

e-ISSN: 2502-1516

Research Article

Received: September 29, 2025
Revised: February 11, 2026
Accepted: March 10, 2026
Available Online: May 2026

OPTIMIZING CAMPUS PROMOTION STRATEGIES: A STUDY ON SELECTING POTENTIAL PROVINCES USING THE AHP METHOD

Ega Adrianto*, Karina Amanda Larasati, Henry Dwi Prihartanto

Keywords:

strategic enrollment management; analytic hierarchy process; higher education management; regional mapping; multicriteria decision-making

Corresponding author(s):

e-mail:
egaadriantoea@telkomuniversity.ac.id

1. Industrial Engineering Study Program, Telkom University, Purwokerto Campus

Abstract

Yogyakarta is recognized as a national education hub in Indonesia, characterized by intense competition among higher education institutions, which necessitates data-driven strategic enrollment management (SEM) approaches. This study aims to identify and prioritize potential provinces for campus promotion using the Analytic Hierarchy Process (AHP) as a multi-criteria decision-making method. Four academic performance-based criteria—Grade Point Average (GPA), study duration, student achievement, and bachelor's thesis performance—were evaluated across four provinces: West Kalimantan, East Nusa Tenggara (NTT), West Nusa Tenggara (NTB), and East Kalimantan. Pairwise comparisons and consistency testing were applied to ensure reliable weighting and ranking. The results indicate that GPA is the most influential criterion, followed by study duration, student achievement, and bachelor's thesis performance. Based on the overall priority scores, West Nusa Tenggara ranked first (1.213), followed by East Nusa Tenggara (0.748), West Kalimantan (0.407), and East Kalimantan (0.229). These findings demonstrate that integrating academic outcome indicators with geographic prioritization provides a systematic and objective basis for targeted promotion planning, supporting more effective and sustainable student recruitment strategies.

Copyright © 2026 by Authors,
Published by Universitas Diponegoro Publishing Group.
This open access article is distributed under a Creative Commons
Attribution 4.0 International license



1. Introduction

Yogyakarta has long served as a national center of education (“city of students”) with a high concentration of higher education institutions. Official data from BPS DIY and LLDIKTI Region V indicate the existence of indicate a high concentration of universities, institutes, colleges, academies, and polytechnics, with many students spread across Yogyakarta City, Sleman, Bantul, Kulon Progo, and Gunungkidul, reflecting a dense and competitive higher education ecosystem (Badan Pusat Statistik Provinsi Daerah Istimewa Yogyakarta, 2024). The distribution of these higher education institutions is evenly spread throughout the Special Region of Yogyakarta, as recorded in data from the Ministry of Education, Culture, Research, and Technology through the DIKTI institutional data system (statistical references per regency/municipality). The number of higher education institutions in each area includes: 64 institutions in Sleman, 61 institutions in Bantul, 63 institutions in Yogyakarta City, while Kulon Progo and Gunungkidul each have 2 higher education institutions (Pusdatin Kemendikdasmen, 2025). The high concentration of institutions, coupled with the large number of active students, creates a highly competitive ecosystem among universities. This condition requires each institution to develop innovative, targeted, and data-driven marketing strategies, particularly in determining priority regions for promotion, to ensure that the allocation of marketing budgets provides optimal impact on the increase of new student enrolments.

In response to increasingly intense competition among higher education institutions, the concept of Strategic Enrollment Management (SEM) has gained substantial relevance. SEM refers to a set of coordinated and systematic strategies, including institutional marketing, admission policies, and funding schemes, aimed at enhancing both the quality and quantity of student applicants in a measurable manner. At the same time, SEM contributes to strengthening the financial sustainability of higher education institutions (Smith & Harris, 2021).

To support informed decision-making within the SEM framework, the Analytic Hierarchy Process (AHP) is particularly well suited due to its ability to integrate multiple quantitative and qualitative criteria through objective weighting. Previous studies have demonstrated the effectiveness of AHP in various educational contexts. For instance, in Malaysia, AHP has been applied to develop quality improvement instruments for higher education institutions in a systematic and transparent way. (Yusof & Salleh, 2013). Moreover, in general, AHP is a well-established technique for breaking down complex problems into hierarchical structures, comparing alternatives in pairs, and processing assessments into clear numerical priorities (Palasara et al., 2022).

