

The Effect of Competency Development on Employee Performance at the North Sumatra Human Resource Development Agency

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Abstract

This study aims to examine the effect of Competency Development on Employee Performance at the North Sumatra Human Resource Development Agency, Indonesia. In the context of public sector governance, improving human resource capacity is essential to support organizational effectiveness and the achievement of institutional goals. Competency development is considered a critical factor in enhancing employees' knowledge, skills, and professional attitudes, which directly contribute to improving their performance. Therefore, this study provides empirical evidence on how competency development improves employee performance in a public sector human resource development institution. A quantitative approach was employed using survey data collected from 50 respondents through a structured questionnaire. The validity and reliability of the research instrument were tested using Pearson's correlation and Cronbach's Alpha, confirming that all items were valid and reliable. Descriptive statistical analysis indicated that both competency development and employee performance were perceived at a moderate level, with mean scores of 20.3600 and 20.4400, respectively, and relatively consistent responses among participants. Furthermore, simple linear regression analysis and a t-test were conducted to test the research hypothesis. The results revealed that competency development has a positive and statistically significant effect on employee performance, with a significance value of 0.000 and a regression coefficient of 1.014. The coefficient of determination ($R^2 = 0.991$) indicates that 99.1% of the variance in employee performance can be explained by competency development. In addition, the high t-value (73.553) confirms a very strong relationship between the variables. These findings demonstrate that competency development plays a crucial role in improving employee performance. Strengthening competency development programs through continuous training, skill enhancement, and professional development initiatives can significantly enhance employee performance and overall organizational effectiveness in the public sector.

Keywords: Competency Development; Employee Performance; Human Resource Management

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Introduction

In the era of bureaucratic reform and public sector governance transformation, improving the quality of human resources of civil servants has become a strategic priority in achieving professional, effective, and accountable public services. Government institutions are increasingly required to enhance the competence and performance of their employees in order to meet the growing demands of public service delivery (1);(2). In this context, the role of human resource development institutions becomes crucial in strengthening the capacity, professionalism, and performance of civil servants.

The North Sumatra Human Resource Development Agency plays a strategic role in supporting the development of civil servant competencies through various education and training programs designed to improve knowledge, skills, and professional attitudes. These programs are expected to enhance the capability of employees in carrying out their duties effectively and efficiently. Therefore, employee performance within the agency becomes a key factor in ensuring the success of human resource development programs and the sustainability of bureaucratic reform initiatives (3).

Employee performance is generally influenced by various organizational and individual factors. One of the most important factors is competency development, which refers to systematic efforts undertaken by organizations to improve employees' knowledge, technical abilities, and professional skills (4). Competency development enables employees to perform their responsibilities more effectively, adapt to organizational changes, and respond to increasing job demands. According (5), competency development is a continuous process designed to improve employee capabilities through structured learning and training activities that align with organizational goals.

Furthermore, competency development has been widely recognized as an essential mechanism for improving employee productivity and work quality. Employees who continuously develop their competencies tend to demonstrate higher levels of job performance, greater problem-solving abilities, and stronger commitment to organizational objectives (6). (7) emphasize that organizations that invest in competency development are more likely to achieve improved organizational performance because employees are better equipped to carry out their duties effectively and efficiently.

In public sector organizations, competency development is particularly important due to the dynamic nature of administrative responsibilities and the increasing complexity of public service delivery. Civil servants are required not only to possess adequate technical skills but also to demonstrate adaptability, innovation, and professionalism in their work (8). Therefore, competency development programs must be designed in a systematic and sustainable manner to ensure that employees continuously improve their capabilities and maintain high levels of performance (2).

Despite the importance of competency development, the relationship between competency development programs and employee performance is not always optimal in practice. In some cases, training and development activities are conducted routinely without producing significant improvements in employee performance (9). This situation often occurs when competency development programs are not aligned with job requirements, organizational needs, or performance evaluation systems. Consequently, the effectiveness of competency development initiatives may not fully translate into improved employee performance (10).

To obtain an initial empirical understanding of this issue, a preliminary survey was conducted among employees at the North Sumatra Human Resource Development Agency. The survey aimed to assess several key indicators of employee performance, including quality of work results, timeliness in completing tasks, application of acquired competencies, responsibility in task execution, and performance consistency. The results of the preliminary survey are presented in Table 1.

