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Research Article

Comparative Analysis of a State University's Physical Plant and Facilities: Internal vs External Evaluations

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ABSTRACT

In the landscape of higher education in the Philippines, institutions are subject to rigorous evaluations by accrediting bodies to ensure quality and adherence to standards. This study delves into the assessment of the physical plant and facilities of a state university, utilizing evaluations from both the university's Internal Assessment Board (IAB) and the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) considered in this study as External Accrediting Body (EAB). Through a quantitative, comparative, and descriptive research design, document analysis was conducted on the ratings provided by the IAB and EAB across various parameters. The research instrument utilized was the AACCUP Accrediting Instrument, focusing on areas such as campus infrastructure, buildings, classrooms, and other essential facilities. Data were collected from the Institutional Development Office, encompassing two visits or evaluations across six academic programs. Statistical analysis such as mean, Mann-Whitney U Test, and one- way analysis of variance (ANOVA) were employed to identify differences between the ratings of the IAB and EAB.

Remarkably, no significant differences were found in the evaluation of campus infrastructure, offices, staff, and function rooms, assembly and athletic facilities, medical and dental clinic, and food services unit/canteen. To wit, there is no significant difference between the two separate visits of the IAB [F(8,9) = .963, p = .516, not significant], no significant difference between the two separate visits of the EAB [F(8,9) = .238, p = .972, not significant], and no significant difference between the evaluation of the IAB and the EAB [Z= -1.549, p= .121, not significant]. The research findings highlight the importance of continuous

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improvement and transparency in assessing and enhancing education quality and facilities.

Keywords: AACCUP, Accrediting agency evaluation, Comparative analysis, External accrediting body, Facilities assessment, Internal assessment board, Physical plant evaluation

Introduction

Building on the concept that quality education relies on adequate and well-managed educational facilities (Abend, 2006), it is evident that this principle holds true not only at the global level but also on a local scale (Fomba et al., 2023). Across the world, countries, especially those in the developing world, are continuously striving to enhance the quality of education provided to their citizens. However, the achievement of quality education is impeded when educational institutions lack the necessary infrastructure and resources (Navarro, 2022 as cited in Simeon, 2022). With the proliferation of universities, both publicly and privately owned, it becomes increasingly crucial to ensure that these institutions have the physical capacity to support effective teaching and learning (Nurturing confident, resilient learners. 2022).

Public or state universities, in particular, play a vital role as they are either governmentowned or receive significant public funding. The school plant, encompassing buildings, classrooms, laboratories, libraries, and other facilities, serves as the backbone of educational endeavors. Therefore, as stressed by Nwuke, T. G. J. (2021), proper management and maintenance of school resources are imperative for the successful administration of educational programs and the attainment of academic excellence.

In the Philippines, public or state universities undergo rigorous evaluations by external accrediting bodies (EAB), such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP), to assess institutional quality and performance. AACCUP assigns accreditation status levels, ranging from Level 1 to Autonomous, with Level 1 denoting the lowest and Autonomous the highest level of accreditation. These evaluations encompass ten key areas, including Vision, Mission, Goals, and Objectives, Faculty, Curriculum and Instruction, Support to Students, Research, Extension and Community Involvement, Library, Physical Plant and Facilities, Laboratories, and Administration.

Cavite State University (CvSU) exemplifies such institutions, having been established by the Tenth Congress of the Republic of the Philippines. This act converted Don Severino Agricultural College in the Municipality of Indang, Province of Cavite, into Cavite State University (Republic Act No. 8468, 1998). CvSU undergoes regular monitoring by AACCUP across its various campuses to ensure compliance with accreditation standards.

To uphold these standards and requirements, the Institutional Development Office, under the University's Vice President for Planning and Development Office, appoints Professors and Associate Professors to serve as members of the CvSU's Internal Assessment Board (IAB). The IAB is tasked with monitoring and evaluating the university's internal assessment system and overseeing the implementation of quality assurance programs (Institutional development office, 2024).

The researchers of this study would like to analyze the physical plant and facilities of Cavite State University Imus Campus, one of the large campuses of the University, as evaluated by the Internal Assessment Board and the Accrediting Agency of Chartered Colleges and Universities in the Philippines across six programs in two visits.