In the context of higher education marketing, branding plays a critical role in helping universities achieve competitive advantage amid intensifying competition, particularly in student recruitment. A study conducted in Vietnam employed a combination of the Delphi method and the AHP to examine the determinants of university brand image. The results identified eight main factors and 31 subfactors that collectively shape institutional branding. Through four rounds of expert interviews involving practitioners with extensive experience in communication and student recruitment, the study ranked the most influential factors affecting prospective students' choices. The key determinants were identified as academic programs, institutional reputation, human resources, financial policies, and communication activities. These findings demonstrate that AHP is an effective tool for developing higher education promotion strategies that are systematic, measurable, and data driven.

Furthermore, a more recent international study on the higher education marketing mix integrated AHP with cluster analysis and correspondence analysis. This methodological integration enabled the development of marketing strategies that are more targeted and aligned with specific institutional contexts. (Maulana Malik Ibrahim, 2024)(Huyen et al., 2024). Specifically, in higher education marketing, AHP has been applied to analyze the promotional mix of universities and to map the priority components of marketing communication, providing evidence that this method is practical in the context of student recruitment. Another study prioritized sources of information and the needs of international prospective students using AHP, reinforcing the argument that promotional decisions should be based on weighted criteria and clear segmentation (Ürer Erdil et al., 2021)(Oh, 2021). Based on the studies, this research will adapt the AHP within a Decision Support System (DSS) to select potential provinces as targets for campus promotion expansion in Yogyakarta. By formulating criteria such as GPA, study duration, bachelor's thesis performance or grades, and student achievements, this model is expected to produce an objective analysis that can optimize the allocation of promotional budgets and increase the number of qualified applicants from the most relevant provinces.

This study applies the AHP as a decision-support framework for strategic planning in new student admission (PMB) promotion. The key novelty lies in integrating academic performance-based student outcome indicators with geographic prioritization to produce evidence-based and operational promotion strategies, enabling higher education institutions to make decisions that are objective, measurable, and strategically targeted. The study generates priority rankings of provinces for PMB promotion and demonstrates their direct application in recruitment planning, thereby extending prior AHP studies that were largely conceptual. The criteria used—GPA, study duration, bachelor's thesis performance, and student achievements—represent core indicators of academic quality, learning efficiency, independent competence, and competitiveness. Weighting these criteria using AHP aligns promotion priorities with measurable educational outcomes and results in strategic recommendations for PMB teams, including priority provinces such as East Nusa Tenggara (NTT), West Nusa Tenggara (NTB), West Kalimantan, and East Kalimantan.

2. Methods

The AHP is a multicriteria decision-making method developed by Saaty and has been widely applied in various fields, including management and strategic decision-making in the higher education sector. The study AHP, a Reliable Method for Quality Decision Making: A Case Study in Business demonstrated that AHP can provide objective analytical results by structuring goals, criteria, and alternatives into a systematic hierarchy (Canco et al., 2021). In the context of higher education, the AHP method has been employed to assist in complex decision-making, such as those related to marketing strategies, quality management, and the selection of promotional media. Previous studies have shown that AHP is capable of mapping the most influential factors in students' decisions when choosing a higher education institution. The findings highlight the importance of data-driven promotion and strategic considerations so that universities can more effectively target prospective students. In line with this, a study in Malaysia also confirmed that AHP is effective in determining the strategic priorities of universities in both academic and non-academic aspects (Ürer Erdil et al., 2021; Yusof & Salleh, 2013).

From a marketing strategy perspective, previous studies have emphasized the importance of managing a university's brand image in enhancing its attractiveness to prospective students (Lim et al., 2020). Moreover, the integration of the marketing mix in the context of higher education is also considered crucial, where promotion serves as one of the dominant factors influencing student preferences (Ho & Hung, 2008). This research reinforces the argument that a well-targeted promotional strategy depends not only on the employed media but also on the

