

# INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH

2025, Vol. 6, No. 6, 2766 – 2777

<http://dx.doi.org/10.11594/ijmaber.06.06.09>

---

## Research Article

### Training and Development in Employee Retention and Organizational Effectiveness at a Manufacturing Firm in Naga City, Cebu, Philippines

Chester S. Tabasa\*, Mark Anthony N. Polinar, Alexander Franco A. Delantar, Allan B. Delantar, Celso L. Ouano

Center of Advanced Studies, Cebu Institute of Technology- University, Cebu City, 6000, Philippines

---

#### Article history:

Submission 30 April 2025

Revised 31 May 2025

Accepted 23 June 2025

#### \*Corresponding author:

E-mail:

[chester.tabasa@cit.edu](mailto:chester.tabasa@cit.edu)

#### ABSTRACT

This descriptive-correlational study investigates the relationship between training and development, employee retention, and organizational effectiveness within a manufacturing firm in Naga, Cebu, Philippines. Three hundred sixty respondents were selected randomly to participate in the study, utilizing a validated and reliable questionnaire to collect pertinent data. The findings, analyzed using Spearman's rho, indicate a significant correlation between training and development, employee retention, and organizational effectiveness. Furthermore, simple linear regression analysis demonstrates that training and development correlate and serve as predictors of employee retention and organizational effectiveness. This emphasizes the importance of implementing comprehensive training and development programs that significantly boost employee retention and improve overall organizational effectiveness. Such initiatives are essential not only for fostering individual growth and skill enhancement but also for aligning with strategic human resource planning, ensuring that the workforce is equipped to meet current and future challenges. Accordingly, it is concluded that training and development should be viewed not merely as supplementary efforts but as essential components of a comprehensive business strategy, which contribute significantly to organizational success. Implementing an employee-centered training program fosters employee engagement, empowerment, and a sense of purpose.

**Keywords:** *Training and Development, Employee Retention, Organizational Effectiveness, Manufacturing Firm, Naga City, Cebu, Philippines*

---

## Introduction

Agriculture, services, and manufacturing share the common goal of advancing economic development, yet they perform distinct,

interdependent roles. Agriculture supplies raw materials to manufacturing, which in turn produces goods distributed through the service sector. This intersectoral synergy not only

---

#### How to cite:

Tabasa, C. S., Polinar, M. A. N., Delantar, A. F. A., Delantar, A. B., & Ouano, C. L. (2025). Training and Development in Employee Retention and Organizational Effectiveness at a Manufacturing Firm in Naga City, Cebu, Philippines. *International Journal of Multidisciplinary: Applied Business and Education Research*. 6(6), 2766 – 2777. doi: 10.11594/ijmaber.06.06.09

stimulates job creation and economic activity but also demonstrates how the decline of one sector can adversely impact the others (Muyambiri, 2023). Lewis' Dual Sector Model, as cited by Anderson and Ponnusamy (2019), emphasizes the shift of labor from traditional agriculture to more productive industrial and service sectors as capital accumulates, reflecting a fundamental dynamic of structural transformation in developing economies.

The manufacturing sector is exceptionally pivotal to economic growth, as it converts raw materials into high-value goods and bolsters other sectors. Its output consistently contributes to GDP, as seen in Ireland's industrial expansion in the 1990s (Egeraat & Breathnach, 2021) and the sustained manufacturing-led growth in the Visegrad Group countries, which positively influenced wages and employment (Suhányi et al., 2023). However, while the sector demonstrates economic contributions, workforce-related challenges persist.

Manufacturing enterprises are typically capital-intensive and reliant on human capital for optimal performance. Sija (2024) found that training and development (T&D) accounted for 46.1% of the variance in employee performance in manufacturing. Conversely, poor working conditions—such as low wages, long hours, and limited social benefits—persist in some manufacturing hubs, notably in parts of India (Singh, 2023), underscoring the link between inadequate employee support and reduced productivity.

Effective T&D is widely recognized as a driver of employee retention and performance. Cloutier et al. (2020) emphasized communication, skill development, and inclusive hiring as key retention strategies. In Nigeria, Taiwo et al. (2021) observed that T&D significantly enhances performance in manufacturing firms. This pattern is echoed across ASEAN countries, where training fosters adaptability and innovation, critical traits in fast-evolving markets (Tan, 2021; Yusof & Ahmad, 2020). In the Philippines and Vietnam, training prepares workers to meet the demands of increasingly automated and digitized industries. Abedi (2023) and Putri et al. (2024) advocate expanding training to include pedagogical and soft skill

development, aligning with the needs of a modern workforce.

