



SIX-YEAR ENROLLMENT TREND ANALYTICS AT WESLEYAN UNIVERSITY- PHILIPPINES: A DATA-DRIVEN BASIS FOR REGISTRAR'S OFFICE DIGITALIZATION AND AUTOMATION

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Abstract: This study analyzed institutional enrollment trends across six academic years, from Academic Year (AY) 2018–2019 to AY 2023–2024, with emphasis on changes by college and sex. Specifically, it compared the combined enrollment counts during the first three academic years (2018–2019 to 2020–2021) with those during the last three academic years (2021–2022 to 2023–2024). A descriptive-comparative approach was used to analyze institutional enrollment records. Frequency counts, percentages, numerical differences, and percentage changes were employed to identify patterns of enrollment growth and decline. Findings revealed that annual enrollment initially decreased by 5.34% from AY 2018–2019 to AY 2019–2020 but subsequently recovered, with the largest annual increase of 26.97% occurring in AY 2021–2022. Enrollment reached a six-year high of 15,043 in AY 2023–2024. Comparing the two three-year periods, overall enrollment increased from 29,901 to 42,231, representing an increase of 12,330 or 41.24%. Seven of the eight colleges recorded enrollment growth, while the College of Education (COED) decreased by 3.73%. The College of Nursing (CON) demonstrated the largest percentage increase at 157.23%, followed by the College of Arts and Sciences (CAS) at 44.15% and the College of Allied Medical Sciences (CAMS) at 41.05%. Female enrollment remained higher than male enrollment, accounting for 61.30% of enrollment during the last three-year period. Female enrollment increased by 48.81%, compared with 30.70% among males. However, sex composition differed across colleges, with males remaining the majority in CCJE and CECT. The findings demonstrate substantial institutional enrollment expansion, although the magnitude and sex distribution of growth varied across academic units. These enrollment analytics provide an empirical and data-driven basis for institutional planning and for advancing the digitalization and automation of registrar operations, particularly in enrollment monitoring, automated reporting, data visualization, and decision support. Integrating historical enrollment data into a digital registrar information environment may facilitate more efficient monitoring of enrollment patterns, resource allocation, staffing, student services, and program development. The figures represent enrollment counts across the first semester, second semester, and summer terms and should not be interpreted as counts of unique individual students.

Keywords: academic programs, enrollment trends, higher education, institutional planning, sex distribution

INTRODUCTION

Enrollment is an essential measure that reflects the growth and changes in the demands of the academic field of the higher education institutions. Enrollment analysis provides the necessary information for the planning of academic programs, the needs of faculty, facilities, and student services. The Commission on Higher Education (CHED, 2024a) provides enrollment data based on sex, institution types, regions, and program levels, emphasizing the significance of disaggregated data. Moreover, using HEMIS (Higher Education Management Information System), CHED obtains enrollment data and other institutional data in order to make data-based decisions (CHED Regional Office I, 2024).



Consequently, enrollment data may be used as valuable inputs for the aforementioned information systems (Manuel et al., 2025).

An analysis of the pattern of enrollments over a period of time would enable universities to know which units are performing well and those that need more focus. The use of longitudinal enrollment analytics will help universities separate short-term developments from long-term trends. In the case of the Philippines, HEMIS obtains information regarding the program, enrollments, graduates, faculty, and other institutional data (CHED Regional Office XI, 2024). Effective management of such data would also facilitate the shift from conventional and piecemeal processes to registrar information systems (Sanie, Mousavifard, & Ayoubi, 2016).

Sex-segregated numbers of enrollees are also significant in analyzing higher education enrollments. For AY 2021-2022, there are more female students than male in the Philippines' tertiary schools because the number of females stood at 2,572,137 while that of males stood at 1,871,080 (Philippine Statistics Authority [PSA], 2024). The same trend was found in the Davao Region, where 56.8% of total enrollees are female in AY 2023-2024 (PSA, 2025a) and in SOCCSKSARGEN, where 57.4% of the enrollees are female (PSA, 2026). This information serves as a good starting point to analyze differences by sex in a particular institution and college-wise.