Table 1. State of the Art

No	Research Title	Year	Method	Research Focus	Limitation	Relevance to This Study
1	Prioritizing Information Sources and Requirements in Students' Choice of Higher Education Destination: Using AHP Analysis (Ürer Erdil et al., 2021)	2022	AHP	Information factors in students' decision to choose a university	Did not address regional promotion strategies	Provides a basis that AHP is effective in mapping prospective students' preferences.
2	AHP, a Reliable Method for Quality Decision Making: A Case Study in Business (Canco et al., 2021)	2021	AHP	Quality-based business decision-making	Not in the context of education	Provides justification for using AHP as a valid method
3	Strategic Brand Management for Higher Education Institutions with Graduate Degree Programs (Lim et al., 2020)	2022	Empirical studies (surveys)	University brand management in enhancing attractiveness	Did not use AHP	Relevant in the context of branding as part of a promotional strategy.
4	Analytical Hierarchy Process in Multiple Decisions Making for Higher Education in Malaysia (Yusof & Salleh, 2013)	2021	AHP	Multi-criteria decision-making in higher education	Not focused on campus promotion	Reinforces AHP as an appropriate method in higher education
5	Marketing Mix Formulation for Higher Education (Ho & Hung, 2008)	2023	Marketing Mix	Formulation of higher education marketing strategy	Not specific to region-based promotion	Provides a marketing strategy framework that can be integrated
6	Selection of Promotional Media with the Integration of AHP Fuzzy and TOPSIS (Case Study in a Study Program) (Indrayana & Utomo, 2022)	2021	AHP Fuzzy + TOPSIS	Selection of effective promotional media	Does not discuss regional targeting	Reinforces that AHP can be applied in promotional strategies
7	Analytical Hierarchy Process (AHP) in New Student Admissions Selection (Liga Mayola et al., 2023)	2023	AHP	Adoption the Analytical Hierarchy Process (AHP) method, for the selection and determination of new students in a doctoral program	Pairwise comparison of criteria influences priority values, which in turn can influence decision outcomes.	Demonstrates the effectiveness of AHP in decision making regarding student admissions
8	Decision-Making for Determining University Promotion Targets Using the Analytical Hierarchy Process Method (Fawait & Rahmah, 2024)	2024	AHP	Decision making in determining promotional targets for University in Samarinda City	Does not address promotional strategies	Optimization of higher education institution promotion strategies using the AHP method
9	Optimizing Campus Promotion Strategies: A Study on Selecting Potential Provinces Using the AHP Method (this research)	2025	AHP	Quantitative data on the number of universities, lecturers, and students	Does not address promotional strategies	Provides empirical context of intense competition among universities in Yogyakarta

segmentation of regions with significant potential as sources of new students. Studies related to the selection of promotional media have also been conducted, demonstrating that the integration of AHP with other methods can yield more accurate and adaptive decisions aligned with institutional needs. This highlights that AHP is flexible and can be adapted according to the objectives of the research (Indrayana & Utomo, 2022).

Based on the literature, this study focuses on the application of the AHP method to support strategic decision-making in the promotion of PMB. The research problem addressed is how the AHP model can assist higher education institutions in making more measurable and objective strategic decisions regarding PMB promotion. In addition, this study highlights which provinces hold the highest priority as the main targets in campus promotional strategies based on the results of the AHP analysis, as well as how these results can be optimally integrated into campus promotional strategies to become more effective and efficient in attracting prospective students.

As summarized in **Table 1**, prior studies have extensively applied the AHP in higher education decision-making, particularly for evaluation, quality improvement, and general marketing strategy formulation. However, most existing studies remain either conceptual or limited to internal institutional assessments, with little emphasis on translating

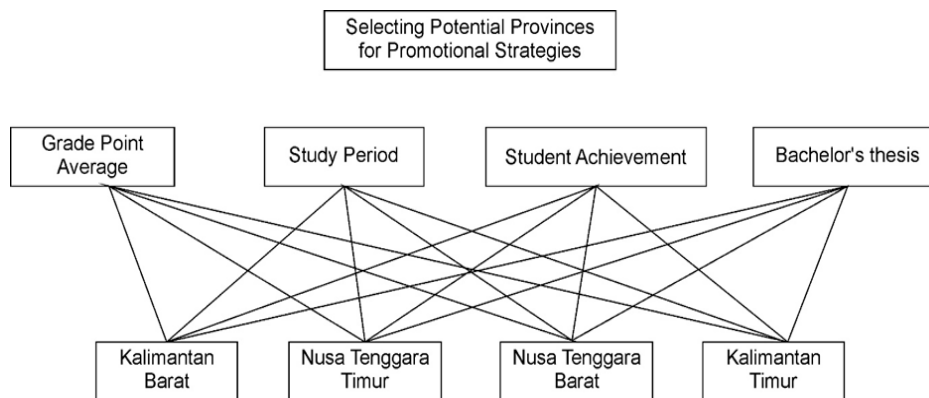


Figure 1. AHP Hierarchy for Selecting Potential Provinces for Campus Promotion

analytical results into operational promotion strategies. In addition, previous research has rarely integrated academic outcome-based indicators with geographic prioritization to guide PMB promotion. Addressing these limitations, the present study employs AHP to combine academic performance criteria with provincial-level targeting, thereby bridging the gap between analytical modeling and practical promotion planning. This approach positions the study as a methodological and applied extension of the existing literature.

