ABET Accreditation in Latin America: A Cross-Country Comparative Analysis

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Abstract: Higher education institutions increasingly place emphasis on program accreditation because it confers real advantages on students, faculty, and employers. Graduates of accredited programs have transparent benefits over graduates of non-accredited programs. However, there is a lack of comparative study of ABET-accredited programs in Latin American countries. This paper fills that gap by providing the first quantitative overview of all ongoing ABET-accredited programs in nine nations within these regions where the latter exist—or once existed. Furthermore, maintaining accreditation poses ongoing difficulties, and some programs ultimately lose their accredited status. Accordingly, this research also investigates past trends and current standing of once-accredited programs in Latin American countries. The results are intended to provide important information for universities, accrediting organizations, and policymakers—especially in these countries—to improve program quality and compliance with ABET guidelines.

Keywords: ABET; Caribbean; Central America; Latin America; South America

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Introduction

Quality education is a key goal under the United Nations' Sustainable Development Goals (SDGs) [1]. A well-established indicator of educational quality is institutional programs accreditation, which serves as a rigorous peer-review process to ensure academic programs meet international benchmarks. However, accreditation is not a one-time achievement—programs must continuously uphold their standards to successfully undergo periodic renewal.

Globally, multiple accreditation agencies specialize in different academic fields, with ABET standing out as the most recognized standard for applied science, computing, engineering, and engineering technology programs. While ABET has a strong international presence, regional efforts are also emerging to strengthen accreditation systems. For instance, reference [2] outlines the development of the Greater Caribbean Regional Engineering Accreditation System (GCREAS), a new program for engineering accreditation in Central America and the Caribbean, supported by the Inter-American Development Bank and led by the Engineering for the Americas (EftA) initiative.

Further examining regional engineering education, reference [3] explores the Biomedical Engineering career in Panama, analyzing its professional and educational landscape, workforce integration, and future

prospects, supplemented by surveys of Panamanian Biomedical Engineers. Despite such regional advancements, Latin America and the Caribbean remain underrepresented in global accreditation agreements. The International Engineering Alliance (IEA) oversees mutual recognition for engineering education, but the region lacks participation in these accords. As noted in [4], Latin American and Caribbean countries must pursue IEA membership, strengthen regional agreements, and build accreditation expertise to align with global standards and foster a culture of quality assurance.

Historically, the U.S. has exerted significant influence on Latin American higher education through evaluation and accreditation systems, with recent trends showing direct accreditation of regional institutions by U.S.-based agencies [5]. This dynamic raises questions about local autonomy and the adaptation of international standards.

To improve engineering education, reference [6] proposes a continuous improvement framework aligned with ABET's competency-based outcomes, tested in Brazil's PUCPR Industrial Engineering program. While effective, the framework requires refinement—such as expanded stakeholder feedback—to better align with external regulations (e.g., MEC, CREA) and institutional goals. Similarly, reference [7] examines ABET accreditation in Colombia, highlighting its benefits (continuous improvement, quality culture) alongside challenges (high resource costs, faculty workload). The study underscores the need for structured improvement processes and greater faculty engagement.

In Peru, reference [8] identifies five accreditation frameworks and seven digital tools that streamline quality assurance in higher education, demonstrating how technology can enhance accreditation efficiency. Meanwhile, hands-on initiatives like Mercer University's service-learning program in the Dominican Republic [9] show how engineering education can integrate community projects—such as improving water access—while providing students with transformative experiences.

Industry perspectives also play a crucial role. In Ecuador, reference [10] finds that employers value teamwork, problem-solving, and planning skills in graduates, viewing ABET accreditation as beneficial despite implementation challenges. Finally, reference [11] analyzes Chile's accreditation process for Industrial Engineering master's programs, revealing that institutional prestige—though not an official criterion—often influences outcomes, suggesting potential biases that warrant further research.

Related Work

Research into ABET accreditation in Saudi Arabia indicates distinct trends within the country, both at the institutional and regional levels. A 2015 study [12] found that Saudi Arabia uniquely concentrated ABET-accredited programs in specialized fields (like aerospace engineering and biomedical technology) compared to other GCC nations. By 2021, the number of accredited bachelor's programs had tripled [13], with King Fahd University of Petroleum & Minerals (KFUPM) remaining the only institution with ABET accreditation across all degree levels. Saudi Arabia also has a range of quality assurance studies, from individual course evaluations to broader program assessments [14-18]. Recent comparative studies of ABET-accredited programs in GCC and non-GCC Muslim-majority countries [19, 20] share a similar

research methodology to this study. Broader comparative analyses of ABET accreditation trends have also been conducted in other global regions, including Africa [21], Europe [22], and Canada and Russia [23].