Despite these findings, there remains a gap in understanding how T&D influences both employee retention and organizational effectiveness, particularly within the manufacturing sector in developing economies. Existing studies often address these elements in isolation, without integrating them into a cohesive framework, especially in the ASEAN context, where rapid industrialization and labor mobility demand localized insights.

In the Philippine setting, particularly in Naga City, Cebu, the manufacturing industry is poised for expansion, with companies like Cebu Mitsumi Inc. scaling operations (Sunnexdesk, 2022). To sustain this momentum, businesses must address workforce development strategically. Implementing comprehensive T&D programs not only builds employee capability but also improves retention and mitigates operational disruptions.

This study is anchored in two key theories. Human Capital Theory (Becker, 1964) posits that investments in education and training enhance worker productivity, leading to improved organizational outcomes. This theory supports the study's central argument that T&D is a strategic tool for improving performance and retention in the manufacturing sector. Social Exchange Theory (Blau, 1964) explains that when organizations invest in their employees through training and career development, employees reciprocate with higher levels of loyalty, engagement, and commitment. This theoretical lens provides insight into how T&D influences employee retention and contributes to organizational effectiveness through strengthened employer-employee relationships. Together, these theories frame the inquiry into how training and development programs function as both a capability-building and retention-enhancing mechanism within manufacturing firms.

While the benefits of T&D on individual performance are well-documented, few studies have explored its simultaneous impact on retention and organizational effectiveness, especially in localized or regional contexts. Moreover, the broader socio-economic implications

of workforce development remain underexplored (Aguinis & Kraiger, 2009). Addressing these gaps, this study investigates the relationship between T&D, employee retention, and organizational effectiveness in a manufacturing firm in Naga City, Philippines.

By examining how T&D predicts both retention and organizational outcomes, this study aims to generate actionable insights for strengthening human capital, reducing employee turnover, and aligning company practices with long-term strategic and developmental goals—including Sustainable Development Goals (SDG 4: Quality Education, and SDG 8: Decent Work and Economic Growth).

## Methods

This quantitative study employed a descriptive-correlational research design to determine employees' perceptions of training and development (T&D), employee retention, and organizational effectiveness within a semiconductor manufacturing company in Naga City, Cebu, Philippines. The study also aimed to explore the predictive relationship between T&D and the latter two variables. This research design is appropriate for establishing associative and predictive relationships among variables without manipulating the research environment, thus preserving ecological validity.

The participating organization is a well-established semiconductor manufacturing firm with an international clientele. Situated in an economically significant industrial corridor, the company operates in a highly competitive, fast-paced, and technologically driven manufacturing environment. It relies heavily on workforce skill development to maintain operational efficiency, safety compliance, and product innovation. Structured training programs form an integral part of its human capital strategy, encompassing technical upskilling, safety orientation, and professional development across all job levels—from production line workers to supervisory and managerial roles.

The choice of research setting is particularly relevant given the pressures of automation, digital transformation, and global standards in the manufacturing sector. This study thus provides valuable insights into how formalized learning structures in such contexts

contribute to employee and organizational outcomes. A total of 360 respondents were selected using simple random sampling from the company's roster of qualified employees. This probability sampling technique ensured that each eligible individual had an equal chance of selection, thereby enhancing the generalizability of the findings and minimizing selection bias.

The individual must be a regular employee of the semiconductor firm. They must have served for a minimum of three years, ensuring that respondents had sufficient exposure to the organization's training programs and human resource practices; They must have voluntarily signed the informed consent form, affirming their willingness to participate and their understanding of the study's scope and objectives. The sample size meets conventional thresholds for statistical power in correlational and regression analysis (Cohen, 1988), enhancing the robustness of the study's findings.

Data were collected through a structured Likert-scale survey instrument designed to measure three key constructs: training and development, employee retention, and organizational effectiveness. The survey used a 5-point scale (1 = Strongly Disagree to 5 = Strongly Agree), capturing respondents' agreement with various statements related to their work experiences and perceptions. The instrument measured:

**Training and Development:** Perceived accessibility, quality, relevance, and impact of training programs on technical and soft skill development, career advancement, and organizational integration.

**Employee Retention:** Indicators such as job satisfaction, organizational commitment, turnover intentions, and perceived career growth.

**Organizational Effectiveness:** Perceptions related to productivity, operational flexibility, innovation, and alignment between individual roles and strategic objectives.