This research aimed to 1] analyze the evaluation results of the Internal Assessment Board (IAB) on the physical plant and facilities after two separate visits, 2] analyze the evaluation results of the External Accrediting Body (EAB) on the physical plant and facilities after two separate visits, 3] test if there is a significant difference across the nine parameters based on the evaluation provided by both IAB and EAB. The scope of this study is bounded within the results of the IAB and EAB only for Area 8: Physical Plant and Facilities. Results were taken only from the six programs which were subjected to the Survey Visit in 2019. Parameter ten i.e., Housing was not included in the study since it is not applicable to the locale of the study as it is a strategic location accessible to many residents. Mere document analysis on the evaluation results was done.

Methods

The researchers gathered the results from the Institutional Development Office of Cavite State University Imus Campus. The data include the breakdown of ratings and the summary of ratings of both IAB and AACCUP for the Area 8 Physical Plant and Facilities across its six programs: BS in Business Management, BS in Hotel and Restaurant Management, BS in Entrepreneurship, BS in Computer Science, BS in Information Technology, and BA in Journalism. After gathering the data, significant difference between the ratings of the IAB and AACCUP would be determined across the nine parameters and across the six programs.

Data came from the evaluated instrument of the AACCUP. The original 12- page instrument is classified as an Outcomes Based Education (OBEdized) comprehensive tool which contains evaluation of System- Implementation- Outcomes across various parameters under Area 8 (Physical Plant and Facilities) such as a. campus; b. buildings; c. classrooms; d. offices, staff, and function rooms; e. assembly and athletic facilities; f. medical and dental clinic; g. student center; h. food services unit/ canteen; and i. accreditation center.

This study aims to analyze the physical plant and facilities of Cavite State University Imus Campus through the perspectives of the Internal Assessment Board (IAB) and the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) considered in this study as external accrediting body (EAB). As there were no direct participants in the study, the actual ratings conducted by the IAB and EAB were utilized. This research employed a quantitative, comparative, and descriptive research design by document analysis. The collected data were subjected to various statistical analysis in order to respond to the objectives of this study.

Mean was used to determine the level of ratings provided by both IAB and EAB on each parameter during the first and second visits.

Mann-Whitney U Test, a nonparametric test counterpart of independent samples t-test, was used to determine if there are statistically significant differences on the rating of IAB and EAB on each parameter considered. This will inform the researchers on whether there is a significant difference on how the IAB and EAB performs the evaluation process across all parameters in both first and second visits.

Lastly, One-Way Analysis of Variance (ANOVA) was used to determine if the ratings at each parameter is statistically different or not. By comparing the ratings of the parameters with each other, the researchers will be able to identify whether there are parameters significantly deviating from the rest of the parameters. This will help the researchers in providing informed decisions on prioritization of the parameters and suggesting effective administrative and management actions based on empirical results.

The null hypothesis (HO) posits that there is no significant difference in the evaluation of the IAB and EAB across the nine parameters after two separate visits. This hypothesis will be tested using appropriate statistical methods to ascertain the significance of any observed differences.

To facilitate a comprehensive evaluation of the internal and external assessments, a structured rating scale was employed. This scale served as the standardized mechanism for quantifying the extent to which specific criteria were met within each parameter. Ranging from 0 to 5, each numerical rating corresponds to a qualitative descriptor, allowing for a nuanced analysis of the physical plant and facilities. By applying this scale, the evaluation process gains clarity and consistency, enabling meaningful comparisons between the assessments conducted by the Internal Assessment Board (IAB) and the External Accrediting Body (EAB).

5	Excellent	Criterion is fully met with substantial number of good practices at a level that provides a model for others.	75% greater than standards
4	Very Satisfactory	Criterion is fully met in all respects at a level that demonstrates good practice.	50% greater than the standard
3	Satisfactory	Criterion is met in all respects.	100% compliance with the standards
2	Fair	Criterion is met in most respects, but some improvement is needed to overcome weaknesses.	50% lesser than the standards
1	Poor	Criterion is met minimally in some respects, but much improvement is needed to overcome weaknesses.	75% lesser than the standards
0	-	Missing	
NA	-	Not Applicable	

Results and Discussion Evaluation results of the Internal Assessment Board after Two Separate Visits

Table 1 shows the summary of the conducted descriptive analysis of the evaluation ratings on all parameters during the first and second visits of the Internal Assessment Board (IAB). Based on the computed data, the evaluation rating obtained during the first visit ($\bar{x} =$ 3.98, very satisfactory) is higher than the rating obtained during the second visit ($\bar{x} =$ 3.84, very satisfactory). Though both are very satisfactory.