According to Saaty (Thomas L. Saaty, 1980), The AHP operates by building a hierarchical structure that begins with the main objective and is further broken down into criteria, sub-criteria, and decision alternatives. Through this method, pairwise comparisons are carried out to establish relative weights among the criteria, which are then checked for consistency to ensure the validity of the evaluation. AHP proves useful not only in setting priorities across multiple factors but also in integrating both quantitative and qualitative aspects into the decision-making process. In the context of higher education marketing, several studies highlight that AHP can be applied to assess and formulate promotional strategies that are more targeted, measurable, and accurate (Indrayana & Utomo, 2022; Petrillo et al., 2023). This reinforces the notion that AHP is one of the most flexible and adaptive Multi-Criteria Decision Making (MCDM) methods for tackling complex problems, including the determination of PMB promotional strategies as well as quality improvement (Chen et al., 2024; Tighnavard Balasbanch et al., 2025).

This research makes use of the AHP to improve student admission promotion strategies, focusing on making the decision-making process more objective and measurable. The AHP framework is structured in a hierarchical format, starting with the main research objective and followed by the criteria, sub-criteria, and alternative decisions to be compared. Within this framework, AHP functions not only as a quantitative analytical tool but also as a systematic approach for setting priorities in promotional strategies with greater precision. The hierarchical structure designed for this study will be illustrated in Figure 1.

In this study, the AHP is employed as a decision-support method to identify potential provinces as target areas for new student recruitment promotion strategies. The research process begins with the identification of relevant criteria that reflect student quality and institutional outcomes, namely Grade Point Average (GPA), study period, student achievements, and bachelor's thesis performance. These criteria were selected because they represent key indicators of students' academic performance and the institution's capacity to produce high-quality graduates (Ürer Erdil et al., 2021).

The research flow begins with identifying decision criteria and alternative provinces, followed by data collection and analysis using the AHP. Data for each criterion were obtained from the academic database of a private university in the Special Region of Yogyakarta (DIY) and complemented with expert judgments from stakeholders involved in student admission and promotion. Data were collected through pairwise comparisons using Saaty's nine-point scale to assess the relative importance of criteria and alternatives. The analysis involved constructing pairwise comparison matrices, calculating priority weights, and evaluating consistency ratios to ensure reliable and objective decision-making in determining priority promotion areas.

The alternatives evaluated in this study consist of four provinces outside Java Island, West Kalimantan, East Nusa Tenggara, West Nusa Tenggara, and East Kalimantan which were selected based on their historical contribution to student enrolment. AHP was then applied to rank these provinces according to their overall priority scores. The resulting rankings provide a structured and objective basis for determining strategic promotion locations with high potential for future recruitment expansion.

3. Results and Discussions

The development of the AHP hierarchy involves experts with strategic authority in university decision-making, namely the Foundation Chairman as the institution's owner with 12 years experiences and the Rector as its primary leader with 8 years experience. These two experts were selected because they hold a broad perspective on the university's direction, including matters related to expanding promotional areas. In the AHP process, pairwise

Table 2. Pair Wise Comparison

	GPA	Study Period	Achievement	Bachelor's Thesis
GPA	1	3	5	4
Study Period	0.33	1	3	3
Achievement	0.20	0.60	1	2
Bachelor's thesis	0.25	0.75	1.25	1

Table 3. Normalization and Weighting

	GPA	Study Period	Achievement	Bachelor's Thesis	Weight
GPA	0.561	0.643	0.526	0.4	0.53
Study Period	0.187	0.214	0.316	0.3	0.25
Achievement	0.112	0.071	0.105	0.2	0.12
Bachelor's Thesis	0.140	0.071	0.053	0.1	0.09

comparisons are created for both the criteria and the alternatives. The experts were asked to evaluate the relative importance of each criterion and alternative by applying Saaty's fundamental scale. The results of these evaluations were then processed to determine the priority weights of the criteria and to generate a ranking of the provincial alternatives based on their potential.

This Pairwise Comparison table illustrates the results of pairwise comparison assessments between the criteria used in the study, namely GPA, Study Period, Achievement, and Bachelor's thesis. The assessments were conducted by experts (foundation chairman and university president) based on the relative importance of each criterion in determining the priority of campus promotion strategies. Based on **Table 2**, the GPA criterion is considered more important than the other criteria, as evidenced by its relatively high comparison weight, for example, GPA compared to Study Period 3, GPA compared to Achievement, and GPA compared to Bachelor's thesis 4. This indicates that students' academic achievement is considered the main indicator in assessing the potential of their home region. Meanwhile, the Study Period is regarded as more important than both Achievement 3 and Bachelor's thesis 3, although it still falls below GPA. Achievement scores higher than Bachelor's thesis 2 but remains lower than GPA and Study Period. Bachelor's thesis occupies the last position with the lowest comparative weight, suggesting that this criterion is viewed as less influential compared to the others in the context of campus promotion strategies. **Table 2** then serves as the foundation for the matrix normalization process, which represents a crucial step in the AHP. The normalization is performed by dividing each value in a column by the total of that column, producing standardized proportions. This ensures that differences in rating scales across criteria can be balanced and aligned. The results of the normalization process, as shown in **Table 2**, generate the relative weights for each criterion—GPA, Study Period, Achievement, and Bachelor's thesis—which are presented in **Table 3**.