The instrument was adapted from previously validated scales in the literature and underwent a pilot test with a sub-sample of 30 employees from a similar industrial context to ensure its applicability. Internal consistency reliability was assessed using Cronbach's alpha, yielding the following results: Training and

Development:  $\alpha = 0.91$ ; Employee Retention:  $\alpha = 0.88$ ; and Organizational Effectiveness:  $\alpha = 0.90$ .

These values exceed the commonly accepted threshold of 0.70 (Nunnally & Bernstein, 1994), indicating high internal consistency across all dimensions. Furthermore, content validity was established through expert review by three academics and two human resource professionals specializing in industrial psychology and organizational development. Their feedback ensured that the items were contextually relevant and theoretically grounded.

The data analysis involved both descriptive and inferential statistics. Descriptive statistics included mean and standard deviation (SD) to summarize central tendencies and variability of the responses. A low SD indicated consensus among respondents, whereas a high SD reflected a wider range of perceptions. For inferential analysis, the study used Spearman's rank correlation coefficient ( $\rho$ ) to examine the relationships among the three main variables due to non-normal data distribution as confirmed by the Shapiro-Wilk test. Spearman's rho is suitable for ordinal data and robust in the

presence of non-parametric distributions. To explore predictive relationships, simple linear regression analyses were performed to determine the extent to which training and development can predict employee retention and organizational effectiveness. All statistical analyses were conducted using SPSS version 27, with a significance level set at  $p < 0.05$ .

Ethical protocols were rigorously followed throughout the study. Before data collection, ethical clearance was obtained from the appropriate institutional review board. All participants were informed of the study's purpose, their right to withdraw at any point without penalty, and the confidentiality of their responses. Anonymity was preserved through the use of unique but non-identifiable codes, and no personally identifiable information was collected. The principle of informed consent was strictly upheld, with all participants signing a consent form that detailed the study's objectives, risks, and benefits. The study also complied with the Data Privacy Act of 2012 (Republic Act No. 10173) in the Philippines, ensuring the secure handling and storage of all research data.

## Results and Discussions

*Table 1. Level of Training and Development Practices in the Manufacturing Firm as Perceived by Employees*

Item	Mean	SD	Interpretation
1. I am encouraged to develop new skills.	3.53	.624	Agree
2. The training programs provided by the company are relevant to my job.	4.40	.680	Agree
3. I have many opportunities for training and development.	3.54	.619	Agree
4. Employees are given a series of training every year.	4.45	.632	Agree
5. There are formal training programs to teach new hires the skills they need to perform their jobs.	3.56	.648	Agree
6. The company invests sufficient resources in employee development.	4.43	.664	Agree
7. The company hires trainers from outside the organization.	2.52	1.226	Neutral
8. I have learned new skills through the training programs offered by the company.	4.41	.686	Agree
9. When assessing training needs, the following issues are considered: job skills, knowledge, ability, new technologies, processes, products, services, and market changes.	3.56	.661	Agree

Item	Mean	SD	Interpretation
10. The company offers opportunities for continuous learning and development.	4.42	.650	Agree
11. During the training period, accommodation, transportation, and meal facilities are provided.	3.59	.698	Agree
12. The training programs use various formats, including workshops, classes, and briefings.	4.39	.687	Agree
Overall	3.8995	.29355	Agree

Descriptive statistics were conducted to examine employee perceptions regarding training and development opportunities. The results suggest a generally favorable perception among employees regarding training and development practices within the manufacturing firm ( $M = 3.90$ ,  $SD = 0.29$ ). Among the individual items, the highest mean scores were observed in the following statements: "Employees are given a series of training every year" ( $M = 4.45$ ,  $SD = 0.63$ ), "The company invests sufficient resources in employee development" ( $M = 4.43$ ,  $SD = 0.66$ ), "The company offers opportunities for continuous learning and development" ( $M = 4.42$ ,  $SD = 0.65$ ), and "I have learned new skills through the training programs offered by the company" ( $M = 4.41$ ,  $SD = 0.69$ ). These findings indicate that employees perceive strong organizational commitment to ongoing learning and skills acquisition.

Conversely, the lowest-rated item was "The company hires trainers from outside the organization" ( $M = 2.52$ ,  $SD = 1.23$ ), suggesting limited use of external expertise in training delivery. This may indicate a preference for in-house training programs or a gap in bringing in external insights.

The standard deviations across items were generally low, indicating a relatively consistent employee perception. Again, the item with the

highest variability was "The company hires trainers from outside the organization" ( $SD = 1.23$ ), which may reflect employees' differing experiences or awareness levels regarding this practice.