In addition, it is found out that during the first visit, *Parameter A (Campus)* obtained the highest mean rating ($\bar{x} = 4.17$, very satisfactory) while the lowest is at *Parameter B (Buildings)* ($\bar{x} = 3.76$, very satisfactory).

Meanwhile, during the second visit, it was found out that the highest rating was both observed at *Parameter G* (Student Center) and Parameter H (Food Services/Canteen) (\bar{x} = 4.00, very satisfactory) while the lowest is at Parameter F (Medical and Dental Clinic) (\bar{x} = 3.52, very satisfactory).

Since specific parameter ratings varied between visits, this shows that different aspects of the institution's physical plant and facilities were perceived differently by each evaluator. While Parameter A (Campus) was highly rated during the first visit, Parameters G (Student Center) and H (Food Services/Canteen) received the highest ratings in the second visit. These findings highlight the need to consider different perspectives when planning improvements. Strict observance of the initial conference amongst the individuals involved in building construction is required (Briggs, 2018).

 Table 1. Evaluation results conducted by the Internal Assessment Board (IAB) across all parameters after two separate visits

		First Visit	Second Visit	
Parameters	Mean Rating	V.I.*	Mean Rating	V.I.*
A. Campus	4.17	Very Satisfactory	3.89	Very Satisfactory
B. Buildings	3.76	Very Satisfactory	3.76	Very Satisfactory
C. Classrooms	4.00	Very Satisfactory	3.72	Very Satisfactory
D. Offices, Staff, and Function Rooms	4.00	Very Satisfactory	3.92	Very Satisfactory
E. Assembly and Athletic Facilities	4.00	Very Satisfactory	3.92	Very Satisfactory
F. Medical and Dental Clinic	4.00	Very Satisfactory	3.52	Very Satisfactory
G. Student Center	4.00	Very Satisfactory	4.00	Very Satisfactory
H. Food Services/Canteen	4.00	Very Satisfactory	4.00	Very Satisfactory
I. Accreditation Center	3.86	Very Satisfactory	3.86	Very Satisfactory
GRAND MEAN	3.98	VERY SATISFACTORY	3.84	VERY SATISFACTORY

4.50 - 5.00 = Excellent 3.50 - 4.49 = Very Satisfactor

> .50 – 3.49 = Satisfactory .50 – 2.49 = Fair

1.00 - 1.49 = Poor 0.00 = Missing/Not Implemented

Evaluation results of the External Accrediting Body (EAB) after Two Separate Visits

Table 2 shows the summary of the conducted descriptive analysis of the evaluation ratings on all parameters during the first and second visits of the External Accrediting Body (EAB). Based on the computed data, the evaluation rating obtained during the second visit (\bar{x} = 3.79, very satisfactory) is higher than the rating obtained during the first visit (\bar{x} = 3.18, satisfactory)

In addition, it is found out that during the first visit, *Parameter I (Accreditation Center)* obtained the highest mean rating ($\bar{x} = 3.56$, very satisfactory) while the lowest is at *Parameter E (Assembly and Athletic Facilities)* ($\bar{x} = 2.90$, satisfactory).

Meanwhile, during the second visit, it was found out that the highest rating was observed at *Parameter D (Offices, Staff, and Function Rooms)* ($\bar{x} = 4.00$, very satisfactory) while the lowest is at *Parameter H (Food Services/Canteen)* ($\bar{x} = 3.66$, very satisfactory).

The increase in the overall evaluation rating from the first to the second visit suggests progress or enhancement in the institution's compliance with accreditation standards over time. This improvement reflects positively on the institution's commitment to quality assurance and continuous enhancement of physical plant and facilities. Thus, the purposes of accreditation include quality control, accountability, transparency, academic mobility and quality enhancement.

