

Relationship between Library Usage and Perceived Academic Performance of TESDA Diploma Trainees: Basis of Research-Based Intervention Plan

Jovie B. Agway

*Master of Arts in Education, Major in Management, Osias Educational Foundation, Inc.
Balaoan, La Union, Philippines*

Publication history: Received: January 12, 2026; Revised: May 21, 2026; Accepted: May 23, 2026

Email of Corresponding Author: jbagway@tesda.gov.ph

Abstract

This study sought to determine the correlation between library use and the perceived academic achievement of TESDA Diploma trainees at the main campus of the Cordillera State Institute of Technical Education (CSITE) and to assess the association of library use with educational achievement in competency-based Technical-Vocational Education and Training (TVET). The study adopted a quantitative correlational design to survey 106 first- to third-year trainees in the Diploma in Culinary Arts and the Diploma in Hospitality and Supervision, using stratified random sampling. Data were analyzed via descriptive statistics and Spearman's Rho correlation. The results showed that the library was not used frequently but was used purposefully. Trainees reported high perceived academic performance on all parameters. Perceived academic accomplishment was not substantially associated with frequency of library use or total time spent in the library. However, the purpose of library use and the level of participation were marginally statistically significantly connected. Perceived academic success was also weakly but substantially associated with library utilization during the assessment phase. These results imply that the quality and goal of library engagement are significantly more critical than the quantity or duration of use, a crucial finding for how TVET institutions build and embed library services within competency-based curricula. A research-based intervention plan is presented to improve participation and to incorporate library services more deliberately in training and assessment. It is recommended that future research consider mixed-methods or longitudinal designs to overcome the limitations of cross-sectional surveys by collecting data on motivational, instructional, and digital literacy factors.

Keywords: Library Usage, Perceived Academic Performance, TESDA Diploma Trainees, TVET, Competency-Based Learning, Research-Based Intervention

1. Introduction

Every good technician, professional cook, or hospitality graduate will have had a learning path that stretches well beyond the walls of a workshop or training kitchen, one that is quietly supported by access to materials, references, and the venues that empower autonomous learning. Research worldwide consistently links the quality of academic support environments, including libraries, to learner achievement and confidence. In Technical-Vocational Education and Training (TVET), however, that relationship remains largely unexamined by both researchers and policymakers. The Philippines is investing heavily in skills-based education through landmark legislation and national development frameworks, making it an urgent moment to examine what drives trainee success.

When Republic Act No. 12313 the Lifelong Learning Development Framework Act was signed into law in October 2025, it did not simply add another layer to existing education policy. It raised the stakes. By institutionalizing lifelong learning as a regulatory expectation rather than an aspirational goal, the law brought every TVET institution's learning environments, resource systems, and academic support infrastructure under the direct scope of national policy accountability (Republic Act No. 12313, 2025). Institutions can no longer treat these components as administrative afterthoughts.

The international literature had already been pointing in this direction for some time. UNESCO-UNEVOC (2024) identified strengthened access to learning resources and library infrastructure as conditions that quality technical education cannot do without not as enhancements, but as necessities. OECD (2023) research adds further weight to this position, showing that meaningful engagement with library resources produces measurable outcomes: learners develop information literacy, gain academic confidence, and reinforce occupational competencies in ways that workshop training alone cannot fully achieve. Taken together, these findings reflect a broader conceptual shift the library is no longer understood as a room where materials are stored and borrowed. It has become a working learning environment, one where trainees build habits of inquiry and learn to study independently.

In the Philippines, TESDA carries the mandate for technical-vocational education, and Republic Act No. 12313 has given that mandate sharper edges. The law's language is deliberate: accessible, structured learning environments are not supplemental to skills development they are part of what skills development actually means. The LLDF Act guarantees every Filipino citizen equal opportunity for lifelong learning and holds TVET institutions accountable for maintaining the kinds of environments where that learning can genuinely take place, not just in principle, but in practice.

Situated in the Cordillera Administrative Region, CSITE-Main Campus is among the TESDA-mandated institutions that carry the primary responsibility of delivering diploma-level technical-vocational programs to the region's workforce candidates. Central to its academic operations are the campus library and learning resource center, which do more than house reading materials they provide trainees with the foundational knowledge that gives meaning and depth to what is practiced in the workshop. This role is not incidental. Lasig and Collantes (2022) established that trainees who make active use of library services tend to report better academic performance, and that this relationship holds most strongly when learners perceive those resources as genuinely accessible and useful to their studies.