In Latin America, we identified five countries in South America with active ABET-accredited programs: Brazil, Chile, Colombia, Ecuador, and Peru. Among Central American countries, Mexico and Panama had either active or historical ABET accreditation. Similarly, among Caribbean nations, the Dominican Republic and Jamaica had active ABET-accredited programs, bringing the regional total to nine countries.

However, research on ABET in Latin American countries faces three main limitations: (1) it often focuses on single institutions or countries; (2) it relies heavily on faculty case studies about accreditation processes; and (3) it lacks comprehensive cross-country comparisons. This gap is significant, given the increasing importance of international accreditation standards in assessing higher education quality and stands in contrast to the more developed comparative literature available for other world regions [21-23].

Comparative Analysis

Table 1 [24] shows the number of ABET-accredited programs in Latin American countries as of 2025. According to the data, the Dominican Republic is the only country with ABET-accredited associate degree programs, while Chile is the only country with ABET-accredited master's degree programs.

Instituto Tecnológico de Las Américas is the sole institution in the Dominican Republic hosting all three ABET-accredited associate degree programs. Similarly, Universidad de Concepción is the only institution in Chile offering all four ABET-accredited master's degree programs.

Additionally, Mexico has the highest number of ABET-accredited bachelor's degree programs, followed by Peru and Colombia.

Table 1. Number of active ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	5	0
Chile	0	13	4
Colombia	0	55	0
Ecuador	0	23	0
Peru	0	68	0
Mexico	0	70	0
Panama	0	0	0

Dominican Republic	3	3	0
Jamaica	0	1	0
Total	3	238	4

Table 2 [24] presents the number of higher education institutions offering ABET-accredited programs in Latin American countries as of 2025. Although Peru has more ABET-accredited bachelor's degree programs than Colombia, the data reveal that Colombia has the highest number of institutions with ABET-accredited bachelor's degree programs than Peru.

In Mexico, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) has sixteen ABET-accredited bachelor's degree programs in all five campuses combined. In Colombia, Universidad de los Andes and Universidad Industrial de Santander each have the highest number of ABET-accredited bachelor's degree programs, with nine programs per institution. Similarly, Universidad Nacional de Ingeniería leads in Peru with twenty-seven ABET-accredited bachelor's degree programs.

Table 2. Number of higher education institutions offering ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	2	0
Chile	0	3	1
Colombia	0	12	0
Ecuador	0	4	0
Peru	0	11	0
Mexico	0	19	0
Panama	0	0	0
Dominican Republic	1	1	0
Jamaica	0	1	0
Total	1	53	1

Table 3 [24] presents the number of ABET-accredited programs in Latin American countries that maintain international mutual recognition agreements as of 2025. The data indicate that none of these countries have established such agreements for associate or master's degree programs. At the bachelor's level, Mexico has the highest number of ABET-accredited programs with international mutual recognition,

followed by Peru. Notably, all thirteen ABET-accredited bachelor's degree programs in these countries are recognized exclusively under the Seoul Accord, as shown in Table 3.

Table 3. Number of ABET-accredited programs covered by international mutual recognition agreements in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0
Chile	0	0	0
Colombia	0	1	0
Ecuador	0	2	0
Peru	0	4	0
Mexico	0	6	0
Panama	0	0	0
Dominican Republic	0	0	0
Jamaica	0	0	0
Total	0	13	0

Table 4 [24] outlines the accreditation commissions responsible for ABET-accredited programs in Latin American countries as of 2025. The table shows that all four ABET accreditation commissions oversee accreditation activities across all three degree levels in these countries. These include the Applied and Natural Science Accreditation Commission (ANSAC), Computing Accreditation Commission (CAC), Engineering Accreditation Commission (EAC), and Engineering Technology Accreditation Commission (ETAC).

Table 4. Recognized accreditation commissions overseeing ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	-	EAC	-
Chile	-	EAC	EAC
Colombia	-	ANSAC, CAC, EAC	-
Ecuador	-	CAC, EAC	-

Peru	-	ANSAC, CAC, EAC	-
Mexico	-	ANSAC, CAC, EAC	-
Panama	-	-	-
Dominican Republic	ETAC	EAC	-
Jamaica	-	EAC	-

Table 5 [24] shows the number of ABET-accredited programs under ANSAC in Latin American countries as of 2025. The data reveal that Peru has the highest number of ANSAC-accredited bachelor's degree programs among these countries.