Table 2. Summary of evaluation results of the External Accrediting Body (EAB) across all parametersduring the first and second EAB visits

		First Visit	Second Visit	
Parameters	Mean Rating	V.I.*	Mean Rating	V.I.*
A. Campus	2.94	Satisfactory	3.75	Very Satisfactory
B. Buildings	3.00	Satisfactory	3.69	Very Satisfactory
C. Classrooms	3.08	Satisfactory	3.69	Very Satisfactory
D. Offices, Staff, and Function Rooms	3.08	Satisfactory	4.00	Very Satisfactory
E. Assembly and Athletic Facilities	2.90	Satisfactory	3.68	Very Satisfactory
F. Medical and Dental Clinic	3.34	Satisfactory	3.75	Very Satisfactory
G. Student Center	3.38	Satisfactory	3.88	Very Satisfactory
H. Food Services/Canteen	3.33	Satisfactory	3.66	Very Satisfactory
I. Accreditation Center	3.56	Very Satisfactory	3.97	Very Satisfactory
GRAND MEAN	3.18	SATISFACTORY	3.79	VERY SATISFACTORY

erpretation: 4.50 – 5.00 = Excellent

4.50 - 5.00 = Excellent 3.50 - 4.49 = Very Satisfactory 2.50 - 3.49 = Satisfactory

2.50 - 3.49 = Satisfactory 1.50 - 2.49 = Fair

1.00 - 1.49 = Poor 0.00 = Missing/Not Implemented

Comparative Analysis on the Evaluation of Internal Assessment Board (IAB) and External Accrediting Body (EAB) across all Parameters

Table 3 shows the comparative analysis of the evaluation ratings provided by the Internal Assessment Board (IAB) and External Accrediting Body (EAB) across all parameters considered. Mann-Whitney U test was performed to compare the ratings of IAB and EAB across all parameters and the following results were obtained: **Parameter A (Campus).** Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter A is concerned (z = -1.549, p = .121)

Parameter B (Buildings). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter B is concerned (z = -1.633, p = .102)

Parameter C (Classrooms). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter C is concerned (z = -1.549, p = .121) **Parameter D (Offices, Staff, and Function Rooms).** Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter D is concerned (z = -.408, p = .683)

Parameter E (Assembly and Athletic Facilities). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter E is concerned (z = -1.549, p = .121)

Parameter F (Medical and Dental Clinic). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter F is concerned (z = -.775, p = .439)

Parameter G (Student Center). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter G is concerned (z = -1.633, p = .102)

Parameter H (Food Services/Canteen). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter H is concerned (z = -1.633, p = .102)

Parameter I (Accreditation Center). Results show that there is no significant difference between the ratings provided by IAB and EAB as far as Parameter I is concerned (z = 0.000, p = 1.000)

Overall. Results show that there is no significant difference between the overall ratings provided by IAB and EAB (z = -1.549, p = .121)

The implications of the comparative analysis between the evaluation ratings provided by the Internal Assessment Board (IAB) and External Accrediting Body (EAB) across all parameters are significant for understanding the alignment and consistency of assessments from both IAB and EAB.

The results of the Mann-Whitney U test indicate that there are no significant differences in the ratings provided by the two boards for each parameter individually, as well as for the overall evaluation. This suggests harmony in the assessments conducted both by IAB and EAB, indicating consistency in evaluating various aspects of the institution's physical plant and facilities and its compliance with accreditation standards. Such alignment between internal and external evaluations is crucial for ensuring credibility and reliability in the accreditation process.

Moreover, it signifies that the institution's internal assessment mechanisms are aligned with external accreditation standards, fostering confidence in the validity of the accreditation outcomes. Additionally, these findings affirm the institution's commitment to quality assurance and continuous improvement, as evidenced by the congruence between internal and external assessments. Overall, the results of the comparative analysis underscore the effectiveness of the institution's evaluation processes and highlight its readiness to meet external accreditation requirements.