Table 1. Preliminary Survey Results of Employee Performance at the North Sumatra Human Resource Development Agency

No	Employee Performance Indicator	Percentage (%)	Category
1	Quality of work results	74.3	Moderate
2	Timeliness in completing tasks	71.8	Moderate
3	Ability to apply competencies gained from training	67.5	Moderate
4	Responsibility in task implementation	72.6	Moderate
5	Performance consistency after participating in training	65.9	Low
Average		70.4	Moderate

Source: Researcher's Preliminary Survey (2025)

The results of the preliminary survey indicate that overall employee performance at the agency is categorized as moderate. However, the ability of employees to apply competencies acquired from training programs into their daily work activities remains relatively limited. In addition, the consistency of employee performance after participating in training programs is still considered low. These findings suggest that competency development initiatives have not yet produced optimal outcomes in terms of improving employee performance.

This situation indicates the existence of a gap between the expected outcomes of competency development programs and their actual impact on employee performance. Such a gap may be caused by several factors, including the relevance of competency development programs to job requirements, the level of employee participation in development activities, and the extent to which employees are able to apply newly acquired competencies in their work environment (11).

Previous studies have highlighted the importance of competency development in improving employee performance in both private and public sector organizations (12). However, empirical research focusing specifically on competency development and employee performance within government human resource development agencies remains relatively limited. Considering the strategic role of these institutions in enhancing the professionalism and competence of civil servants, it is important to examine how competency development influences employee performance in this organizational context (2).

Therefore, this study aims to analyze the effect of competency development on employee performance at the North Sumatra Human Resource Development Agency. The findings of this study are expected to provide empirical evidence regarding the role of competency development in improving employee performance and to offer practical recommendations for strengthening human resource development policies within government institutions.

Literature Review

Competency Development

Competency development is a systematic and continuous process aimed at enhancing employees' capacity through the improvement of knowledge, skills, and work attitudes so that they align with job demands and organizational needs (13). Competency development is intended to prepare employees to face both current and future job challenges.

In the public sector, competency development serves as a strategic instrument for creating professional, adaptive, and performance-oriented civil servants (14).

Indicators of Competency Development

The indicators of competency development in this study refer to (13), which include:

1. The alignment of training programs with job requirements
2. Opportunities to participate in education and training programs
3. Improvement of knowledge and work-related skills

4. Development of professional attitudes and behaviors
5. Sustainability of competency development programs

Employee Performance

Employee performance refers to the level of achievement of work results accomplished by employees in carrying out the duties and responsibilities assigned to them in accordance with organizational standards and objectives. Performance reflects an individual's contribution to the overall achievement of organizational goals, including aspects such as the quality, quantity, and timeliness of task completion (7).

In the context of public sector organizations, employee performance is not only measured by work output but also by accountability, compliance with regulations, and the ability to deliver high-quality public services. (15) emphasize that employee performance is a function of ability, motivation, and the opportunities provided by the organization.

Indicators of Employee Performance

According to (7) the indicators of employee performance include:

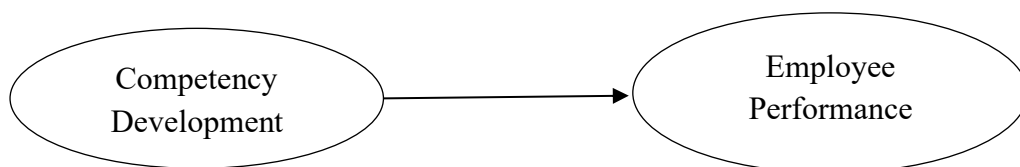
1. Quality of work results
2. Timeliness in completing tasks
3. Work responsibility
4. Consistency of performance
5. Ability to apply competencies in work tasks

Conceptual Framework and Hypothesis

This study conceptualizes Competency development as independent variables. And employee performance acts as the dependent variable.

The conceptual framework assumes that higher Competency development will improve internal service satisfaction. Increased satisfaction among DPRD leaders and members is expected to contribute positively to their work performance.

Based on this framework, the hypotheses of this study are formulated as follows:



The hypothesis is:

Ha : Competency Development has a positive and significant effect on Employee Performance at the North Sumatra Human Resource Development Agency

Ho : Competency development does not have positive and significant effect on Employee performance at the North Sumatra Human Resource Development Agency

Research Methodology

This study employed a quantitative associative research design, which aims to examine the relationship between two or more variables (16); (17). The quantitative approach was selected to statistically test the hypothesized relationships among the research variables. However, in the present study, the primary focus is on analyzing the influence of Competency development on Employee performance .