Table 5. Number of ANSAC-evaluated ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0
Chile	0	0	0
Colombia	0	2	0
Ecuador	0	0	0
Peru	0	4	0
Mexico	0	1	0
Panama	0	0	0
Dominican Republic	0	0	0
Jamaica	0	0	0
Total	0	7	0

Table 6 [24] presents the number of ABET-accredited programs under CAC in Latin American countries as of 2025. The data show that Mexico and Peru have the highest same number of CAC-accredited bachelor's degree programs, followed by Ecuador.

Table 6. Number of CAC-evaluated ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0

Chile	0	0	0
Colombia	0	1	0
Ecuador	0	2	0
Peru	0	4	0
Mexico	0	4	0
Panama	0	0	0
Dominican Republic	0	0	0
Jamaica	0	0	0
Total	0	11	0

Table 7 [24] shows the number of ABET-accredited programs under EAC in Latin American countries as of 2025. The data reveal that Mexico has the highest number of EAC-accredited bachelor's degree programs, followed by Peru, Colombia, Ecuador, and Chile.

Table 7. Number of EAC-evaluated ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	5	0
Chile	0	13	4
Colombia	0	52	0
Ecuador	0	21	0
Peru	0	60	0
Mexico	0	65	0
Panama	0	0	0
Dominican Republic	0	3	0
Jamaica	0	1	0
Total	0	220	4

Table 8 [24] presents the number of ABET-accredited programs under ETAC in Latin American countries as of 2025. The data show that the Dominican Republic is the only country with ETAC-accredited associate

degree programs. Furthermore, no bachelor's or master's degree programs in these countries currently maintain ETAC accreditation.

Table 8. Number of ETAC-evaluated ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0
Chile	0	0	0
Colombia	0	0	0
Ecuador	0	0	0
Peru	0	0	0
Mexico	0	0	0
Panama	0	0	0
Dominican Republic	3	0	0
Jamaica	0	0	0
Total	3	0	0

Table 9 [24] presents data on historically ABET-accredited programs in Latin American countries as of 2025. Peru is the only country in the region with historically ABET-accredited programs at both associate and bachelor's degree levels. Additionally, Mexico has the highest number of historically ABET-accredited bachelor's degree programs followed by Peru. While Colombia hosts the third highest number of active ABET-accredited programs, it has only one historically ABET-accredited bachelor's degree program.

Table 9. Historically ABET-accredited programs in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0
Chile	0	4	0
Colombia	0	1	0
Ecuador	0	0	0
Peru	1	11	0
Mexico	0	40	0

Panama	0	1	0
Dominican Republic	0	0	0
Jamaica	0	0	0
Total	1	57	0

Table 10 [24] presents the number of higher education institutions with historically ABET-accredited programs in Latin American countries as of 2025. The data shows that Mexico has the highest number of institutions offering historically accredited bachelor's degree programs. Among these institutions, ITESM has twenty six historically ABET-accredited bachelor's degree programs in all seven campuses combined. The data also shows that Peru has four institutions offering historically accredited bachelor's degree programs. Among these institutions, TECSUP Lima and TECSUP Arequipa have the highest numbers of historically accredited bachelor's degree programs, with five and three programs respectively.

Table 10. Institutions with historical ABET accreditation in Latin American countries (2025)

Countries	Associate	Bachelor's	Master's
Brazil	0	0	0
Chile	0	1	0
Colombia	0	1	0
Ecuador	0	0	0
Peru	1	4	0
Mexico	0	11	0
Panama	0	1	0
Dominican Republic	0	0	0
Jamaica	0	0	0
Total	1	18	0

Figure 1 illustrates the distribution of ABET-accredited programs across Latin American countries as of 2025. The data indicate that the Dominican Republic accounts for all associate degree-level accreditations (100%), as it is the only country in the region with ABET accreditation at this level. Similarly, Chile represents all master's degree-level accreditations (100%), being the sole country in the region with accreditation at this level. However, these findings do not imply that all eligible associate degree programs in the Dominican Republic or all eligible master's degree programs in Chile have obtained ABET accreditation.