Still, many trainees struggle. Efforts to improve learning outcomes in TVET settings have been ongoing, yet a significant number of diploma trainees continue to face obstacles that slow their academic progress in ways that are not always visible or well-understood. Part of the difficulty is that the research base itself is thin in this area most empirical studies examining the connection between library use and academic achievement have been conducted in conventional degree-granting institutions, and TVET contexts remain poorly represented in that body of work.

This study was undertaken to address that gap at the local level. By examining library usage patterns and their relationship to self-reported academic progress among TESDA diploma trainees at CSITE-Main Campus, it aims to produce findings that are grounded in institutional reality and directly actionable serving as the empirical basis for a targeted intervention plan intended to strengthen library services and deepen academic support where trainees need it most.

2. Material and Methods

2.1 Research Design

The study used a quantitative correlational design to investigate how library usage, specifically its frequency, duration, purpose, and level of engagement, relates to the perceived academic performance of TESDA Diploma trainees at CSITE-Main Campus. A correlational approach was appropriate here because the study was never intended to manipulate variables or establish experimental conditions. The goal was to observe relationships as they naturally exist in the training environment, drawing on actual trainee behavior and their own accounts of academic experience. This is consistent with how Fraenkel et al. (2022) and Creswell and Poeth (2018) characterize correlational research as a method suited to situations in which the researcher seeks to understand associations without intervening in them.

2.2 Locale of the Study

The study was conducted at the Main Campus of the Cordillera State Institute of Technical Education, located in the Military Cut-Off area of Baguio City. The choice of this campus was deliberate. Among all CSITE campuses, the Main Campus is the only one that operates a fully developed library facility staffed by a professional librarian who provides structured academic support on a regular basis. That combination of functional infrastructure and professional service delivery made it the most fitting site for a study examining how library participation shapes trainees' perceptions of their academic progress. Conducting the study elsewhere would have introduced institutional conditions that could not reliably support the kind of library engagement this research was designed to examine.

2.3 Respondents of the Study

The respondents were 106 TESDA Diploma trainees enrolled during the second semester of Academic Year 2025-2026 from the Diploma in Culinary Arts and the Diploma in Hospitality and Supervision. These trainees are the main users of the campus library and are actively involved in competency-based training that requires the use of both practical and academic materials.

2.4 Sample and Sampling Procedure

The sample size was calculated using Slovin's Formula with a 5% margin of error, yielding 106 respondents from a total population of 144 enrolled Diploma trainees. Proportional stratified random sampling was used to ensure that each academic program was equally represented according to its population size: 60 trainees from the Diploma in Culinary Arts (population 81) and 46 from the Diploma in Hospitality and Supervision (population 63).

2.5 Research Instrument

The survey questionnaire consisted of seven sections covering: (1) respondents' profile, (2) frequency of library usage, (3) duration of library usage, (4) purpose of library usage, (5) level of engagement with library resources and services, (6)

perceived academic performance, and (7) open-ended suggestions. The instrument was developed by modifying validated research tools and adapting them for the respondents' context.

2.6 Data Gathering Procedure

A standardized seven-part questionnaire was personally administered by the researcher to eligible respondents at CSITE-Main Campus. Before data collection, a formal request letter was sent to CSITE-Main administration and written consent was obtained. Specific instructions were given to each respondent on how to answer, and all filled-out surveys were collected on the same day.

2.7 Data Analysis Techniques

Descriptive and inferential statistics were used for data analysis. On the descriptive side, frequencies, percentages, means, and standard deviations were calculated to provide a clear picture of the respondents and how they used the library and assessed their academic performance. For the inferential part, Spearman's Rho correlation was utilized to examine the associations between library usage characteristics and perceived academic success. This statistic was carefully chosen since the data collected by Likert scale items is of an ordinal nature, and Spearman's Rho is the proper instrument to analyze associations under those conditions of measurement, as Field (2020) verifies. Statistical calculations were performed using Microsoft 365.

