

Post Pandemic Visitor Engagement and Resource Utilization: A Comparative Analysis (2022-2024) of Tanauan City College

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Abstract. This study examines the relationship between library client visits and borrowing behavior at Tanauan City College Library over three years (2022–2024). Despite an increasing trend in visitor traffic, borrowing rates did not consistently follow suit. The research conducts a SWOT analysis to identify strategies for improving resource utilization. A practical, data-driven approach analyzed monthly visitor and borrowing records from 2022 to 2024. The non-experimental, retrospective design relied on existing library records to uncover patterns and relationships between these variables. One-way ANOVA results revealed statistically significant differences in both visitor and borrowing counts across the years. Visitor counts showed $F=5.92, p=0.006$, while borrowing counts indicated $F=4.38, p=0.019$. These findings confirm that observed changes were not mere random fluctuations but reflected meaningful shifts in client engagement with library resources. In summary, the data highlights a critical disconnect: high visitor traffic does not guarantee high borrowing or engagement. While footfall increased, borrowing lagged, signaling untapped potential in converting visits into active resource use. The SWOT analysis underscores strengths like growing visibility and opportunities for targeted outreach, while addressing weaknesses such as underutilized collections and threats from digital alternatives. Recommendations urge the library to adopt intentional strategies, including user education programs, enhanced resource promotion, and interactive events to foster deeper interactions. By bridging the visit-engagement gap, Tanauan City College Library can optimize utilization and better serve its community.

Introduction

Library's success has been most often perceived and determined by the number of visitors counts alone, and are used as a primary metric for all its client engagement. However, true engagement is better reflected in how visitors interact with available resources on hand—such as borrowing books, utilizing its services, or attending library literacy and related programs.

This study explores the relationship between library clients visit of Tanauan City College and their borrowing behavior from 2022 to 2024 respectively. It aims to identify patterns, inefficiencies, and opportunities for improving utilization as the academe eventually heads back towards the usual normal operation. By analyzing monthly data, the study provides clear guide to better enhance service delivery and user engagement.

Statement of the Problem

In the increasing trend of the library visitors' traffic, borrowing rates does not consistently follow the same trend. For instance, in 2024, visitors' number peaked in January, yet borrowing activity remained low. This discrepancy raises concerns about engagement and resource utilization. Understanding the factors behind these trends are essential for improving library efficiency and effectiveness.

Objectives of the Study

This study aims to analyze the relationship between library clients' visit and the borrowing behavior of Tanauan City College Library clients from 2022 to 2024 and do the swot analysis to determine and design appropriate strategies to improve utilization. Specific Objectives: (1) Compare year-over-year trends in visitor and borrowing data, (2) Calculate borrowing efficiency (borrowings per visitor) across months and years, (3) Identify high-traffic periods with low borrowing engagement, (4) Apply ANOVA to test for significant differences across years, and (5) Recommend strategies to improve borrowing utilization.

Significant of the Study

This study contributes to the growing body of research on data-driven decision-making in libraries. By analyzing the relationship between library visits and borrowing behavior, it offers insights into how engagement can be measured more meaningfully beyond attendance figures. The findings are particularly valuable for: Institutional Managers: To identify under-utilized periods and optimize programming, staffing, and resource allocation, Policy Makers: To support evidence-based strategies that enhance the library's public service impact, Researchers: To build on quantitative methods for evaluating user engagement, and Community Stakeholders: To understand how their participation translates into resource use and institutional value. Ultimately, the study aims to improve the efficiency and responsiveness of Tanauan City College library by aligning services with actual user behavior.

Methodology

This study opted a practical, data-driven approach to understand how Tanauan City College library clients engage with the library resources. By looking at monthly visitor's and borrowing records from 2022 to 2024, it also explores not just how many people came through the doors, but how many actually used the services and resources as well. The analysis focuses on three key questions: (1) How did visitor and borrowing numbers change over time? (2) Were there months when lots of people visited but few borrowed? and (3) What patterns can help improve engagement?

Research Design

This study used a quantitative, descriptive-comparative design to analyze trends in client visits and borrowing behavior over a three-year period (2022–2024). The approach is non-experimental and retrospective, relying on existing records of Tanauan City College library to uncover patterns and relationships between variables

Collection of Data Sources

Two datasets were used: *Visitor Data*: Monthly counts of individuals who visits Tanauan City College library from January to December for each year (2022–2024). *Borrowing Data*: Monthly records of items borrowed during the same period. These datasets were extracted from Tanauan City College library visitors log books and have been compiled into structured tables. Each dataset includes 12 monthly entries per year, totaling 36 data points per variable. Variables Independent: Visitor count, Dependent: Borrowing count, Derived: and Borrowings per visitor. This Derived metric serves as a representation for utilization efficiency, indicating how effectively visitor traffic translates into resource engagement.