The data point to a positive perception of training and development practices, with particular strengths relevant to job roles, investment in employee growth, and varied learning formats. However, there may be room for improvement in diversifying training sources and potentially incorporating more external expertise.

According to the investigation by Truitt (2011), the perceived job competence of employees is directly impacted by positive training outcomes and attitudes, while negative training attitudes negatively affect their perceived job competence. Additionally, Zaleska and De Menezes (2007) believed that employee satisfaction with development practices facilitates their relationship with the perceived significance of development practices and organizational commitment. With time, self-motivation and lateral development increase in importance. Moreover, training positively contributed to employee perceptions of development, leading to job satisfaction in a public sector organization (Takrim et al., 2023).

Table 2. Level of Employee Retention in the Manufacturing Firm as Perceived by the Respondents

Item	Mean	SD	Interpretation
1. I will likely stay with the company for the next two years due to ample growth and development opportunities.	3.60	.791	Agree
2. The training and development opportunities offered by the company influenced my decision to stay.	4.33	.786	Agree
3. I am loyal to this company because of the professional growth opportunities it provides, and the feedback scheme is fair enough.	3.59	.784	Agree

Item	Mean	SD	Interpretation
4. I know I will be recognized if I contribute to the organization's success.	4.44	.657	Agree
5. I can balance my work and personal life.	3.78	.745	Agree
6. I would recommend this company to others because of its training and development initiatives.	4.44	.656	Agree
7. I am given the resources I need to succeed, and the skills I have gained from training make me feel more secure in my job.	3.80	.770	Agree
Overall	3.9988	.50109	Agree

Table 2 presents the employee perceptions of retention and satisfaction with training and development initiatives. The overall mean score of 3.9988 (SD = 0.50) indicates a generally favorable perception of how training and development initiatives influence employee retention and job satisfaction in the manufacturing firm. Employees appear to value the developmental support provided by the organization and link it to their intent to stay.

On the one hand, the highest-rated items were: "I know I will be recognized if I contribute to the organization's success" (M = 4.44, SD = 0.66) and "I would recommend this company to others because of its training and development initiatives" (M = 4.44, SD = 0.66). These responses suggest that employees feel acknowledged for their efforts and take pride in the organization's developmental programs, promoting positive word-of-mouth. Another high-scoring item was "The training and development opportunities offered by the company influenced my decision to stay" (M = 4.33, SD = 0.79), underscoring the direct impact of development programs on retention.

On the other hand, slightly lower mean scores were found in statements such as "I am loyal to this company because of the professional growth opportunities it provides, and the feedback scheme is fair enough" (M = 3.59, SD = 0.78), and "Due to ample growth and development opportunities, I will likely stay with

the company for the next two years" (M = 3.60, SD = 0.79). While still moderately positive, these items may reflect areas where further improvements in feedback processes and long-term career path clarity could enhance retention.

The consistency in responses is generally strong, with standard deviations ranging from 0.66 to 0.79, indicating relatively stable employee perceptions. Thus, the findings suggest that employees generally associate the company's training and development efforts with job satisfaction, loyalty, and willingness to stay, highlighting the strategic role of professional growth opportunities in employee retention.

Prior research indicates that appropriately designed training programs in manufacturing may improve employee performance and retention by customizing training according to the types of jobs (Herjuna et al., 2024). Notably, a published study claimed that factors related to effective employee training, future development, training, and development, and organizational support to the training function can be linked to employee retention and performance appraisal (Khadka & Khadka, 2024). Furthermore, an investigation by Nasution et al. (2024) suggests that training and career development may significantly impact employee retention, and job satisfaction is a mediator for this relationship.

*Table 3. Level of Organizational Effectiveness in the Manufacturing Firm as Perceived by the Respondents*

Item	Mean	SD	Interpretation
1. The decision-making process in the organization is transparent and fair, which makes the company more effective in delivering quality service.	3.72	.868	Agree

Item	Mean	SD	Interpretation
2. The company's investment in training has improved its operational efficiency.	4.19	.849	Agree
3. The organization's goals and objectives align well with my career goals.	3.81	.847	Agree
4. Company employees are more productive after attending training sessions, which provide effective collaboration and teamwork among departments.	4.24	.750	Agree
5. The company's performance has improved due to well-trained employees.	3.99	.788	Agree
Overall	3.9883	.55513	Agree

Descriptive statistics examined employee perceptions of organizational effectiveness as influenced by training and development practices. The overall mean score of 3.99 (SD = 0.56) indicates that employees generally perceive a positive relationship between the organization's training efforts and overall effectiveness. High mean ratings across several items suggest that training programs are seen as contributing not only to individual performance but also to organizational goals.