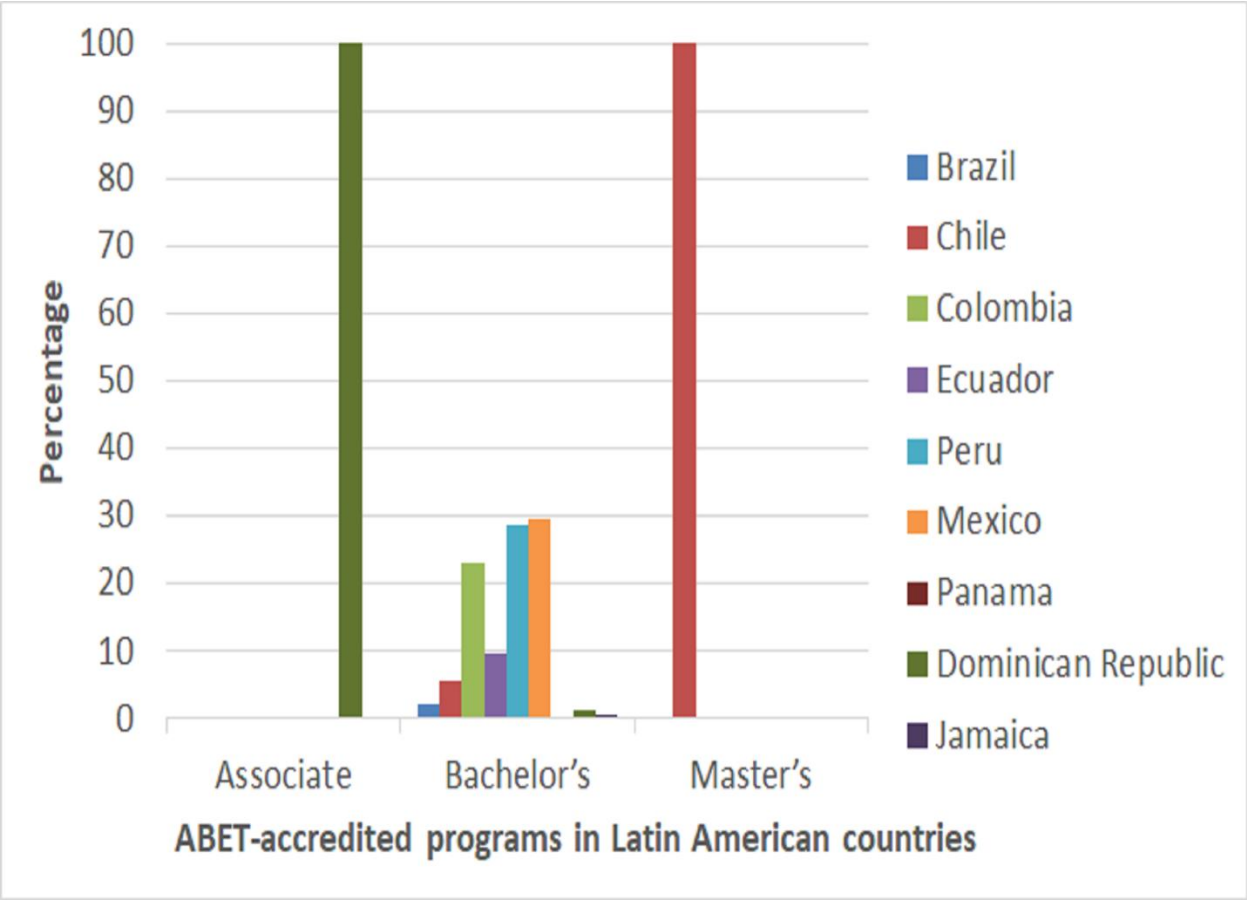

Figure 1. Percentage of ABET-accredited programs in Latin American countries (2025)

Figure 2 shows the proportion of historically ABET-accredited programs in Latin American countries as of 2025. The data indicate that only four countries—Brazil, Ecuador, the Dominican Republic, and Jamaica—have maintained continuous accreditation for all their ABET-accredited bachelor's degree programs. Notably, Brazil, the Dominican Republic, and Jamaica each have a relatively small number of such programs (5, 3, and 1, respectively). Furthermore, all ABET-accredited associate degree programs in the Dominican Republic and all ABET-accredited master's degree programs in Chile have retained their accredited status without interruption.

