



BUILDING INSTITUTIONAL READINESS: HOW EDUCATION, TRAINING, AND WORK DISCIPLINE SHAPE PERSONNEL PERFORMANCE IN A POLICE LOGISTICS BUREAU

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Abstract

This study examines the effect of education, training, and work discipline on personnel performance at the Logistics Bureau of the Regional Police of the Riau Islands (Biro Logistik Polda Kepri). Personnel performance in a public-sector logistics function is central to institutional readiness, yet it is shaped by human-resource conditions that have received limited empirical attention in this context. A quantitative associative design was used, with a census of all 43 personnel as respondents. Data were collected through a structured Likert-scale questionnaire and analyzed using multiple linear regression in SPSS 23, following classical assumption tests. The results show that education ($t = 7.340$; $p = .000$), training ($t = 2.328$; $p = .025$), and work discipline ($t = 4.464$; $p = .000$) each have a positive and significant partial effect on personnel performance, and the three variables jointly explain 95.0 percent of the variance in personnel performance ($R^2 = .950$; $F = 246.779$; $p = .000$). Education emerged as the most dominant predictor ($\beta = .525$), followed by work discipline ($\beta = .321$) and training ($\beta = .184$). The findings indicate that continuing-education pathways, mandatory training compliance, and consistent disciplinary enforcement are complementary levers for strengthening personnel performance in police logistics units, and the study offers practical implications for human-resource policy in similar public-sector settings.

Keywords: *Education, Training, Work Discipline, Personnel Performance, Public-Sector Logistics*

1. Introduction

Human resources remain the decisive factor behind organizational effectiveness, and this is no less true in public-sector logistics functions, where the timely and accurate handling of materiel directly supports operational readiness (Atatsi et al., 2019). Within police organizations, the logistics bureau occupies a quietly critical position: it procures, stores, distributes, and accounts for the equipment on which frontline units depend. When personnel in this function underperform, the consequences cascade into the operational capability of the wider institution, yet logistics personnel performance rarely receives the same empirical attention as frontline policing performance (Shane, 2010).

Performance itself is best understood as the work outcomes and behaviors an employee has achieved in fulfilling assigned duties and responsibilities within a given period, judged jointly on quality and quantity (Atatsi et al., 2019). A large body of human-resource-management research treats performance as a function of employee capability, which is in turn built through education, reinforced through training, and safeguarded through discipline (Kwon & Rupp, 2013). Education develops the analytical and problem-solving capacity that employees bring to their roles; formal educational attainment is consistently associated with a stronger grasp of task requirements and a

greater ability to resolve non-routine problems (Schulz, 2013). Training complements formal education by building job-specific skill and updating competence as tasks and technologies change, and a growing literature links structured training investment to measurable gains in employee performance (Sendawula et al., 2018; Ibrahim et al., 2017; Mahmud et al., 2019; Truitt, 2011). Work discipline, meanwhile, is the behavioral scaffolding that translates capability into consistent output: it reflects an employee's willingness to comply with organizational rules, and its presence or absence has repeatedly been shown to shape performance outcomes in both public and private organizations (Asif & Rathore, 2021; Harris et al., 2015).

The Biro Logistik Polda Kepri illustrates these tensions concretely. Field observation indicates that a substantial share of personnel hold only secondary-level education, that participation in specialized training is uneven, and that disciplinary consistency varies across work units conditions that plausibly constrain personnel performance even where individual effort is not lacking. Public-sector organizations more broadly face comparable human-resource constraints, and evidence from other public-sector and high-performance-work-system settings suggests that the effects of leadership, job design, and human-resource practice on performance are neither automatic nor uniform across contexts (Alqudah et al., 2022; Shetty et al., 2022).

Prior studies offer mixed and fragmented evidence on how education, training, and discipline jointly shape performance in security-sector logistics settings specifically, and much of the existing literature examines these predictors separately rather than as a combined model. This study addresses that gap by testing the partial and simultaneous effects of education, training, and work discipline on personnel performance at the Biro Logistik Polda Kepri, using the full population of the unit as respondents. Based on the foregoing, the study advances four hypotheses: H1, education has a positive and significant effect on personnel performance; H2, training has a positive and significant effect on personnel performance; H3, work discipline has a positive and significant effect on personnel performance; and H4, education, training, and work discipline simultaneously have a positive and significant effect on personnel performance.