Table 3 presents the results of the normalization process from pairwise comparisons on the established criteria, namely GPA, Study Period, Achievement, and Bachelor's thesis. This normalization process was carried out to obtain the relative weights of each criterion, so that it could describe the importance level of each aspect in the context of determining PMB promotion strategies. The values displayed in the table reflect the normalized proportion of each criterion relative to the others, which subsequently results in the average weight or what is known as the eigenvector. From the calculation results, it can be seen that GPA holds the highest weight at 0.53, indicating that this criterion is considered the most dominant factor. Meanwhile, Study Period receives a weight of 0.25, showing that although its position is not as strong as GPA, this criterion still plays an important role in influencing promotion strategies.

As for the other criteria, namely student achievement with a weight of 0.12 and bachelor's thesis with a weight of 0.09, they show a relatively smaller contribution compared to GPA and study period. This indicates that academic factors such as GPA and the efficiency of completing studies are considered more relevant and strategic in attracting prospective new students compared to factors such as achievement or bachelor's thesis results. This finding provides an initial overview of the priority order of criteria that will serve as the basis for formulating a promotion strategy. Next, to ensure that these weighting results are consistent and accountable, the next step is to perform a consistency test by calculating the Consistency Index (CI) and Consistency Ratio (CR) values.

Based on the calculations performed, the Consistency Index (CI) value obtained was 0.050 and the Consistency Ratio (CR) value was 0.056. This relatively small CI value indicates that the level of inconsistency in the pairwise comparison evaluation process is still within reasonable and acceptable limits. As is known, consistency measurement is an important step in the Analytical Hierarchy Process (AHP) method, as it ensures that the preferences or assessments given for each criterion are not contradictory. In the context of this research, the CR calculation is performed by dividing the CI value by the Random Index (RI) value according to the number of criteria analyzed. Considering there are four criteria: GPA, Study Period, Achievement, and Bachelor's thesis, the RI value used is 0.89, referring to the RI reference table developed by Saaty. Therefore, the CR is obtained by dividing the CI (0.050) by the RI (0.89), resulting in a value of 0.056.

Table 4. Consistency Check Results

	λ_{max}	CI	CR	Conclusion
Criteria	4.06	0.050	0.056	Consistent
GPA	4.05	0.015	0.017	Consistent
Study Period	4.25	0.082	0.092	Consistent
Achievement	4.22	0.074	0.083	Consistent
Bachelor's Thesis	4.18	0.060	0.067	Consistent

Table 5. Overall Local Priority

Criteria	Local Priority
GPA	0.53
West Nusa Tenggara	0.979
East Nusa Tenggara	0.627
West Kalimantan	0.335
East Kalimantan	0.189
Study Duration	0.25
West Nusa Tenggara	0.130
East Nusa Tenggara	0.064
West Kalimantan	0.036
East Kalimantan	0.023
Achievements	0.12
West Nusa Tenggara	0.056
East Nusa Tenggara	0.035
West Kalimantan	0.020
East Kalimantan	0.011
Bachelor's Thesis	0.09
West Nusa Tenggara	0.048
East Nusa Tenggara	0.022
West Kalimantan	0.015
East Kalimantan	0.006

The Consistency Ratio (CR) value of 0.056 is below the commonly used threshold of 0.10 (10%). This indicates that the weighting results obtained in this study have a good level of consistency. This consistency indicates that there are no deviations in the inter-criteria assessment process that could affect the validity of the calculation results. Thus, the preference for the GPA criterion, which carries the highest weight, followed by Study Period, Achievement, and Bachelor's thesis, is logically and consistently arranged. This situation strengthens the reliability of the analysis results, so the resulting priority weights can be used as a basis for formulating PMB promotion strategies that are more targeted and aligned with the institution's needs. By following the same procedure, the calculation of local priority values and consistency checks were conducted for all analyzed criteria and alternatives. The results presented in **Table 4** indicate that each criterion namely GPA, study duration, achievements, and bachelor's thesis yielded low Consistency Index (CI) and Consistency Ratio (CR) values, which are well below the accepted tolerance threshold of 0.1. In addition, the obtained λ_{max} values fall within the appropriate range, further reinforcing the evidence that no significant inconsistencies exist in the pairwise comparison process among the criteria. These findings demonstrate that the comparisons are consistent and reliable. Such consistency ensures that the calculated weights for each criterion can be regarded as valid and truly reflective of the actual priorities. Consequently, the data provides a solid foundation for subsequent decision-making stages of the analysis.