The highest-rated statement was: "Employees in the company are more productive after attending training sessions, and it provides effective collaboration and teamwork within the department" (M = 4.24, SD = 0.75). This suggests that training enhances productivity and interdepartmental collaboration, which are critical to organizational cohesion and service delivery. Additionally, "The company's investment in training has improved its operational efficiency" (M = 4.19, SD = 0.85) and "The company's performance has improved due to well-trained employees" (M = 3.99, SD = 0.79) further affirm the belief among employees that training positively affects the company's bottom line.

Slightly lower mean ratings were found for: "The organization's goals and objectives align

well with my personal career goals" (M = 3.81, SD = 0.85) and "The decision-making process in the organization is transparent and fair..." (M = 3.72, SD = 0.87). While still favorable, these suggest potential areas for improvement in aligning employee career paths with organizational vision and enhancing the transparency of internal processes.

The data reflect a strong consensus that effective training contributes meaningfully to organizational success, particularly through improved productivity, operational efficiency, and team collaboration.

Training and development programs have been shown to positively influence organizational performance, with empirical data supporting their positive influence (Diwedi & Nema, 2023). Moreover, research undertaken by Dewi et al. (2025) suggests that training has a positive and significant impact on organizational productivity. In contrast, leadership development positively influences productivity but is insignificant at 95% confidence. An investigation was carried out by Jha and Sachdeva (2024), indicating that training and development contribute positively and significantly to both employee and organizational performance and ultimately increase overall effectiveness for organizations and individuals.

Table 4. Relationship Between Training and Development and Employee Retention

R-value	P-value	Decision on H <sub>0</sub>	
.457	0.000	Reject H <sub>0</sub>	Significant

A Spearman's rho correlation examined the relationship between training and employee retention. The results revealed a moderate positive

correlation between training and retention,  $r_s(360) = .457$ ,  $p < .001$ , indicating that employee retention tends to improve as training opportunities increase.

This correlation is statistically significant at 0.01, suggesting a reliable association between the two variables. These findings highlight the potential impact of training programs on employee retention.

According to Kumari (2022), training and development positively affect employee retention, and the relationship between training and retention is strong. Also, a study claimed that retaining employees long-term post training

and development activities is more advantageous if compensation is increased based on their ability to transfer skills and capabilities in training and development (Anis et al., 2011). Moreover, training and development positively affect employee retention, and job performance has no effect, as does effective communication, on the relationship between training and development and employee retention (Elsafy & Oraby, 2022).

Table 5. Relationship Between Training and Development and Organizational Effectiveness

R-value	P-value	Decision on H <sub>0</sub>	
.481	0.000	Reject H <sub>0</sub>	Significant

A Spearman’s rho correlation assessed the relationship between training and perceived effectiveness. The analysis showed a moderate positive correlation,  $r_s(360) = .481, p < .001$ , indicating that higher levels of training are associated with greater employee perceived effectiveness.

This correlation is statistically significant at the 0.01 level, suggesting that the relationship is unlikely due to chance. The findings imply that effective training initiatives may enhance employee performance and efficiency.

A study by Ismael et al. (2021) found that training and development interventions

measure organizational effectiveness by impacting organizational success and development. In another study, Diwedi and Nema (2023) found that training and development experiences will enhance organizational performance and development, while effective training and development interventions optimize an organization for further growth and success. Furthermore, Dewi et al. (2025) assessed that training programs positively contribute to organizational productivity, as training impacts competencies, while development experiences foster leadership and add value to organizational productivity.

Table 6. Model Summary of Training and Development as a Predictor of Employee Retention

F-value	df1	df2	P-value
77.816	1	358	0.000

A simple linear regression examined whether training and development significantly predict employee retention. The results indicated that the model was statistically significant,  $F(1, 358) = 77.82, p < .001$ , suggesting that training is a meaningful predictor of retention.

Empirical evidence confirms a statistically significant positive effect between training and development programs and employee retention (Kumari, 2022). Interestingly, Alshehhi et al. (2021) concluded that training frequency is the strongest predictor of retention within this construct. Moreover, an investigation by Fletcher et al. (2018) found that perceived training and development affect retention

through a serial mediation chain of job satisfaction, work engagement, and anxiety about change. Emotional exhaustion does not have a significant mediating effect.