Analytical Procedures

Descriptive Statistics

Descriptive Statistics is used to summarize and compare data across years:

1. Measures of Central Tendency: Mean and median
2. Measures of Dispersion: Minimum, maximum, and range

These statistics help identify general trends, peaks, and anomalies in both visit trends and borrowing behavior.

Ratio Analysis

Borrowings per visitor were calculated monthly to assess engagement efficiency. This metric highlights months with high traffic but low borrowing, and vice versa.

One-Way ANOVA (Analysis of Variance)

One-Way ANOVA is applied separately to both visitor and borrowing datasets to test for statistically significant differences across years.

1. Null Hypothesis (H_0): No significant difference in mean values across years
2. Alternative Hypothesis (H_1): At least one year differs significantly
3. Significance Level: $\alpha = 0.05$

If the p-value is below 0.05, the null hypothesis is rejected, indicating meaningful variation over time.

Data Visualization

To visualize data, line graphs were generated to illustrate the following:

1. Monthly trends in visitor and borrowing counts
2. Year-over-year comparisons
3. Borrowing efficiency patterns

Visuals enhance interpretability and support the narrative of the findings.

Scope and Limitations

The study focuses exclusively on monthly visitor and borrowing data of Tanauan City College library from 2022 to 2024. External factors (e.g., holidays, institutional changes, public health events) are not explicitly analyzed. Borrowing behavior is treated as a uniform metric, without disaggregating by item type or user demographics.

Results and Discussion

For the three-year period from 2022 to 2024, the data presented striking patterns in both visitor traffic and borrowing behavior.

Visitor Trends

In 2023 was the busiest year, with over 7,300 visitors—nearly double the count in 2022, then in 2024 started strong, especially in January, which shown a dramatic spike in visitors (1,515). But after that, numbers gradually declined and 2022 had the lowest overall traffic, with just under 3,800 visitors across the year.

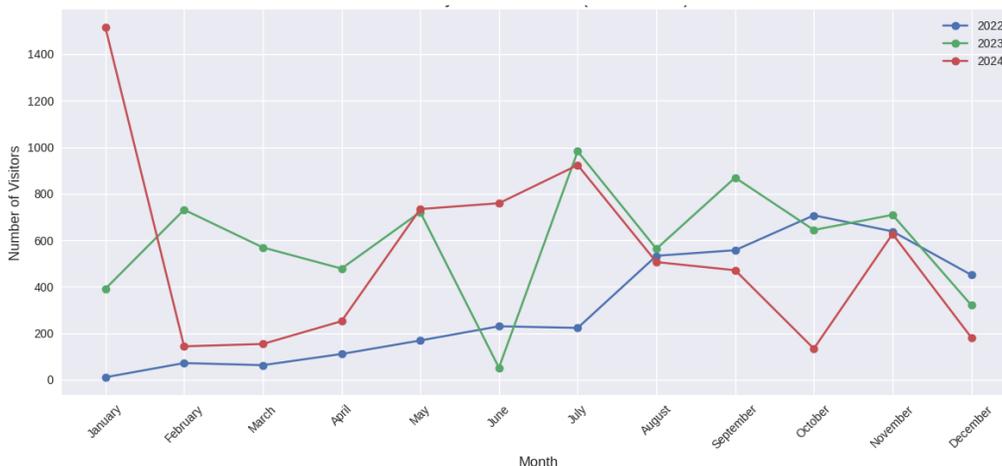


Figure No. 1. Monthly Visitor Trends (2022-2024)

Borrowing Trends

Borrowing activity mirrored visitor traffic in 2023, peaking in August with 211 items borrowed. In contrast, 2024 showed a disconnect: despite high visitor numbers early in the year, borrowing remained relatively low. February 2024 stood out as an exception—it had fewer visitors but the highest borrowing efficiency (0.60 borrowings per visitor), suggesting something worked well that month.

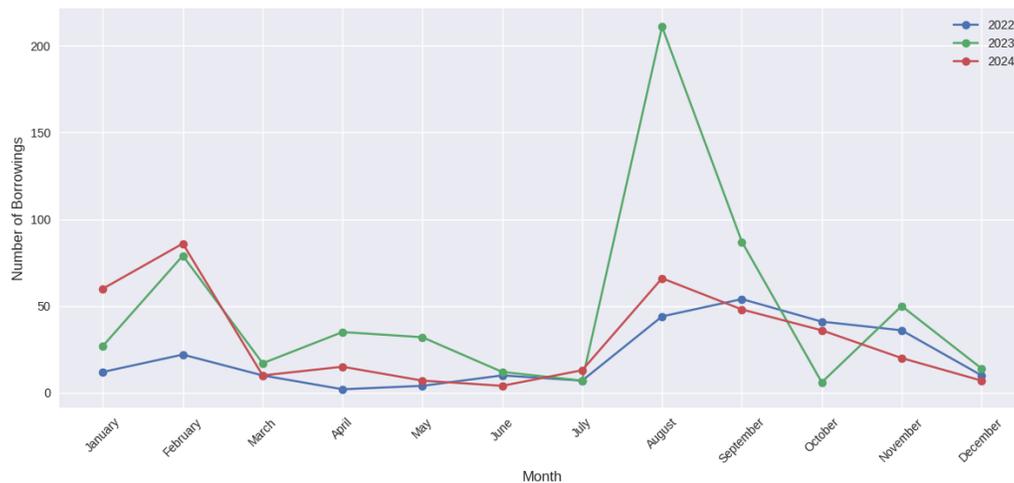


Figure No. 2. Monthly Borrowing Trends (2022-2024)