Based on these results, the next step involves constructing the Local Priority table that consolidates all criteria and alternatives considered in the study. This table serves to illustrate the local priority values of each criterion relative to the available alternatives, allowing a more comprehensive understanding of the comparative relationships among elements. The overall local priority values for all criteria are presented in **Table 5**.

The Local Priority table above presents the results of relative priority calculations for each main criteria of GPA, study duration, achievements, and bachelor's thesis against the alternative promotion locations consisting of West Nusa Tenggara, East Nusa Tenggara, West Kalimantan, and East Kalimantan. The table shows that the GPA criterion holds the highest local priority, with West Nusa Tenggara obtaining a dominant score of 0.979. This indicates that, from the perspective of GPA, the province demonstrates the greatest potential compared to the others. For the study duration criterion, West Nusa Tenggara again ranks first with a score of 0.130, followed by East Nusa Tenggara with 0.064. These findings illustrate that West Nusa Tenggara consistently occupies the top priority across nearly all criteria analyzed, particularly in GPA, which carries the greatest weight in decision-making. The overall Local Priority results will serve as the foundation for calculating the total weighting presented in **Table 6**, aimed at determining the final ranking of promotion locations with the most potential to be prioritized as the main target.

Based on the calculation, West Nusa Tenggara Province ranked first with the highest total score of 1.213. Subsequently, East Nusa Tenggara Province was in second place with a score of 0.748. In third position was West

Table 6. Provincial Election Rankings

Province	Total	Rank
West Nusa Tenggara	1.213	1
East Nusa Tenggara	0.748	2
West Kalimantan	0.407	3
East Kalimantan	0.229	4

Kalimantan Province with a score of 0.407, while East Kalimantan Province occupied the fourth rank with a score of 0.229. These results indicate that West Nusa Tenggara holds the highest priority compared to other provinces in the analysis conducted.

The main indicators used in this assessment include GPA, study duration, student achievements, and bachelor's thesis completion, all of which collectively determine the weighting and final calculation results. Based on these calculations, the provincial rankings provide a comprehensive overview of promotion priorities according to the applied criteria, with West Nusa Tenggara emerging as the top-ranked province, followed by East Nusa Tenggara, West Kalimantan, and East Kalimantan.

In addition to the quantitative outcomes of the AHP analysis, examining the educational conditions across the four provinces is essential to provide a broader and more contextual interpretation of the observed rankings. Educational development has been widely recognized as a critical determinant of students' academic preparedness and long-term learning outcomes (Badan Pusat Statistik [BPS], 2024). National education statistics indicate that West Nusa Tenggara has experienced steady progress in key educational indicators, particularly in the Gross Enrollment Rate (GER) and Net Enrollment Rate (NER) at the secondary education level, along with increased participation in government-supported scholarship and school assistance programs (BPS, 2024; Pusat Data dan Teknologi Informasi Kemendikbudristek [Pusdatin], 2024). These improvements not only enhance access to education but also strengthen students' academic foundations, which may help explain the relatively higher GPA and academic performance indicators observed among students originating from this province.

Similarly, East Nusa Tenggara, which ranked second, has shown gradual improvements in educational access and literacy levels, reflecting ongoing policy efforts to reduce regional disparities (BPS, 2024). However, persistent challenges related to geographical isolation, limited infrastructure, and unequal teacher distribution continue to constrain educational quality in many remote areas. These structural limitations may partially account for its comparatively lower overall score when contrasted with West Nusa Tenggara, highlighting how uneven development trajectories shape educational outcomes at the regional level.

Meanwhile, West Kalimantan and East Kalimantan, ranked third and fourth respectively, present distinct educational contexts influenced by demographic distribution and patterns of regional economic development. Despite relatively higher income levels driven by natural resource-based industries, significant disparities in educational access and quality between urban centers and rural or border areas remain evident (BPS, 2024). Such inequalities may affect students' academic readiness, learning continuity, and motivation to pursue higher education, thereby influencing the performance indicators applied in this study. These findings suggest that provincial rankings derived from the AHP framework are shaped not only by institutional academic outcomes but also by broader socio-educational environments. Integrating these contextual perspectives allows for a more comprehensive understanding of the results and supports the formulation of promotion strategies that are not only data-driven but also sensitive to regional realities and human development dynamics.