2. Literature Review

A. Personnel Performance

Performance is the result of work, in both quality and quantity, that an individual accomplishes in carrying out the duties assigned within a defined period (Atatsi et al., 2019). In public-sector organizations, performance carries an additional accountability dimension: because outputs are funded by public resources and tied to institutional mandates, personnel performance is evaluated not only against efficiency but against compliance with procedure and standard (Shane, 2010; Asif & Rathore, 2021). A systematic review of the employee-performance literature identifies ability, motivation, and opportunity as the three broad antecedent categories that jointly determine performance outcomes across organizational settings (Atatsi et al., 2019), a framework consistent with the education training discipline structure examined in this study, since education and training build ability while discipline shapes the opportunity for ability to be consistently realized in practice.

B. Education and Personnel Performance

Education can be understood as the deliberate effort to prepare individuals for their present and future roles through guidance, instruction, and training. From a human-capital perspective, formal education is an investment that expands an employee's stock of task-relevant knowledge and cognitive flexibility, and this stock of capital is a recognized driver of both individual and organizational performance (Kwon & Rupp, 2013). Firm-level evidence further shows that task-specific human capital the kind that formal education helps employees build and later refine on the job has a measurable link to productivity outcomes (Schulz, 2013). In security and logistics functions,

where personnel must interpret regulations, manage inventories, and solve non-routine procurement problems, a higher level of formal education is plausibly associated with stronger task performance.

C. Training and Personnel Performance

Training can be understood as a structured activity intended to improve capability and performance in the execution of assigned duties, through the enhancement of employees' expertise, knowledge, skill, attitude, and job-specific behavior (Sendawula et al., 2018). Empirical evidence from a range of settings supports a positive training-performance relationship: training combined with employee engagement has been shown to improve performance in the health sector (Sendawula et al., 2018), soft-skills training methodology has been linked to stronger employee performance outcomes (Ibrahim et al., 2017), and a properly targeted training-needs assessment strengthens the transfer of skill into employee performance (Mahmud et al., 2019). Training and development also shape employee attitudes toward work proficiency more broadly, an effect that compounds over time as training becomes embedded in organizational routine (Truitt, 2011).

D. Work Discipline and Personnel Performance

Work discipline can be defined as an attitude of respect, honor, obedience, and compliance toward applicable regulations written or unwritten carried out willingly, including a readiness to accept sanction for violations of the authority granted (Harris et al., 2015). In security-sector organizations specifically, discipline is not incidental but structural: performance-management frameworks in policing rest on systematic, rule-based accountability rather than informal compliance (Shane, 2010), and formal discipline instruments such as discipline matrices are used precisely because consistent rule enforcement is understood to underpin operational performance (Harris et al., 2015). Broader public-sector evidence likewise identifies behavioral compliance as a significant driver of performance outcomes (Asif & Rathore, 2021), reinforcing the expectation that work discipline functions as a performance lever in the police logistics context examined here.

Building on this review, the conceptual framework below (Figure 1) positions education (X1), training (X2), and work discipline (X3) as independent variables jointly predicting personnel performance (Y).

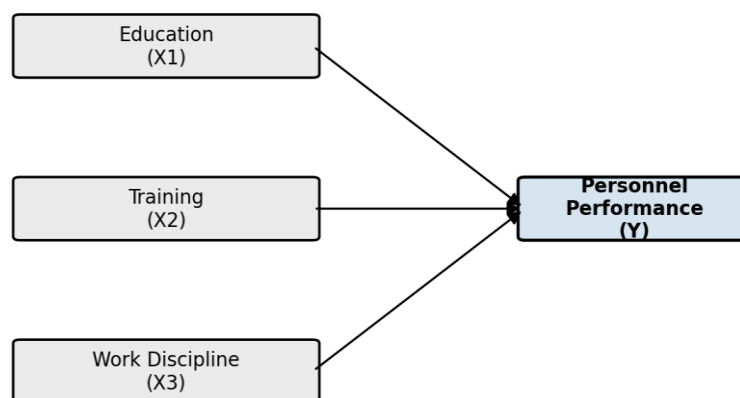


Figure 1. Conceptual Framework

Based on the framework above, the study proposes the following hypotheses:

- H1: Education has a positive and significant effect on personnel performance.
- H2: Training has a positive and significant effect on personnel performance.
- H3: Work discipline has a positive and significant effect on personnel performance.