2.8 Ethical Considerations

The study was conducted in accordance with standard principles of research ethics. Before any data collection, each possible participant was fully informed about what the study was about, its aim, its scope, and what participation would involve. Participation was voluntary. Participation was voluntary, and written informed consent was obtained separately from each respondent before administering the questionnaire. All information submitted by participants was treated as strictly confidential and used only for academic study. The data were stored securely and access was limited to the researcher only.

3. Results and Discussion

3.1 Profile of TESDA Diploma Trainees

The study was conducted on 106 TESDA Diploma Trainees. The most represented age bracket was 20-22 years old with nearly half of all respondents (47%) falling within this range. However, the 17-19 age bracket was not far behind making up 40% of respondents. The sample comprised 10% of trainees aged 23-25 and 3% aged 26 and beyond. This distribution is not surprising, as it follows the age profile commonly associated with technical-vocational enrollment, where most students are coming straight from secondary school or entering within a few years of finishing it. The sex breakdown was almost evenly distributed, 51% of respondents were female and 49% were male. In terms of program, more than half of the students were enrolled in the Diploma in Culinary Arts (57%) and the remaining 43% were pursuing the Diploma in Hospitality and Supervision. Distribution according to year level showed that the majority were first year trainees (50%) followed by third year (27%) and second year (23%). This demographic profile is mostly compatible with the description of the established pattern of TVET participation in Southeast Asia provided by UNESCO-UNEVOC (2024), which states that young people of post-secondary age represent the biggest share of the vocational student population.

3.2 Library Usage: Frequency

The trainees' frequency of library trips was generally low. 39% of the largest group said they rarely went into the library at all. A further 27% said they came once or twice a month, and 19% came around once a week. The regular users were a small minority: just 12% went two to three times a week, and 3% arrived everyday. These are small figures, but they're not hard to explain. TESDA diploma programs are based on practical training and for most of the learners, the workshop is where the learning takes place. The library usually enters the scene only when there is a specific academic need, an assignment, a report, or an imminent test, rather than during any regular study routine. Lasig and Collantes (2022) and UNESCO-UNEVOC (2024) noted this trend and observed that TVET trainees tend to use the library as a situational response to imminent academic pressure. The advent of digital platforms and mobile sources of information that provide trainees with alternatives to physical library trips, which are speedier and more convenient for their daily needs, has further reinforced this trend.

3.3 Library Usage: Duration

Library use are usually short. During a normal school day, more than half of the trainees (54%) spent less than an hour in the library while another 42% spent between one and two hours. The pattern during exam periods was similar but with some variation. 51% still kept their trips under an hour, and 37% stayed one to two hours, but there was a notable spike in longer use: 11% spent three to four hours during examinations, compared to just 4% on usual days. It's a small change, but it speaks volumes. This shows that the library is a more enduring resource at the height of academic pressure, but for most trainees, most of the time, trips are short and purposeful rather than long and exploratory. This aligns with the literature's

portrayal of vocational learners as practical, efficiency-minded users who prefer targeted information over open-ended study time (Iliescu et al., 2025; OECD, 2023).

3.4 Library Usage: Purpose

When trainees do go to the library, they have definite academic purposes. For all-purpose related items, the overall mean was 3.66 (SD = 0.76). This is translated as Often. This means that library use are often prompted by actual academic need rather than casual habit. The highest individual rating (M = 3.90) was given to research activities, followed closely by fulfilling project requirements (M = 3.75), accessing trainer-recommended supplemental resources (M = 3.73), and group study (M = 3.69). The lowest-ranked item was accessing online materials through the library (M = 3.37), which was in the Sometimes range. It's worth dwelling on this finding because it implies that trainees are not coming to the library for its internet connection or digital access points. Those demands are being satisfied elsewhere, most likely on personal devices. Trainees are attracted to the library because it is an intellectual resource space, not a place to connect. This is consistent with the findings of Lasig and Collantes (2022) and Ferrer (2024), who found that students who use library resources for specific academic activities generally exhibit higher academic engagement and better learning outcomes.