This finding is consistent with previous studies that emphasize academic performance indicators as key determinants in higher education decision-making and strategic planning. However, unlike prior research that primarily focused on institutional evaluation or general marketing strategies, this study extends existing findings by incorporating geographic prioritization as a basis for operational promotion planning. The results therefore highlight how differences in provincial rankings reflect varying responses to academic outcome indicators, reinforcing the practical applicability of AHP in targeted student recruitment strategies.

4. Conclusion

This study demonstrates that the AHP is a relevant and effective decision-support method for planning PMB promotion strategies. The results indicate that academic outcome indicators—namely GPA, study duration, student achievements, and bachelor's thesis completion—can be objectively weighted to support structured, transparent, and data-driven decision-making. By incorporating these criteria, the proposed approach minimizes subjective judgment and provides a more measurable analytical basis for determining promotion priorities.

The AHP analysis yields a clear ranking of target provinces for promotion, with West Nusa Tenggara identified as the highest-priority location, followed by East Nusa Tenggara, West Kalimantan, and East Kalimantan. This ranking reflects variations in overall priority weights derived from the selected criteria and illustrates how regional potential differs when evaluated using academic performance-based indicators. Overall, the findings confirm that campus promotion strategies can be systematically formulated through quantitative analysis rather than intuition,

thereby strengthening the implementation of evidence-based decision-making in higher education management and supporting more efficient and accountable recruitment planning.

From a theoretical perspective, this study extends the application of AHP in higher education management by integrating academic performance indicators with geographic prioritization for student recruitment planning. Practically, the findings offer actionable insights for PMB teams by providing a structured and data-driven basis for identifying priority promotion areas, which may enhance promotional effectiveness and support a more equitable regional recruitment strategy.

Despite these contributions, this study has several limitations. The analysis relies on academic data from a single private university and considers a limited set of internal performance indicators, which may constrain the generalizability of the results. Future research is therefore encouraged to incorporate external variables, such as regional socio-economic conditions, transportation accessibility, levels of inter-university competition, and prospective students' preferences obtained through perception-based surveys. The inclusion of these factors would enrich the analytical framework and generate more comprehensive recommendations that better reflect the dynamic nature of the higher education market in Indonesia.

Acknowledgment

The author would like to express gratitude to the Industrial Engineering Study Program, Telkom University, Purwokerto Campus, for their support throughout this research and publication project.