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>
1	.423	.178	.176

As shown in the model summary, the regression yielded an  $R^2 = .178$ , indicating that approximately 17.8% of the variance in employee retention can be explained by training. The adjusted  $R^2 = .176$  accounts for the degrees of freedom and confirms the consistency of the model.



B	$\beta$	SE	t-value
.721	.423	.082	8.821

The table shows that the unstandardized regression coefficient for training was  $B = 0.721$  ( $SE = 0.082$ ), meaning that for every one-unit increase in training, employee retention increases by 0.721 units. The standardized coefficient was  $\beta = .423$ , with a t-value of 8.821

and  $p < .001$ , indicating that this relationship is statistically significant.

The findings suggest that higher levels of training are associated with higher employee retention. Although the model does not explain the variation in retention, training is a key factor influencing employee decisions to stay within the organization.

Table 7. Model Summary of Training and Development as a Predictor of Organizational Effectiveness

F-value	df1	df2	P-value
101.968	1	358	0.000

A simple linear regression was conducted to determine whether training significantly predicts organizational effectiveness. The results showed that the overall model was statistically significant,  $F(1, 358) = 101.97$ ,  $p < .001$ , indicating that training contributes meaningfully to explaining employee effectiveness.

According to Ismael et al. (2021), training and development programs directly relate to organizational effectiveness, thus making development and training vital for an effective organization. A different study by Oluwaseun (2020) stresses that training and development have a statistically significant and positively correlated relationship with employee performance and effectiveness and can facilitate organizational growth and success. Additionally, another study asserts that training and development positively affect organizational effectiveness in Nigeria's public sector, likely enhancing job satisfaction and reducing employee turnover (Obi-Anike & Ekwe, 2014).

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>
1	.471	.222	.220

The regression yielded an  $R = .471$ , suggesting a moderate positive relationship between training and effectiveness. The  $R^2 = .222$  indicates that training can explain 22.2% of the variance in effectiveness. The adjusted  $R^2 = .220$  confirms that the model remains consistent even when accounting for the number of predictors.

B	$\beta$	SE	t-value
.890	.471	.088	10.098

The table shows that the unstandardized regression coefficient for training was  $B = 0.890$  ( $SE = 0.088$ ), meaning that for every one-unit increase in training, employee effectiveness is predicted to increase by 0.890 units. The standardized beta coefficient was  $\beta = .471$ , which is statistically significant ( $t = 10.10$ ,  $p < .001$ ).

These results suggest that training is a strong and statistically significant predictor of employee effectiveness. Although this model explained 22.2% of the variance, training substantially enhances employees' performance.

## Conclusion

The study empirically substantiates the positive and significant influence of training and development (T&D) on employee retention and organizational effectiveness within a high-tech manufacturing context. Spearman's rank correlation analysis revealed robust positive associations, while simple linear regression confirmed the predictive power of T&D in shaping both employee loyalty and organizational performance outcomes. These findings reinforce long-standing theoretical assertions within human resource development literature—namely, that strategic investment in human capital is a fundamental lever for sustained organizational success.

From a practical perspective, the results provide actionable insights for business leaders, human resource managers, and policymakers. Specifically, Training and development programs should be institutionalized as core business strategies, not peripheral activities.

Companies that treat learning as an ongoing strategic initiative are better positioned to reduce turnover, retain talent, and enhance operational capability. T&D initiatives must be aligned with both employee needs and organizational objectives. When employees perceive training as relevant and empowering, their engagement, productivity, and organizational commitment increase. Investing in competency-based training models, which integrate technical, behavioral, and leadership skills, can generate substantial returns in the form of increased employee agility, innovation, and goal alignment. The implementation of data-driven training evaluation systems can help firms continuously improve the efficacy of T&D programs, ensuring that they remain adaptive to industry trends, workforce expectations, and technological advancements. By embedding learning and development in the organizational culture, firms create a virtuous cycle in which empowered employees contribute to enhanced performance, which in turn reinforces organizational loyalty and adaptability.

The study was conducted within a single semiconductor manufacturing firm in Naga City, Cebu, Philippines. While the organization represents a relevant and competitive industry, generalizability to other sectors or geographic locations may be constrained. Data were collected at a single point in time, limiting the ability to infer causality. Longitudinal studies are recommended to establish temporal relationships between training and retention or effectiveness more definitively. The use of a Likert-scale questionnaire relies on subjective perceptions, which may be influenced by social desirability bias or recent events. Although the survey instrument was validated, triangulating data with performance metrics or managerial assessments would strengthen the study's internal validity. The study did not account for potential moderating variables such as organizational culture, leadership style, generational cohort differences, or economic conditions, which may influence the strength of the observed relationships.