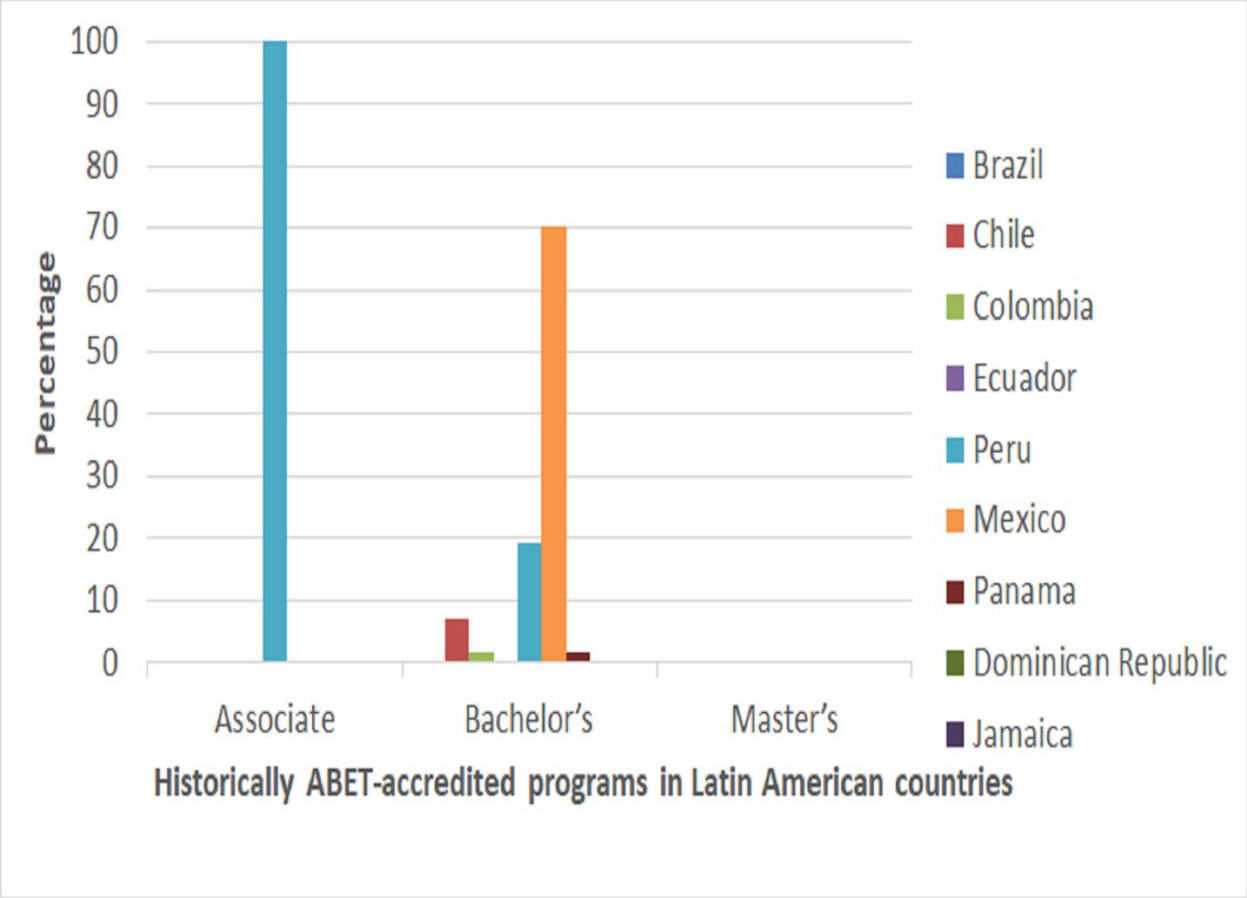

Figure 2. Percentage of historically ABET-accredited programs in Latin American countries (2025)

Conclusions

Ensuring all have available, high-quality education and ongoing learning is critical, and accredited academic programs are central to making this a reality. This research is the first extensive review of all ABET-accredited programs in Latin American countries. Of special interest are findings that the Dominican Republic and Chile are the only nations in the region with ABET-accredited associate and master's degree programs, respectively. In addition, Mexico (29.41%), Peru (28.57%) and Colombia (23.11%) collectively are home to most (81.09%) of ABET-accredited bachelor's programs. Just 5.46% of these region's bachelor's programs have an international mutual recognition arrangement (the Seoul Accord). Historically ABET-accredited bachelor's programs are predominantly led by Mexico (70.18%), followed by Peru (19.3%). Although this research only focused on Latin American countries, what is discovered can have useful implications for other parts of the world with ABET-accredited programs.

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