3.5 Library Usage: Level of Engagement with Library Resources

Overall, trainees engaged with the library at a level characterized as Often with a mean score of 3.48 (SD = 0.69). Of the specific markers of engagement, asking the librarian for help was rated highest (M = 3.91), indicating that when trainees do contact library staff, they do so frequently enough to be worth the effort. This was followed by participation in academic activities connected to the library (M = 3.63), using resources to facilitate hands-on learning (M = 3.59), and using practical services such as printing and photocopying (M = 3.56). Lower-end trainees reported less frequent use of library orientation programs (M = 3.26), printed materials and physical facilities (M = 3.23), and digital resources comprising e-books and databases (M = 3.25). The ratings suggest that there is a tendency for more transactional than deep engagement. Trainees go toward services that are easy to relate to their coursework but do not employ offerings that are less connected to their everyday academic work. In vocational settings, Zhu et al. (2025) describe a similar dynamic, in which interaction with the library is less driven by institutional design and more by learners' sense of immediacy regarding curricular relevance.

3.6 Perceived Academic Performance

The trainees judged their academic achievement relative to library utilization as High with an overall mean of 3.74 (SD = 0.74). All individual PI's were rated High, but not consistently. The highest ratings were for outcomes that capture the type of immediate, practical academic benefit trainees are most likely to notice and attribute to library use: better understanding of lessons (M = 4.01), improved focus and quality of learning (M = 3.99), and more efficient completion of projects and assignments (M = 3.85). In contrast, increased quiz performance (M = 3.44) and higher test outcomes (M = 3.53) received lower ratings, but still in the High group. This discrepancy between process-oriented improvements and measured test performance is instructive, as it shows that trainees feel the library helps them comprehend and work better, even if that does not necessarily translate into ways they identify with examination scores. These self-reported results are fully within the realm of a long line of research. Both Schunk and DiBenedetto (2020) and Ferrer (2024) argue that perceived academic performance is a valid and meaningful measure in the context of vocational education, where academic self-efficacy, that is how capable learners feel themselves to be, is an important factor in motivation, persistence and continued engagement with learning.

3.7 Significant Relationship Between Library Usage and Perceived Academic Performance

The correlation results draw a fairly clear line between what matters and what does not when it comes to library use and academic outcomes. The purpose of library use and level of engagement each produced moderate, very highly significant correlations with perceived academic performance ($\rho = 0.527$, $p = 0.000$ for both). These are not trivial findings a moderate effect size of this consistency across two related variables is enough to warrant serious institutional attention. Frequency of use, on the other hand, showed no statistically significant relationship with perceived academic performance ($\rho = 0.100$, $p = 0.310$), and neither did general use duration ($\rho = 0.067$, $p = 0.493$). Put plainly, coming to the library more often or staying longer does not, by itself, produce better academic outcomes. The one exception worth noting is library duration during examination periods, which returned a weak but statistically significant correlation ($\rho = 0.221$, $p = 0.023$) a finding that aligns with the earlier observation that exam season prompts a qualitative shift in how trainees use the library. Taken together, these results reinforce what Iliescu et al. (2025), UNESCO-UNEVOC (2024), and Lasig and Collantes (2022) have each argued from different angles: it is the intentionality and quality of library engagement that predicts academic benefit, not the volume or length of use.

4. Conclusion & Recommendations

The TESDA Diploma trainees at CSITE-Main Campus are a young and relatively diverse group whose relationship with the library is better described as strategic than habitual. They do not use often, and when they do, they rarely stay long but those uses are purposeful. Trainees come to the library to conduct research, work through project requirements, locate

materials their trainers have recommended, and occasionally study with peers. And by their own account, these targeted engagements contribute meaningfully to their academic performance. The correlation analysis reinforces this picture from a different angle: it is not how frequently trainees use or how long they stay that predicts perceived academic benefit it is why they come and how deeply they engage while they are there. Frequency and general duration added nothing statistically significant to the model. Purpose and engagement did, and did so consistently. That distinction is the central finding of this study, and it has direct implications for how CSITE and TVET institutions more broadly should think about library development. Investing in physical expansion or longer operating hours may be less productive than investing in programs that deepen the quality of trainee interaction with library resources and make those resources feel more directly connected to what happens on the training floor.