Replicating the study in other industries (e.g., services, healthcare, or education) and across varied cultural or regional contexts would enhance the external validity of the

results. Future studies should employ longitudinal or time-series designs to better understand the dynamic interplay between T&D initiatives and employee or organizational outcomes over time. Exploring mediating factors such as employee engagement, psychological empowerment, or organizational culture may yield deeper insights into how training translates into retention and performance. Similarly, examining moderators (e.g., leadership style, team climate) can illuminate boundary conditions of the training-retention-effectiveness link. A comparative analysis between companies with different levels of training investment (e.g., high-investment vs. low-investment organizations) may reveal critical thresholds or best practices for effective talent development. Supplementing quantitative data with qualitative interviews or focus groups could uncover richer insights into employees' lived experiences with training programs and uncover organizational nuances not captured through surveys alone.

## References

- Abedi, E. (2023). "We [teachers] first require basic technical [skills] training": Investigating formal professional development pathways and knowledge needs of teachers for technology integration. *Educ. Inf. Technol.*, 29, 11793–11814. <https://doi.org/10.1007/s10639-023-12344-w>.
- Aguinis, H., & Kraiger, K. (2009). Benefits of Training and Development for Individuals and Teams, Organizations, and Society. *Annual Review of Psychology*, 60, 451–474. <https://doi.org/10.1146/annurev.psych.60.110707.163505>
- Alshehhi, K., Zawbaa, S. B., Abonamah, A. A., & Tariq, M. U. (2021). Employee Retention Prediction in Corporate Organizations Using Machine Learning Methods. *Academy of Entrepreneurship Journal*. 27 (2) <https://edms.wexl.in/handle/1/5140>
- Anderson, K., & Ponnusamy, S. (2019). Structural transformation to manufacturing and services: What role for trade? *Asian Development Review*, 36(2), 32–71. <https://doi.org/10.1162/adev.a.00131>

- Anisa, N. P., Sumardi, R. A., Dewi, N. K. & Saleh, M. Z. (2024). Enhancing service quality through employee training and development: A literature review. *Jurnal Riset Manajemen*, 2(4), 19–31. <https://doi.org/10.54066/jurma.v2i4.2549>
- Cloutier, O., Felusiak, L., Hill, C. & Pemberton-Jones, E. J. (2015). The Importance of Developing Strategies for Employee Retention. *Journal of Leadership, Accountability, and Ethics*. 12 (2) 119-129. <https://www.proquest.com/open-view/028159d66e5109e0b1feb88a055c816f/1?cbl=39006&pq-origsite=gscholar>
- Dewi, Z., Hestiningrum, E., Riyani, A., Ariyanti, S., & Sekarini, R. (2025). The Effect of Training and Leadership Development on Organisational Productivity. *Indonesian Journal of Innovation Multidisciplinary Research*. <https://doi.org/10.69693/ijim.v3i1.275>.
- Diwedi, P., & Nema, P. (2023). The Role of Training and Development in Enhancing Organizational Performance. *International Journal for Research in Applied Science and Engineering Technology*. <https://doi.org/10.22214/ijra-set.2023.57583>.
- Egeraat, C., & Breathnach, P. (2021). THE MANUFACTURING SECTOR. *International Yearbook of Industrial Statistics 2021*. <https://doi.org/10.4337/9781781954232.00007>
- Elsafty, A., & Oraby, M. (2022). The impact of training on employee retention. *International Journal of Business and Management*, 17(5), 58. <https://doi.org/10.5539/ijbm.v17n5p58>
- Fletcher, L., Alfes, K., & Robinson, D. (2018). The relationship between perceived training and development and employee retention: the mediating role of work attitudes. *The International Journal of Human Resource Management*, 29, 2701–2728. <https://doi.org/10.1080/09585192.2016.1262888>
- Herjuna, S., Marhaeni, V., Alvira, M., Putri, F., & Anastasya, F. (2024). Impact of Training and Development Programs on Employee Performance in the Manufacturing Sector. *Acta Psychologica*. <https://doi.org/10.35335/psychologia.v3i3.68>.
- Ismael, N., Othman, B., Gardi, B., Hamza, P., Sorguli, S., Aziz, H., Ahmed, S., Sabir, B., Ali, B., & Anwar, G. (2021). The Role of Training and Development on Organizational Effectiveness. *Political Economy - Development: Public Service Delivery eJournal*. <https://doi.org/10.22161/IJEBM.5.3.3>.
- Jha, S., & Sachdeva, L. (2024). A study related to the role of training and development in employee and organizational performance. *AiBi Revista de Investigación, Administración e Ingeniería*. <https://doi.org/10.15649/2346030x.3825>.
- Khadka, A., & Khadka, S. (2024). Productive Employee Training and Its Impact on Retention. *Nepal Journal of Multidisciplinary Research*. <https://doi.org/10.3126/njmr.v7i1.65270>.
- Kumari, S. (2022). The Impact of Training and Development on Employees Retention. *International Journal of Scientific Research in Engineering and Management*. <https://doi.org/10.55041/ijsrem13044>
- Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester School*, 22(2), 139–191. <https://doi.org/10.1111/j.1467-9957.1954.tb00021.x>
- Muyambiri, B. (2023). The role of agriculture, industry, and the service sector in economic growth: The case of Mozambique. *African Journal of Agricultural and Resource Economics*, 18(2), 190–201. [https://doi.org/10.53936/afjare.2023.18\(2\).1](https://doi.org/10.53936/afjare.2023.18(2).1)
- Nasution, A., Suhairi, S., & Nurbaiti, N. (2024). The Influence of Training and Career Development on Employee Retention Mediated by Job Satisfaction. *MEC-J (Management and Economics Journal)*. <https://doi.org/10.18860/mec-j.v8i2.28494>.
- Obi-Anike, H. O., & Ekwe, M. C. (2014). Impact of training and development on organizational effectiveness: Evidence from selected public sector organizations in

