proposals regarding the need to train human resources in specific areas related to the transfer of the Panama Canal appeared in the scholarship call by the National Secretariat for Science and Technology (SENACYT) in 2013. This call, posted on their portal, listed the careers and universities presented by the Panama Canal Authority (ACP). The purpose of this call was to target Panamanian professionals interested in acquiring master’s degrees abroad to strengthen and enhance their performance in the workplace. The thematic areas included the following: Geotechnics, Geological Engineering, Seismology, Concrete Technology, Failure and Materials Analysis, Bridge Engineering, Transportation and Road Engineering, Acoustic Engineering, Lighting, Metallurgy, and Corrosion Control, Geography, Geodesy, among others. As a result of the above, the following question is posed: Are the specific postgraduate programs offered by the University of Panama relevant to the requirements arising from the transfer of the Panama Canal since 1999?

**Objectives**

**General objective**

To determine whether the specific Postgraduate Programs offered by the Institute of the Canal and International Studies at the University of Panama are relevant to the requirements arising from the transfer of the Panama Canal.

**Specific objectives**

- a) Describe the academic dimension of the Master’s program in Maritime Industries with an emphasis on Multimodal Transportation and Logistics offered by the Institute of the Canal.
- b) Identify the connection of the Master’s program in Maritime Industries with an Emphasis on Multimodal Transportation and Logistics with the national context.
- c) Analyze the geographic-political dimension of the specific postgraduate program offered by the Institute of the Canal in the context of its environment and relevance.

**Description of the Model**

This evaluative research was based on Guillermo Briones’ model of specific references as shown in Figure 1.

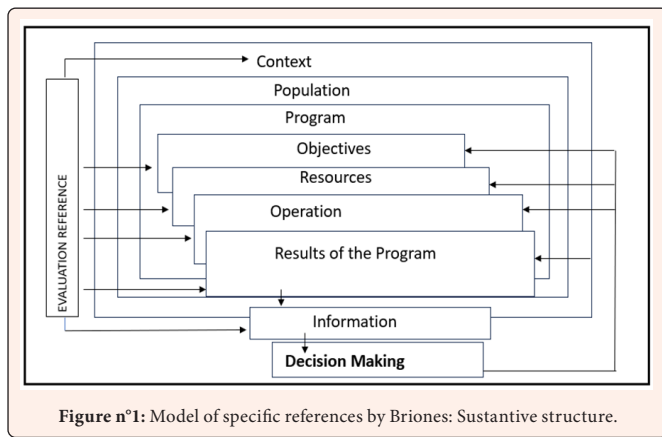


Figure n°1: Model of specific references by Briones: Sustantive structure.

Source: Adapted from Briones, G. Evaluación Educacional. Vol 4, Bogotá, 1985.

This is how the main components of the model are described:

- A. **Context:** After the historic moment of the transfer of the Canal, there have been a series of social, economic, cultural, and educational transformations, both in official and private universities’ graduate programs.
- B. **Population:** Refers to graduates and current students of specific programs at Panamanian universities. For this study, the unit of analysis is the University of Panama, specifically the Institute of the Canal and International Studies.
- C. **Program:** Belongs to specific postgraduate programs offered by Panamanian universities. For this study, the “Master’s Program in Maritime Industries with an Emphasis on Port Management, Multimodal Transportation, and Logistics” from the mentioned Institute has been chosen.

Table N°2: Factor to evaluate in the postgraduate program.

Factor	Dimension	Indicator
a.Environment and Relevance	3	10

**Environment and Relevance**

This encompasses three dimensions:

- A. **Academic:** Regarding the alignment of the undergraduate program with the postgraduate program.
- B. **Geographical-Political:** Relating to international development plans.
- C. **Linkage with National Development Plans:** Connection with national development plans.

Tabla N°3: Variables, Indicators and Source of Information.

Factors	Dimension	Indicators	Source of Verification
Environment and Relevance	Academic	The undergraduate program I studied is related to the specific field of knowledge of the postgraduate program	Survey of students, graduates, and postgraduate program coordinators
	Geographical-political	The program uses as a reference the development plans at the global (international) level	
		Trade treaties	
		Opening of new markets	
	Connections	SENACYT (National Secretariat for Science, Technology, and Innovation)	
		IFARHU	
		Del PEG (Plan estratégico de gobierno)	
		ACP (Autoridad del Canal de Panamá)	
		The program maintains links with: The business and productive environment	
		The scientific and technological environment	

Source: Adapted from the “Guide to the Evaluation of Postgraduate Programs” (6<sup>th</sup> edition 2014) by the Ibero-American University Association for Postgraduate Studies (AUIP - Salamanca, Spain).