Enrollment at Wesleyan University-Philippines demonstrated major fluctuations during the six-year period. The number of students enrolled fell from 10,158 in AY 2018-2019 to 9,616 in AY 2019-2020 but then increased to 10,127 in AY 2020-2021. Afterwards, it saw a major increase to 12,858 in AY 2021-2022, 14,330 in AY 2022-2023, and 15,043 in AY 2023-2024. These fluctuations show that there is a need for analyzing enrollments by college and sex. As enrollments increase, effective management and analysis of institutional data become more crucial for the Registrar's Office operations (Aquino & De Asis, 2025).

As such, this research looked into the enrollment patterns of Wesleyan University-Philippines from AY 2018-2019 up to AY 2023-2024, looking specifically into yearly enrollments, college differences, and gender patterns in enrollment. These results can help in making decisions regarding staffing, facility, student services, program creation, recruitment, and resource allocation. What is more, the six-year data analysis may be used as the base for digitalization and automation of the Registrar's Office, particularly with regard to automated enrollment tracking, visual data presentation, report creation, and decision-making. Such an approach goes along well with the significance of using high-quality higher education data for effective decision-making (CHED Regional Office I, 2024).

Statement of the Problem

The objective of this study was to study the trend in the enrolment of the institution from the year 2018-2019 to the year 2023-2024, focusing on the comparison between the first three academic years (2018-2019 to 2020-2021) and the last three academic years (2021-2022 to 2023-2024). The study tried to address the following questions:

1. What was the annual enrollment trend from AY 2018-2019 to AY 2023-2024 in terms of male enrollment, female enrollment, total enrollment, and percentage change from the previous academic year?
2. What changes in enrollment occurred between the first three academic years and the last three academic years among the different colleges in terms of numerical difference and percentage increase or decrease?
3. How did male and female enrollment compare between the first three academic years and the last three academic years in terms of enrollment count, numerical difference, percentage increase or decrease, and share of total enrollment?
4. What changes occurred in male and female enrollment within each college between the first three academic years and the last three academic years?
5. What overall enrollment patterns can be identified from the six-year institutional enrollment data?



METHODOLOGY

This study employed a quantitative descriptive-comparative research design using secondary institutional data to analyze enrollment trends at Wesleyan University-Philippines from AY 2018–2019 to AY 2023–2024. The study compared enrollment during the first three academic years (AY 2018–2019 to AY 2020–2021) with the last three academic years (AY 2021–2022 to AY 2023–2024). Secondary data analysis is appropriate for examining existing records to answer research questions and identify trends over time (Johnston, 2014; Kelly et al., 2024). The data consisted of official institutional enrollment records categorized by academic year, college, and sex. Enrollment figures covered the first semester, second semester, and summer terms and were therefore treated as enrollment counts rather than counts of unique individual students.

The results were obtained through frequency counts, percentages, numerical differences, and percentage changes. Enrollment per year was used in order to detect trends in year to year enrollment. First three years and last three years were compared in order to find changes in colleges and by gender. Percentage change was calculated by taking the difference between two enrolment figures and dividing it by the early enrolment figure multiplied by one hundred. As this research used the full enrollment information for six years, descriptive and comparative statistics were used instead of inferential tests. The obtained enrolment statistics were used as a basis for further institutional planning, especially in terms of Registrar's Office digitalization and automation in the areas of enrollment management, data visualization, reporting, and trend analysis (Johnston, 2014).

RESULTS AND DISCUSSION

Enrollment Trend Analysis

Comparison of the First Three Academic Years and the Last Three Academic Years

Academic Years 2018-2019 to 2023-2024

The analysis compares the combined enrollment counts for the first three academic years (2018-2019 to 2020-2021) with the last three academic years (2021-2022 to 2023-2024). The figures are enrollment counts across the first semester, second semester, and summer terms as reported in the source workbook; therefore, they should not be interpreted as counts of unique individual students.