The research was conducted at the North Sumatra Human Resource Development Agency, located at Jalan Ngalengko No. 1 Medan, North Sumatera. The study was carried out over a three-month period, from March 2026 to June 2026.

The population of this study consisted of all employees working at the North Sumatra Human Resource Development Agency. According to (18); (19), a population refers to the

entire group of subjects or objects that possess specific characteristics relevant to the research problem and serve as the basis for data collection and generalization of findings. In this study, the total population comprised 50 employees, all of whom were civil servants (ASN).

Given the relatively small size of the population, this research applied a saturated sampling technique (census sampling), in which all members of the population were included as research respondents. As defined by (19), a sample represents a subset of the population selected to reflect the characteristics of the entire population. However, since the population in this study was limited to 50 employees, all individuals were involved as respondents. Therefore, the total sample size was 50 employees.

The study relied on primary data collected through a structured questionnaire distributed to all respondents. The questionnaire items were developed based on established theoretical indicators of service speed and service optimization. Responses were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. In addition, secondary data were obtained from institutional documents, official reports, and relevant administrative records to complement and support the primary data.

The collected data were analyzed using quantitative statistical methods with the assistance of SPSS version 26.0. The analysis was conducted in several stages. First, a validity test was performed to assess whether each questionnaire item accurately measured the intended variable (20). An item was considered valid if the calculated correlation coefficient (r -count) exceeded the r -table value. Second, a reliability test was conducted using Cronbach's Alpha, where a coefficient greater than 0.70 indicated that the instrument was reliable.

The regression model applied in this study is formulated as follows: $Y = a + bX$, Where:

Y = Employee performance

X = Competency development

a = Constant

b = Regression Coefficient

The t -test is used to determine whether service speed has a significant effect on service optimization. The hypothesis is accepted if the t -count value is greater than the t -table value or if the significance level (p -value) is less than 0.05. Additionally, the coefficient of determination (R^2) is calculated to measure the proportion of variance in service optimization explained by service speed. The R^2 value ranges from 0 to 1, with values closer to 1 indicating a stronger influence of the independent variable.

Results

Validity and Reliability Tests

Validity was assessed using Pearson's correlation coefficient (r -value) by correlating each individual item score with the total composite score of its respective variable. With a sample size of $N = 50$ and a significance level of 5% (two-tailed), the critical r -table value was 0,2017. An item was considered valid if its r -value exceeded the r -table value.

Based on the results of the validity test using Pearson Correlation, the correlation coefficients obtained were 0.954, 0.984, 0.886, 0.975 and 0.975 with a significance value (Sig. 2-tailed) of 0.000 for all indicators of Competency development variable.

Since all correlation coefficients are very high and the significance values are below 0.05, it can be concluded that all indicators are statistically significant and valid in measuring the Competency development.

The results of the validity test using Pearson Correlation of Employee performance variable, obtained were 0.989, 0.989, 0.989, 0.991 and 0.859 with a significance value (Sig. 2-tailed) of 0.000 for all indicators of the Employee performance variable.

According to (17) since all correlation coefficients are above the commonly accepted minimum threshold ($r > 0.30$) and fall within the moderate to very strong correlation range, and because the significance values are below 0.05, it can be concluded that all indicators are statistically significant and valid in measuring the Employee performance variable.

Reliability was evaluated using Cronbach's Alpha to measure the internal consistency of each variable. A research instrument is generally considered reliable if its Cronbach's Alpha value exceeds 0.60 (21).

Table 2. Reliability Results

Variable	Cronbach's Alpha	Benchmark	Result
Competency development	0.976	> 0.60	Reliable
Employee performance	0.981	> 0.60	Reliable

The Competency development variable achieved a Cronbach's Alpha value of 0.968, while the Employee performance variable obtained a value of 0.986. Both values were well above the 0.60 benchmark, indicating strong internal consistency. These findings confirmed that the measurement instruments were both valid and reliable.

Descriptive Analysis

The first step in the descriptive analysis was to examine the summary statistics of the two main variables (Competency development and Employee performance). The analysis was conducted to provide an overview of respondents' perceptions based on the composite scores obtained from the questionnaire items. Each variable score represents the total accumulation of responses across its respective indicators.

Table 3. Descriptive Statistics

Variable	Mean	Std. Deviation	N
Competency development	20.3600	3.59001	50
Employee performance	20.4400	3.52345	50

As shown in Table 3, the mean score for Competency Development is 20.3600, with a standard deviation of 3.59001, based on 50 respondents. This result indicates that, on average, respondents perceived the implementation of competency development within the organization to be at a moderate level. The standard deviation, which is relatively smaller than the mean, suggests that the responses were fairly consistent among respondents. This implies that employees tend to have similar perceptions regarding the availability and implementation of competency development programs, although some variation still exists.