H4: Education, training, and work discipline simultaneously have a positive and significant effect on personnel performance.

3. Research Method

This study uses a quantitative, associative research design intended to test the causal relationship between independent and dependent variables through statistical hypothesis testing rather than description alone. The quantitative approach is appropriate where the goal is to measure variables numerically and validate a hypothesized model against sample data (Bashir et al., 2020). The population comprises all personnel of the Biro Logistik Polda Kepri, totaling 43 individuals. Because the population is small and fully accessible, a census (total sampling) technique was used, meaning all 43 personnel served as respondents rather than a drawn subsample; this avoids sampling error entirely at the cost of external generalizability beyond the studied unit.

Three independent variables were operationalized: education (X1), measured through indicators of formal educational attainment and its perceived relevance to job tasks; training (X2), measured through indicators of training frequency, relevance, and applied skill gain; and work discipline (X3), measured through indicators of rule compliance, punctuality, and responsiveness to supervision. The dependent variable, personnel performance (Y), was measured through indicators of work quality, work quantity, timeliness, and task responsibility. All items used a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) and were administered through a structured questionnaire supplemented by observation and interview. Prior to hypothesis testing, the instrument was assessed for validity (item-total correlation) and reliability (Cronbach's alpha), and the regression model was checked against the classical assumptions of normality, multicollinearity, and heteroscedasticity. Multiple linear regression was then used to estimate the model $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$, with partial effects assessed via the t-test, the joint effect assessed via the F-test, and the proportion of variance explained assessed via the coefficient of determination (R^2), all computed in SPSS 23 at a 95 percent confidence level ($\alpha = .05$).

4. Results and Discussion

Questionnaires were distributed to all 43 personnel of the Biro Logistik Polda Kepri, all of which were returned complete and valid. Table 1 summarizes the respondent profile.

Table 1. Respondent Profile (n = 43)

Characteristic	Category	n	%
Gender	Male	33	77.0
	Female	10	23.0
Age	21–30 years	19	44.0
	31–40 years	20	46.0
	41–50 years	4	10.0
Tenure	> 5 years	32	74.0
	< 5 years	11	26.0
Education	Senior secondary (SMA)	29	67.0
	Bachelor's degree (S1)	14	33.0

The sample is predominantly male (77.0%), concentrated in the 21–40 age range (90.0% combined), with most personnel holding more than five years of tenure (74.0%) and a secondary-school education (67.0%). This profile is consistent with a stable, experienced but formally under-educated workforce a pattern that foreshadows the strength of the education effect reported below.

Table 2. Multiple Linear Regression Results

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	19.655	2.249	-	8.740	.000
Education (X1)	.820	.112	.525	7.340	.000
Training (X2)	.299	.128	.184	2.328	.025
Work Discipline (X3)	.401	.090	.321	4.464	.000

The unstandardized coefficients indicate that, holding the other predictors constant, a one-point increase in education is associated with a 0.820-point increase in personnel performance, a one-point increase in training with a 0.299-point increase, and a one-point increase in work discipline with a 0.401-point increase. All three coefficients are positive, consistent with the hypothesized direction of effect. The standardized (Beta) coefficients show education as the strongest relative predictor (.525), followed by work discipline (.321) and training (.184).

$$Y = 19.655 + 0.820X1 + 0.299X2 + 0.401X3 + e$$

Table 3. F-Test (ANOVA) Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2565.901	3	855.300	246.779	.000
Residual	135.168	39	3.466		
Total	2701.070	42			

With $F = 246.779$ exceeding the critical F-table value of 2.61 at a significance level of .000 ($p < .05$), H_0 is rejected and H_4 is supported: education, training, and work discipline simultaneously exert a significant effect on personnel performance.

Table 4. Coefficient of Determination (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.975	.950	.946	1.862

The model yields $R^2 = .950$, indicating that education, training, and work discipline jointly account for 95.0 percent of the variance in personnel performance, with the remaining 5.0 percent attributable to factors outside the model. This is a very strong explanatory fit for a field survey of this kind.