- Nigeria. *European Journal of Business and Management*, 6(29), 66–75. <https://iiste.org/Journals/index.php/EJBM/article/view/16079>
- Oluwaseun, O. (2020). EMPLOYEE TRAINING AND DEVELOPMENT AS A MODEL FOR ORGANIZATIONAL SUCCESS. , 5, 181-189. <https://doi.org/10.29121/ijetmr.v5i3.2018.190>.
- Putri S. R, Monika, R. H.G, & Azmi, D. W. P. (2024). Strategi manajemen talenta untuk menghadapi tantangan era revolusi industri 4. 0. *MANABIS: Jurnal Manajemen Dan Bisnis*, 3(3), 94–104. <https://doi.org/10.54259/manabis.v3i3.2930>
- Sija, A. (2024). UNVEILING THE IMPACT OF TRAINING AND DEVELOPMENT ON EMPLOYEES' PERFORMANCE IN MANUFACTURING ENTERPRISES. *European Journal of Human Resource Management Studies*. <https://doi.org/10.46827/ejhrms.v8i2.1878>.
- Singh, R. (2023). Problems and Prospects of Employees in the Manufacturing Sector in the Haridwar District of Uttarakhand, India. *Asian Journal of Managerial Science*. <https://doi.org/10.51983/ajms-2023.12.2.3936>.
- Suhányi, L., Suhányiová, A., Kádárová, J., & Janeková, J. (2023). Relationships between Average Wages in the Manufacturing Sector and Economic Indicators of the Manufacturing Sector in the Region of Visegrad Group Countries. *Sustainability*. <https://doi.org/10.3390/su15054164>.
- Sunnexdesk. (2022, March 8). *Japanese electronics manufacturers are expanding operations in Naga, Cebu*. SunStar Publishing Inc. <https://www.sunstar.com.ph/cebu/local-news/japanese-electronics-manufacturer-to-expand-operations-in-naga-cebu>
- Taiwo, S., Alase, P., Hassan, T., & Okusanya, A. (2021). Training and Development Practices and Employees' Performance in Selected Manufacturing Companies in Nigeria. *International Journal of Engineering and Management Research*, 11, 136-142. <https://doi.org/10.31033/IJEMR.11.2.20>.
- Takrim, K., Khan, K., & Khan, M. (2023). Impact of Training on Employees' Perception of Development: A Case Study of Accountant General Office, Khyber Pakhtunkhwa, Pakistan. *Global Sociological Review*. [https://doi.org/10.31703/gsr.2023\(viii-ii\).09](https://doi.org/10.31703/gsr.2023(viii-ii).09).
- Truitt, D. (2011). The Effect of Training and Development on Employee Attitude as it Relates to Training and Work Proficiency. *SAGE Open*, 1. <https://doi.org/10.1177/2158244011433338>.
- Zaleska, K., & De Menezes, L. (2007). Human resources development practices and their association with employee attitudes: Between traditional and new careers. *Human Relations*, 60, 1018 - 987. <https://doi.org/10.1108/dlo.2008.08122aad.008>.