Borrowing Efficiency

This metric—borrowings divided by visitors—helped highlight months where engagement was strong or weak. February 2024 had the best efficiency, while May to July 2024 had high traffic but very low borrowing rates (as low as 0.01), pointing to missed opportunities.

Statistical Analysis

A one-way ANOVA test showed that differences in both visitor and borrowing counts across the three years were statistically significant: Visitor counts: $F = 5.92, p = 0.006$ Borrowing counts: $F = 4.38, p = 0.019$. These results confirm that the changes weren't just random fluctuations—something meaningful shifted in how people engaged with the institution over time.

Discussion

The data from 2022 to 2024 presented a few patterns that stand out. Firstly, 2023 clearly shows the most active year, with both visitor traffic and borrowing numbers reaching their peak. This simply suggests that something worked well that year—whether it was programming, outreach, or simply timing. However, 2024 tells a different story. Visitor numbers were still strong, especially in January, yet borrowing rates dropped. These disconnect raises important questions: Why were visitors less interested in borrowing? Were resources harder to access? Or did the institution miss opportunities to convert interest into action?

Moreover, it interestingly shows that, February 2024 had the highest borrowing efficiency, even though it had one of the lowest visitor counts. That month may have benefited from a targeted campaign or event that encouraged borrowing. If so, it's a model worth replicating.

Now, the ANOVA results confirm that these shifts weren't random. There are statistically significant differences in both visitor and borrowing behavior across the three years. These means something has changed—and it's worth digging into why, reinforcing the need for strategic interventions. To sum it all, the data shows that high traffic doesn't automatically mean high engagement. The library needs to be intentional about turning visits into meaningful interactions.

Conclusion and Implications

This study was set out to explore how visitor traffic relates to borrowing behavior of Tanauan City College library clients—and the results are clear: numbers alone don't tell the full story. Despite 2023 records showed strong alignment between visitors and borrowings, 2024 revealed a remarkable gap, that needs attention. Thru the trend's analysis, calculating borrowing efficiency, and applying statistical tests, the study uncovered both strengths and missed opportunities. The value of looking beyond attendance and focusing on how people actually use resources was also highlighted

Therefore, to move forward, Tanauan City College Library can use these findings to design smarter strategies—ones that not only attract visitors but also encourage deeper engagement. By identifying underperforming periods and applying targeted strategies, the library can enhance their impact and better serve their communities. The goal is the same: to make every visit count. Remember that visitor numbers alone do not guarantee effective resource utilization.

Recommendations

Considering the patterns, we've seen in the data, here are the practical steps Tanauan City College library can look into and consider to improve borrowing utilization and make visitor engagement more meaningful:

1. Learn from What Worked. February 2024 had the highest borrowing efficiency despite low visitor numbers. Something clearly clicked that month—whether it was a campaign, a special event, or a change in layout. Take a closer look at what happened and consider repeating or adapting those strategies in other months.
2. Make the Most of Busy Months. Months like January, May, and July had high visitor traffic but low borrowing rates. These are golden opportunities. Try introducing themed borrowing drives, staff-curated collections, or quick-pick bundles that make borrowing easier and more appealing during peak times.
3. Help Visitors Engage More Deeply. Sometimes people visit without knowing what's available or how to borrow. Clear signage, friendly staff prompts, and interactive displays can make a big difference. Even small nudges—like “Staff Picks of the Month” or “Borrow One, Get One Free”—can encourage action.
4. Tailor Offerings to Different Audiences. Not all visitors are the same. Some come to browse, others to study, and some just to relax. Consider segmenting your audience and offering borrowing options that speak to their needs—like academic kits for students or leisure bundles for casual readers.
5. Ask Visitors What They Need. If borrowing rates are low, don't guess—ask. A simple feedback form or short survey can reveal barriers you hadn't considered, like confusing processes, lack of relevant materials, or even timing issues. Use that input to refine your approach.
6. Align Programs with Seasonal Interests. Borrowing tends to follow seasonal rhythms. Use that to your advantage by promoting collections that match the moment—summer reads, exam prep, holiday themes, or wellness kits. When the content feels timely, people are more likely to engage.

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Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

The data used in this research can be accessed through a formal request to the author of the study.

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Appendices

No appendices are included in this article.