1. The Effect of Education on Personnel Performance

Education shows a positive and significant partial effect on personnel performance ($t = 7.340 > t\text{-table } 2.022$; $p = .000 < .05$), supporting H_1 and confirming education as the most dominant predictor in the model ($\beta = .525$). This finding is consistent with human-capital accounts of performance, in which formal education expands the analytical capacity employees bring to non-

routine tasks and strengthens firm-level outcomes associated with human-capital investment (Kwon & Rupp, 2013). It also aligns with evidence that task-specific human capital often built upon a foundation of formal education is closely tied to productivity (Schulz, 2013). Given that two-thirds of respondents in this study hold only a secondary-school education, the strength of this effect suggests that continuing-education pathways represent a high-leverage intervention for this unit.

II. The Effect of Training on Personnel Performance

Training shows a positive and significant partial effect on personnel performance ($t = 2.328 > t\text{-table } 2.022$; $p = .025 < .05$), supporting H2, though its relative contribution ($\beta = .184$) is smaller than that of education or discipline. This is broadly consistent with prior evidence that structured training raises employee performance, particularly when training content is relevant and reinforced through engagement (Sendawula et al., 2018; Ibrahim et al., 2017), and that properly targeted training-needs assessment improves the transfer of training investment into performance gains (Mahmud et al., 2019). The comparatively modest effect size found here may reflect uneven participation in specialized training across personnel, a pattern consistent with the uneven training exposure noted in the introduction and suggests that training effects could be strengthened through more consistent, needs-based scheduling rather than ad hoc delivery.

III. The Effect of Work Discipline on Personnel Performance

Work discipline shows a positive and significant partial effect on personnel performance ($t = 4.464 > t\text{-table } 2.022$; $p = .000 < .05$), supporting H3 and confirming discipline as the second-strongest predictor in the model ($\beta = .321$). This result is consistent with the structural role discipline plays in policing-sector performance management, where rule-based accountability mechanisms such as discipline matrices are used precisely because consistent compliance is understood to underpin operational output (Shane, 2010; Harris et al., 2015), and with broader public-sector evidence linking behavioral compliance to performance (Asif & Rathore, 2021). For a logistics unit responsible for materiel accountability, this finding underscores that consistent enforcement of standard operating procedure is not merely a compliance requirement but a direct contributor to performance.

IV. The Simultaneous Effect of Education, Training, and Work Discipline on Personnel Performance

Taken together, education, training, and work discipline simultaneously exert a significant effect on personnel performance ($F = 246.779 > F\text{-table } 2.61$; $p = .000 < .05$; $R^2 = .950$), supporting H4. The very high explained variance suggests that these three variables capture most of what distinguishes higher- from lower-performing personnel in this unit, leaving comparatively little room for unmeasured factors. This pattern is consistent with the broader human-resource-management view that employee performance is jointly a function of ability (built through education and training) and the behavioral discipline required to translate that ability into consistent output (Atatsi et al., 2019; Alqudah et al., 2022). It also echoes evidence that combined, mutually reinforcing human-resource interventions rather than any single lever tend to drive the strongest performance outcomes, whether channeled through organizational support and trust (Saleem et al., 2020; Bhatti et al., 2022) or through employee contentment and retention-linked motivation (Mardanov, 2021).

5. Conclusion and Recommendations

This study demonstrates that education, training, and work discipline each have a positive and significant partial effect on personnel performance at the Biro Logistik Polda Kepri, and that the three variables jointly explain 95.0 percent of the variance in performance. Education is the most dominant predictor, followed by work discipline and training, indicating that the unit's performance

is anchored more strongly in what personnel know and how consistently they comply with procedure than in training exposure alone. For management, the findings imply three complementary priorities: expanding access to continuing and job-relevant education for personnel whose formal qualifications remain at the secondary level; scheduling training on a needs-assessed rather than ad hoc basis to raise its comparatively modest contribution; and maintaining consistent, transparent disciplinary enforcement, given its demonstrated link to performance in security-sector settings. Because this study draws on the full population of a single logistics bureau, the findings are best generalized cautiously to comparable public-sector logistics units rather than to policing performance broadly. Future research could extend the model with additional predictors such as extra-role behavior and psychological empowerment, which were beyond the scope of the present design, and could test the model across multiple regional logistics bureaus to assess the stability of these effects.

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