 Table 3. Test of difference between the evaluation of Internal Assessment Board (IAB) and External

 Accrediting Body (EAB) across all parameters

Parameter	Z	p-value	Significance	Decision
Parameter A	-1.549	.121	Not Significant	Do not reject H _o
Parameter B	-1.633	.102	Not Significant	Do not reject H _o
Parameter C	-1.549	.121	Not Significant	Do not reject H _o
Parameter D	408	.683	Not Significant	Do not reject H _o
Parameter E	-1.549	.121	Not Significant	Do not reject H _o
Parameter F	775	.439	Not Significant	Do not reject H _o
Parameter G	-1.633	.102	Not Significant	Do not reject H _o
Parameter H	-1.633	.102	Not Significant	Do not reject H _o
Parameter I	0.000	1.000	Not Significant	Do not reject Ho
Overall	-1.549	.121	Not Significant	Do not reject Ha

Comparative Analysis of all Parameters as Rated by the Internal Assessment Board (IAB) and External Accrediting Body EAB)

Table 4 below shows the comparative analysis across all parameters as rated by the Internal Assessment Board (IAB). One-Way Analysis of Variance (ANOVA) was performed to compare the ratings provided by IAB at each parameter during the first and second visits. Based on the results obtained, there is no statistically significant difference found on the parameters considered [F(8,9) = .963, p = .516, not significant]. This further tells that the ratings received by each parameter during the internal visit are statistically equal and all must be prioritized and taken into consideration as far as administrative and supervisory actions are concerned.

 Table 4. Test of difference between each parameter as rated by the Internal Assessment Board (IAB)
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F-value	df	p-value	Significance	Decision
.963	8,9	.516	Not Significant	Do not reject H _o

On the other hand, Table 5 shows the comparative analysis across all parameters as rated by the External Accrediting Body (EAB). One-Way Analysis of Variance (ANOVA) was also performed to compare the ratings provided by EAB at each parameter during the first and second visits. Based on the results obtained, there is no statistically significant difference found on the parameters considered [*F*(8,9) = .238, p = .972, not significant].

This further tells that the ratings received by each parameter during the AACCUP visit are statistically equal and all must be prioritized and taken into consideration as far as administrative and supervisory actions are concerned.

F-value	df	p-value	Significance	Decision
.238	8, 9	.972	Not Significant	Do not reject H _o

Conclusions

Based on the analysis of the evaluation ratings obtained during the first and second visits of the Internal Assessment Board (IAB) and the External Accrediting Body (EAB), several conclusions were drawn by the researchers:

- 1. The study found no significant differences in the evaluation ratings provided by the IAB and EAB across all parameters considered. This indicates a high level of alignment and consistency in the assessments conducted by both internal and external evaluators even if there are separate visits. Such alignment is crucial for ensuring credibility and reliability in the accreditation process, indicating that the institution's internal assessment mechanisms are aligned with external accreditation standards.
- 2. The congruence between internal and external assessments suggests a strong commitment to quality assurance and continuous improvement within the institution.

The consistent evaluation of various aspects of the physical plant and facilities reflects the institution's dedication to meeting accreditation standards, enhancing, and improving the quality of educational infrastructure.

- 3. The results of the comparative analysis underscore the effectiveness of the institution's evaluation processes in assessing the physical plant and facilities. By utilizing structured rating scales and employing rigorous statistical analysis, the study demonstrates the institution's capacity to conduct thorough and reliable evaluations and actions to show improvement efforts as reflected by the scores.
- 4. The study's findings indicate that Cavite State University Imus Campus in terms of its physical plant and facilities is well-prepared to meet external accreditation requirements, as evidenced by the congruence between internal and external

evaluations. This readiness reflects positively on the institution's ability to maintain accreditation status, uphold, and improve standards of excellence in its physical infrastructure.

Further, the following also serve as recommendations for Cavite State University Imus Campus to further improve the physical plant and facilities:

- 1. Prioritize areas which gathered satisfactory ratings, by allocating resources and implementing targeted enhancement initiatives.
- 2. Emphasize continuous maintenance and upkeep across all facilities to prevent deterioration, ensure a conducive learning environment, and maintain or improve the evaluation ratings.
- 3. Enhance student facilities, strategic resource allocation, and stakeholder engagement mechanisms to meet the needs and sustaining institutional excellence.
- 4. Integrate sustainability practices and establish a framework for ongoing monitoring and evaluation to facilitate continuous improvement and alignment with accreditation standards, positioning the university for sustained success in the future.

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