5. References

- Badan Pusat Statistik Provinsi Daerah Istimewa Yogyakarta. (2024). *Jumlah Perguruan Tinggi, Dosen, dan Mahasiswa2 (Negeri dan Swasta) di Bawah Kementerian Pendidikan Tinggi, Sains, dan Teknologi Menurut Kabupaten/Kota di Provinsi DI Yogyakarta, 2024*. <https://yogyakarta.bps.go.id/en/statistics-table/3/Y21kVGRHNXZVMEI3S3pCRIIyMHJRbnB1WkVZemR6MDkjMw%3D%3D/jumlah-perguruan-tinggi-sup-1--sup---dosen--dan-mahasiswa-negeri-dan-swasta--di-bawah-kementerian-ristek--teknologi-dan-pendidikan-tinggi-kementerian-pe>
- Canco, I., Kruja, D., & Iancu, T. (2021). AHP, a Reliable Method for Quality Decision Making: A Case Study in Business. *Sustainability*, 13(24), 13932. <https://doi.org/10.3390/su132413932>
- Chen, X., Xie, H., Tao, X., Wang, F. L., & Cao, J. (2024). Leveraging text mining and analytic hierarchy process for the automatic evaluation of online courses. *International Journal of Machine Learning and Cybernetics*, 15(11), 4973–4998. <https://doi.org/10.1007/s13042-024-02203-6>
- Fawait, A. B., & Rahmah, S. (2024). KLIK: Kajian Ilmiah Informatika dan Komputer Pengambilan Keputusan Penentuan Target Promosi Universitas menggunakan metode Analytical Hierarchy Process. *Media Online*, 4(5), 2607–2615. <https://doi.org/10.30865/klik.v4i5.1811>
- Ho, H., & Hung, C. (2008). Marketing mix formulation for higher education. *International Journal of Educational Management*, 22(4), 328–340. <https://doi.org/10.1108/09513540810875662>
- Huyen, N. T., Hai, H. Van, Lich, H. K., & Tuan, P. M. (2024). Prioritizing components of university brands by using the integrated Delphi and AHP methods. *Multidisciplinary Reviews*, 7(4), 2024067. <https://doi.org/10.31893/multirev.2024067>
- Indrayana, M., & Utomo, D. S. (2022). Selection of promotional media with the integration of AHP Fuzzy and TOPSIS (case study in a study program). *Journal of Industrial Engineering and Halal Industries*, 3(1), 35–40. <https://doi.org/10.14421/jieh.3487>
- Liga Mayola, Afdhal, M., & Rita. (2023). Analytical Hierarchy Process (AHP) dalam Seleksi Penerimaan Mahasiswa Baru. *Jurnal KomtekInfo*, 10(2), 81–86. <https://doi.org/10.35134/komtekinfo.v10i2.371>
- Lim, W. M., Jee, T. W., & De Run, E. C. (2020). Strategic brand management for higher education institutions with graduate degree programs: empirical insights from the higher education marketing mix. *Journal of Strategic Marketing*, 28(3), 225–245. <https://doi.org/10.1080/0965254X.2018.1496131>
- Maulana Malik Ibrahim, M. S. (2024). *DECISION STRATEGY TO INCREASE THE MARKET SIZE OF EPLC*. 7, 9140–9151.
- Oh, S. (2021). The AHP Analysis of University Marketing Communications Based on Promotion Mix: Evidence from Korea. *Research Article*, 20(6), 1–8. <https://www.abacademies.org/articles/the-ahp-analysis-of-university-marketing-communications-based-on-promotion-mix-evidence-from-korea-12642.html>
- Palasara, N., Herdiansyah, F. H., Prasetyo, F., Siwi, A., & Sinnun, A. (2022). Implementasi Metode Analytical Hierarchy Process (AHP) untuk Analisis Pemilihan Aplikasi Sekuritas Saham Pemula. *Jurnal Sistem Dan Teknologi Informasi (JustIN)*, 10(2), 249. <https://doi.org/10.26418/justin.v10i2.53827>
- Petrillo, A., Salomon, V., & Tramarico, C. (2023). State-of-the-Art Review on the Analytic Hierarchy Process with Benefits, Opportunities, Costs, and Risks. *Journal of Risk and Financial Management*, 16(8), 372. <https://doi.org/10.3390/jrfm16080372>
- Pusdatin Kemendikdasmen. (2025). *Jumlah Data Satuan Pendidikan (DIKTI) per Prov. D.I. Yogyakarta*. <https://referensi.data.kemendikdasmen.go.id/pendidikan/dikti/040000/1>
- Smith, C., & Harris, L. (2021). Faculty involvement in strategic enrollment management at North American

- postsecondary educational institutions. *Strategic Enrollment Management Quarterly*, 8(4), 23–32. https://www.researchgate.net/profile/Clayton-Smith-6/publication/348687061_Faculty_Involvement_in_Strategic_Enrollment_Management_at_North_American_Postsecondary_Educational_Institutions/links/600d8d8c299bf14088bab9f2/Faculty-Involvement-in-Strategic-Enro
- Thomas L. Saaty. (1980). *The Analytic Hierarchy Process* (2nd, berilus ed.). McGraw-Hill International Book Company, 1980. https://books.google.co.id/books/about/The_Analytic_Hierarchy_Process.html?id=Xxi7AAAAIAAJ&redir_esc=y
- Tighnavard Balasbaneh, A., Aldrovandi, S., & Sher, W. (2025). A Systematic Review of Implementing Multi-Criteria Decision-Making (MCDM) Approaches for the Circular Economy and Cost Assessment. *Sustainability*, 17(11), 5007. <https://doi.org/10.3390/su17115007>
- Ürer Erdil, D., Tümer, M., Nadiri, H., & Aghaei, I. (2021). Prioritizing Information Sources and Requirements in Students' Choice of Higher Education Destination: Using AHP Analysis. *Sage Open*, 11(2). <https://doi.org/10.1177/21582440211015685>
- Yaqin, A. M. 'Ainul, Rosyid, M. J., Leksono, V. A., & Wantira, A. D. (2024). A Preference-Oriented Multi-Criteria Decision Model for Stunting-Prevention Food Basket Ranking using AHP-TOPSIS. *Jurnal Teknik Industri*, 26(2), 145–156. <https://doi.org/10.9744/jti.26.2.145-156>
- Yusof, N. A. M., & Salleh, S. H. (2013). Analytical Hierarchy Process in Multiple Decisions Making for Higher Education in Malaysia. *Procedia - Social and Behavioral Sciences*, 81, 389–394. <https://doi.org/10.1016/j.sbspro.2013.06.448>