Table 1. Annual Enrollment by Sex and Academic Year

Academic Year	Male	Female	Total	% Change from Previous Year
2018-2019	4,429	5,729	10,158	-
2019-2020	4,170	5,446	9,616	-5.34%
2020-2021	3,905	6,222	10,127	+5.31%
2021-2022	4,832	8,026	12,858	+26.97%
2022-2023	5,509	8,821	14,330	+11.45%
2023-2024	6,002	9,041	15,043	+4.98%

Total enrollment decreased from 10,158 in 2018-2019 to 9,616 in 2019-2020, a 5.34% decline. It then increased by 5.31% in 2020-2021. The largest year-to-year growth occurred in 2021-2022, when enrollment rose by 26.97% to 12,858. Growth continued in 2022-2023 by 11.45% and in 2023-2024 by 4.98%, bringing the six-year high to 15,043.

Table 2. College Enrollment: First Three Years vs Last Three Years

College	First 3 Years	Last 3 Years	Difference	% Increase/Decrease	Trend
COED	2,490	2,397	-93	-3.73%	Decrease
CAS	2,827	4,075	+1,248	+44.15%	Increase
CBA	7,549	8,936	+1,387	+18.37%	Increase
CCJE	1,532	1,699	+167	+10.90%	Increase



College	First 3 Years	Last 3 Years	Difference	% Increase/Decrease	Trend
CECT	3,569	4,046	+477	+13.37%	Increase
CAMS	4,168	5,879	+1,711	+41.05%	Increase
CON	4,115	10,585	+6,470	+157.23%	Increase
CHTM	3,651	4,614	+963	+26.38%	Increase
Overall	29,901	42,231	+12,330	+41.24%	Increase

Across all colleges, the combined enrollment count increased from 29,901 in the first three-year period to 42,231 in the last three-year period, an increase of 12,330 or 41.24%. Seven of the eight colleges recorded growth. CON showed the largest percentage increase at 157.23%, rising from 4,115 to 10,585. CAS increased by 44.15%, CAMS by 41.05%, CHTM by 26.38%, CBA by 18.37%, CECT by 13.37%, and CCJE by 10.90%. COED was the only college to decline, decreasing from 2,490 to 2,397, or 3.73%.

Table 3. Male and Female Enrollment: First Three Years vs Last Three Years

Sex	First 3 Years	Last 3 Years	Difference	% Increase/Decrease	Share in Last 3 Years
Male	12,504	16,343	+3,839	+30.70%	38.70%
Female	17,397	25,888	+8,491	+48.81%	61.30%
Total	29,901	42,231	+12,330	+41.24%	100.00%

Female enrollment was higher than male enrollment in both periods. In the first three years, females accounted for 17,397 enrollment counts compared with 12,504 males. In the last three years, female enrollment increased to 25,888 while male enrollment increased to 16,343. This represents a 48.81% increase among females and a 30.70% increase among males. Females represented 61.30% of enrollment in the last three-year period, compared with 38.70% for males.

Table 4. Male and Female Enrollment Change by College

College	Male First 3	Male Last 3	Male % Change	Female First 3	Female Last 3	Female % Change	Last 3 M	Last 3 F
COED	756	733	-3.04%	1,734	1,664	-4.04%	30.6%	69.4%
CAS	1,083	1,357	+25.30%	1,744	2,718	+55.85%	33.3%	66.7%
CBA	2,454	2,812	+14.59%	5,095	6,124	+20.20%	31.5%	68.5%
CCJE	1,174	1,237	+5.37%	358	462	+29.05%	72.8%	27.2%
CECT	3,034	3,323	+9.53%	535	723	+35.14%	82.1%	17.9%
CAMS	1,317	1,917	+45.56%	2,851	3,962	+38.97%	32.6%	67.4%
CON	1,191	3,111	+161.21%	2,924	7,474	+155.61%	29.4%	70.6%
CHTM	1,495	1,853	+23.95%	2,156	2,761	+28.06%	40.2%	59.8%

Analysis by College

COED. COED witnessed a slight decline of 3.73% overall. Males showed a decline of 3.04% while females registered a decline of 4.04%. Female enrollment remained higher than male enrollment in both the time periods, showing that the decline was for both genders and not just one particular gender.