The findings point toward several concrete directions for institutional action. First, library materials and guided activities should be deliberately woven into assignments, performance tasks, and competency-based assessments not offered as optional supplements but built into the academic requirements trainees are already expected to meet. Second, engagement-centered library programs should be developed collaboratively by trainers and librarians, with structured orientation sequences designed specifically for first-year trainees who are still forming their academic habits. Third, digital and quick-access services within the library need to be expanded and made more responsive to the task-oriented, time-pressured way trainees actually work. Fourth, as trainees progress through their programs, library offerings should evolve with them progressive programming for higher-year trainees would help sustain information literacy development beyond the introductory level. Fifth, future research in this area would benefit from moving beyond self-reported surveys to incorporate objective performance indicators and qualitative methods, which would allow for a more textured understanding of how library engagement shapes competency-based learning outcomes.

These recommendations are not presented in isolation. They form the foundation of a proposed Research-Based Intervention Plan the CSITE Main Library Digital Hub which operationalizes each recommendation through a structured, evidence-grounded platform aligned with the TESDA competency framework and the accountability requirements established under Republic Act No. 12313 (2025).

A few boundaries of this study deserve honest acknowledgment. Geographically, the research was confined to CSITE-Main Campus, and the findings should not be assumed to transfer automatically to other TVET institutions with different resource profiles, student populations, or institutional cultures. The data themselves rest entirely on self-reported survey responses a practical and widely used approach, but one that carries well-known constraints that no statistical procedure can fully correct for. Trainees' accounts of their own library use and academic performance reflect their perceptions, and perceptions, however genuine, are not the same as independently verified outcomes. Beyond measurement, there is the broader question of what this study did not and could not account for. Learner motivation, personal study habits, access to technology outside the institution, and the quality of instruction are all factors that research associates with academic outcomes in vocational settings consistently. None of these falls within the analytical scope of this study, and their absence from the model is a limitation that future research should take seriously.

Compliance with ethical standards

The investigation was performed in full compliance with the standards of conventional research ethics. Prior to data collection, all potential respondents were informed (i.e. advised of the nature and aim of the study) and their participation was fully voluntary (i.e. no one was coerced or obliged to participate). Prior to the administration of the survey instrument, informed consent was secured from each respondent individually. At the beginning of the trial, participants were also informed that they were free to resign from the study at any time, and that doing so would entail no consequence of any kind.

All information provided by the interviewees was kept in complete confidence throughout all the phases of the research and only for academic purposes. Data were stored safely and only the researcher had access to them.

There was no conflict of interest in the study design, conduct and reporting. I, the undersigned researcher, Jovie B. Agway, declare that this work is my own and I accept full responsibility for the integrity of all aspects of the research process, from conception to publishing.

REFERENCES

- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Ferrer, D. S. (2024). Interplay of information literacy, library engagement and academic performance among state university students. *International Journal of Research and Innovation in Social Science*, 8(3). <https://dx.doi.org/10.47772/IJRISS.2024.803197S>
- Field, A. (2020). *Discovering statistics using IBM SPSS Statistics* (5th ed.). SAGE Publications.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2022). *How to design and evaluate research in education* (11th ed.). McGraw Hill.
- Iliescu, D., Greiff, S., & Ion, A. (2025). Evidence-based approaches for enhancing vocational education worldwide. *npj Science of Learning*, 10, Article 20. <https://doi.org/10.1038/s41539-025-00317-2>
- Lasig, C. A., & Collantes, L. M. (2022). Library services utilization and teacher education students' academic performance in selected state universities in Region III, Philippines. *International Journal of Scientific and Management Research*, 5(4), 12-32. <https://doi.org/10.37502/IJSMR.2022.5402>
- OECD. (2023). *Education at a glance 2023*. OECD Publishing. <https://doi.org/10.1787/e13bef63-en>
- Republic Act No. 12313. (2025). *An act institutionalizing the Lifelong Learning Development Framework*. Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph>
- Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60.
- UNESCO-UNEVOC. (2024). *TVET and skills development report*. <https://unevoc.unesco.org>
- Zhu, X. A., Whitaker, E. E., Cho, M., & Zhang, M. (2025). Student engagement in academic libraries: A conceptual framework. *College & Research Libraries*, 86(2), 275-293. <https://doi.org/10.5860/crl.86.2.275>