**Materials and Methods**

The evaluation model used to assess the environment and relevance of the specific Postgraduate Programs offered by the University of Panama is based on Guillermo Briones’ model of particular references. Data collection utilizes an adaptation of the “Evaluation Guide for Postgraduate Programs” (6<sup>th</sup> edition, 2014) from the Ibero-American University Postgraduate Association (AUIP - Salamanca, Spain). The surveyed population includes the coordinators of specific postgraduate programs, a sample of students currently enrolled in programs at the University of Panama, and a sample of graduates from the specific postgraduate program “Master’s in Maritime Industries with an Emphasis on Port Management, Multimodal Transportation, and Logistics,” developed by the Institute of the Canal and International Studies at the University of Panama. The program evaluation factors consist of three factors, four dimensions, and twenty-five indicators adapted from the “Evaluation Guide for Postgraduate Programs” by the Ibero-American University Postgraduate Association (AUIP). Data collection describes the perception of the program’s coordinators, students, and graduates concerning environment and relevance. The instrument’s construct corresponds to the Likert scale. The list of indicators was generated based on exploring the key concepts of each variable in the literature and through expert input.

**Results**

Regarding the Environment and Relevance of the program, three dimensions were examined: Academic, Linkage, and Geographical-Political.

**Dimension: Academic**

- A. Undergraduate related to postgraduate  
20% of respondents were indifferent.  
20% of respondents somewhat agreed.  
60% of respondents strongly agreed.

**Dimension: Linkage**

- A. Program related to the business-productive sector  
40% of respondents were indifferent.  
40% of respondents somewhat agreed.  
20% of respondents strongly agreed.
- B. Program related to the academic-scientific environment  
40% of respondents were indifferent.  
60% of respondents somewhat agreed.
- C. The program uses SENACYT’s development plan  
40% of respondents strongly disagreed.  
60% of respondents somewhat disagreed.
- D. The program uses IFARHU’s development plan  
40% of respondents somewhat disagreed.  
20% of respondents were indifferent.  
40% of respondents somewhat agreed.
- E. The program uses PEG’s development plan  
20% of respondents strongly disagreed.  
40% of respondents somewhat disagreed.  
40% of respondents somewhat agreed.
- F. The program uses ACP’s development plan  
40% of respondents were indifferent.  
40% of respondents somewhat agreed.  
20% of respondents strongly agreed.

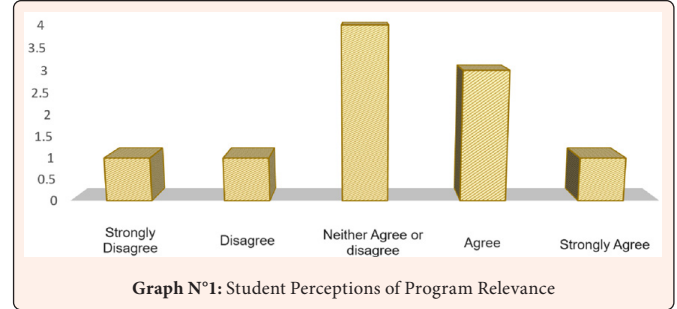
**Dimension: Geographical-Political**

- A. The program uses an international development plan; international trade rules  
40% of respondents were indifferent.  
20% of respondents somewhat agreed.  
40% of respondents strongly agreed.
- B. The program uses an international development plan; free trade agreements  
20% of respondents were indifferent.  
40% of respondents somewhat agreed.  
40% of respondents strongly agreed.
- C. The program uses an international development plan; opening new markets  
20% of respondents were indifferent.  
20% of respondents somewhat agreed.  
60% of respondents strongly agreed.

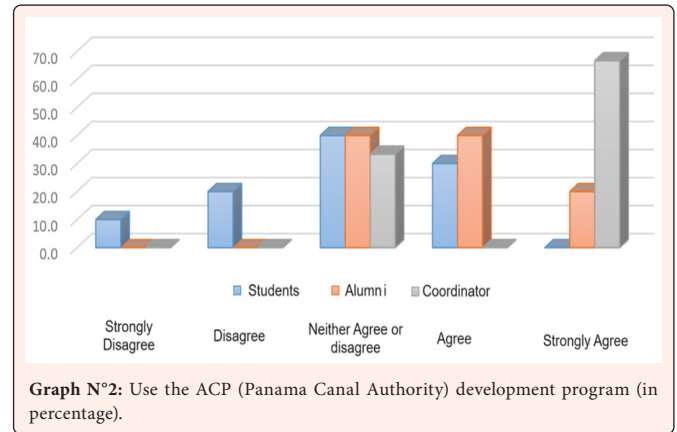
**Discussion and Conclusion**

Both public and private higher education institutions in Panama, responsible for creating specialized academic offerings to meet the demands of the canal transfer, stopped viewing the need to educate qualified human resources in necessary percentages according to the sector’s demand. Additionally, government strategic plans ceased to promote scholarships and loan facilities that would influence the social psychology of the population towards an interest in pursuing postgraduate studies, master’s degrees, and doctorates abroad in topics related to the canal and related subjects. As a result, it is evident that the country has progressed slowly in developing qualified and specialized national human resources in terms of relevance to the operation of the Panama Canal [7]. The Environment and Relevance of the Postgraduate Programs: Students showed a 30% agreement that the program uses the ACP’s strategic plan as a reference. Graduates mentioned this to be at 20%, while program coordinators indicated a higher