CAS. CAS witnessed an overall increase of 44.15%. Males registered an increase of 25.30% while females registered a much higher increase of 55.85%. So, the increase in CAS was mainly attributed to the increase in female enrollment.

CBA. CBA saw an overall increase of 18.37%. Males increased by 14.59% while females increased by 20.20%. Again, the females were in the majority and their increase contributed more to the overall increase.

CCJE. The overall increase in CCJE is 10.90%. There is a 5.37% increase in male enrollment and 29.05% increase in female enrollment. Despite the higher increase in female enrollment, males still form the majority in CCJE in the past three years.

CECT. The overall increase in CECT is 13.37%. Male enrollment shows an increase of 9.53%, while there is a 35.14% increase in female enrollment. While males form the majority, the increase in female enrollment is much faster.



CAMS. The overall increase in CAMS is 41.05%. The increase in male enrollment is 45.56% and that of female enrollment is 38.97%. Although female enrollment is still higher, there is a slightly higher increase in male enrollment.

CON. CON was the college that demonstrated the largest growth percentage (157.23%). Male students were up 161.21%, whereas females had increased by 155.61%. The number of both male and female students increased significantly; however, females comprised a larger portion of CON students.

CHTM. The number of students enrolled at CHTM increased by 26.38% in general. Male students were up 23.95%, whereas females increased 28.06%. The number of female students was larger, and their increase was more significant.

Overall Comparative Analysis

The comparison indicates a clear expansion in enrollment during the last three academic years. The overall increase of 41.24% was not evenly distributed across colleges: CON accounted for the most pronounced growth, while COED experienced a small decline. The pattern also shows that female enrollment grew faster than male enrollment overall. However, the sex distribution differed by college, with male enrollment remaining dominant in CCJE and CECT while female enrollment was higher in most of the other colleges.

The annual data further show that the expansion accelerated beginning in 2021-2022. Although the institution experienced a decrease in 2019-2020 and only modest recovery in 2020-2021, enrollment rose substantially in the following three years. The slower 4.98% increase in 2023-2024 compared with the preceding two years suggests that enrollment was still growing, but at a more moderate rate by the end of the period.

CONCLUSIONS

1. The WUP showed a general positive increase in terms of student enrolment for the six years. While student enrolment decreased in the beginning, it bounced back to peak at 15,043 in AY 2023-2024. Nevertheless, the declining annual growth rate for the last two years indicates that the increase in student enrolment is getting slower.
2. There was a substantial increase in enrollment between the first and last three-year period, with a total increase of 41.24 percent. Out of the eight colleges, seven showed an increase, but the College of Nursing (CON) had the greatest increase of 157.23 percent, whereas the College of Education (COED) was the only college that showed a decrease.
3. The number of female students was always higher than that of male students and also showed a faster increase. The share of females among the total number of students was 61.30% in the latest three-year period, showing how important it is to analyze the data disaggregated by sex in the process of planning.
4. There were also differences in enrollment by sex depending on colleges. Female enrollment was the predominant one in all but two colleges, whereas male students constituted the majority in CCJE and CECT. Overall, the six-year enrollment trends demonstrate the value of systematically collecting, organizing, and analyzing historical enrollment data for institutional decision-making.
5. The identified patterns by academic year, college, and sex provide a data-driven basis for the digitalization and automation of the Registrar's Office. These findings may guide the future development of automated enrollment monitoring, data visualization, report generation, trend analytics, and decision-support functions that can improve the efficiency, accuracy, and accessibility of registrar services and institutional planning.

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