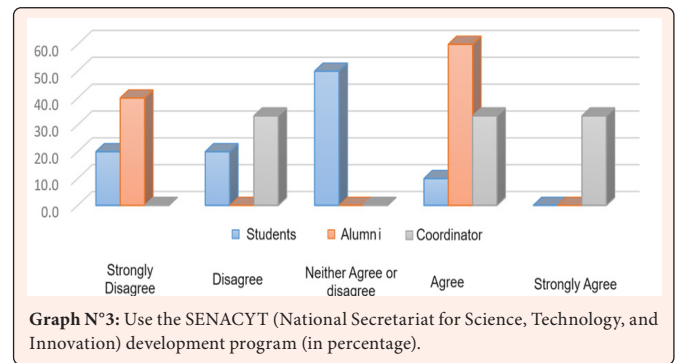
level of agreement at 66.7%. Regarding the program’s reference to global development plans such as international trade rules, students found it to align at 50%, graduates at 40%, and program coordinators at 100%, indicating that program content considers international trade agreements [8-14]. Graduates are currently employed in a related field to their program of study. Graduates expressed more positive and definitive responses compared to coordinators on this topic, which may suggest a potential lack of data and connection with the institute where they completed the program (Graph 1).



The students’ response in the “somewhat agree” column reaches a higher level, followed by the “agree somewhat” scale. This demonstrates that the set of items formulated for the factor of the program’s environment and relevance, which refers to the academic, geographical-political, and the program’s linkage with the strategic plans of SENACYT, IFARHU, PEG, and ACP, as well as scientific and business environments, reflects balanced responses. In other words, according to the students, the program’s relevance is neither very low nor very high, and it tends towards high relevance, which is positive (Graph 2).



According to the master’s coordinators, the program uses the ACP development plan in 66.7%, the graduates consider that it uses 20%, however the students believe that nothing or 0% of the master plan has been taken into account. the ACP for the development of the program (Graph 3) [15-18].



The coordinators somewhat agree that the program uses SENACYT’s development plan in 33.3% of cases, while graduates believe it is used in 60%. However, students only consider it to be used in 10% [19,20].



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### References

1. Valdés G (2020) Roles played by the Panama Canal, 1914-2020.
2. Romero YMG (2022) Operational and economic impact of the expansion of the Panama Canal, 2018. REICIT 1(2): 83-99.
3. Alfredo CC (2004) General history of Panama. Volume 1 & Volume II, Bogota Colombia, Edition: Digital Designs Group, Inc. Panama, Dvinni Printers & Publishers, India.
4. Menacho CLP (2008) History of higher and graduate education.
5. Barletta NA (2016) Footprints (National and International Public Contributions). Bogotá, Colombia. Edit Panamericana, forms and prints S.A.
6. Filiberto M (2004) Postgraduate studies in Panama. Panama: Technological University of Panama, Panama.
7. Zapata-Cantú L, González Fernando (2021) Challenges for innovation and sustainable development in Latin America: The significance of institutions and human capital. Sustainability 13(7): 1-21.
8. Carlos AB, Violetta C (2014) Demand and supply of advanced human capital in Panama. Panamá: SENACYT- BID.
9. Bernal JB (2009) University, globalization and institutional heterogeneity. 1<sup>st</sup> (edn.), Panamá: Specialized University of the Americas, pp. 1-315.
10. Bernal JB (2001) Higher education in Panama: Situation, problems and challenges. Panama: Theorethikos 5(2): 1-78.
11. Víctor CC (2006) Postgraduate Educational Models: An international vision. Colombia.
12. Castillo N (2003) National Report on Higher Education of Panama. 1<sup>st</sup> (edn.), Panama: Panama: Council of Rectors of Panama IESALC/UNESCO.
13. Catsambanis BA (2005) Diagnosis on the policies of the public and private universities of Panama in research matters. Panama: IESALC/UNESCO.
14. Dorindo JC (2013) The University of the Future, challenges and perspectives of the 21<sup>st</sup> century. Panama: Institute of National Studies (IDEN)-University of Panama, Panama.
15. Dávila Mabel (2012) Recent postgraduate trends in Latin America. Buenos Aires, Argentina: Teseo; Inter-American Open University, Argentina.
16. Vasto C (2010) University of Panama origins and evolution. Colombia. 1<sup>st</sup> (edn.), Gargraphic, S.A. for Nova Publishers art in Panama, USA.
17. Gandásegui M (2000) The transfer of the Panama Canal. Theorethikos: The Electronic Journal of Scientific Articles.
18. Panamá, SENACYT (2015) National Science, Technology and Innovation Policy of Panama and National Plan 2015-2019. Ira (Edn.), Editora Novo Art, USA.
19. Panama Ministry of Economy and Finance. Government Strategic Plan 2015-2019.
20. Rodríguez A (2001) Study on the supply and demand of University Degrees for national development. Council of Rectors of Panama.