Meanwhile, the mean score for Employee Performance is 20.4400, with a standard deviation of 3.52345, also based on 50 respondents. This finding indicates that the overall level of employee performance is perceived to be in the moderate to good category. The relatively low standard deviation compared to the mean suggests that respondents' assessments of employee performance are also consistent. This means that most employees share similar views regarding their performance, including aspects such as quality of work, timeliness, responsibility, and consistency.

Overall, the descriptive statistics indicate that both Competency Development and Employee Performance are perceived at a relatively moderate level, with consistent responses across participants. These findings provide an initial indication that competency development may play a role in shaping employee performance. Therefore, further inferential analysis is necessary to examine the relationship and the extent of the influence of competency development on employee performance within the organization.

These findings are consistent with previous studies (22) which indicate that the Competency development has a significant relationship with Employee performance. The findings highlighted that Competency development significantly contribute to improved Employee performance ..

Regression Analysis

Simple Linear Regression

A simple linear regression analysis was conducted to examine the effect of Competency development on Employee performance at the North Sumatra Human Resource Development Agency. The analysis used composite scores derived from the three indicators of each variable based on the questionnaire data from 50 respondents.

Table 4. Regression Results

Model	B	Std. Error	Beta	t	Sig. (p)
(Constant)	-.374	.286		-1.309	.197
Employee performance	1.014	.014	.996	73.553	.000

a. Dependent Variable: Competency development

A simple linear regression analysis was conducted to examine the effect of Employee Performance on Competency Development. The analysis was based on questionnaire data collected from 50 respondents, with Competency Development as the dependent variable and Employee Performance as the independent variable.

Based on the regression output presented in Table 4, the regression equation can be formulated as:

$$Y = -0.374 + 1.014X$$

The constant value ($B = -0.374$) indicates that when the value of Competency Development is assumed to be zero, the predicted score of Employee Performance would be -0.374 . Although this value has limited practical meaning in real organizational settings, it serves as a statistical baseline in the regression model.

The regression coefficient ($B = 1.014$) indicates that for every one-unit increase in Competency Development, the Employee Performance score is predicted to increase by 1.014 units, assuming other variables remain constant. This positive coefficient suggests that higher levels of competency development are associated with higher levels of employee performance within the organization.

The significance value ($p = 0.000$) is lower than the significance level of 0.05, indicating that Competency Development has a statistically significant effect on Employee Performance. Furthermore, the standardized beta coefficient ($Beta = 0.996$) shows a very strong positive relationship between the two variables.

The t-value of 73.553, which is much higher than the critical t-table value (approximately 2.010 for $df = 48$, $\alpha = 0.05$), further confirms that the effect of Competency Development on Employee Performance is statistically significant.

These findings indicate that higher levels of competency development are strongly associated with increased employee performance within the organization (12).. Therefore, the research hypothesis stating that Competency Development has a positive and significant effect on Employee Performance is accepted.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) was calculated ;to measure the proportion of variance in Competency development that could be explained by Employee performance at the North Sumatra Human Resource Development Agency.

Table 5. Coefficient of Determination

Model	R	R^2	Adjusted R^2
1	.996a	.991	.991

Based on Table 5, the results of the analysis show that the coefficient of determination (R^2) is 0.991. This indicates that 99.1% of the variance in by Employee Performance can be explained by Competency Development. In other words, the independent variable included in this regression model has a very strong explanatory power in predicting changes in Competency Development. The remaining 0.9% of the variance is influenced by other factors not included

in this research model, such as leadership style, organizational culture, work environment, training systems, or other managerial aspects within the organization.

Furthermore, the correlation coefficient ($R = 0.996$) indicates a very strong positive relationship between Employee Performance and Competency Development. This suggests that higher levels of competency development are strongly associated with higher levels of employee performance within the organization.

The Adjusted R^2 value of 0.991 also demonstrates that the regression model remains highly reliable even after adjustment. This indicates that the model has excellent predictive capability and provides a robust explanation of the relationship between the variables.

Overall, these findings confirm that Competency Development makes a substantial contribution to explaining variations in Employee Performance, while only a very small proportion is influenced by other factors beyond the scope of this study (23).

Hypothesis Testing (t-Test)

Hypothesis testing was conducted using a t-test to determine whether the independent variable, Competency development, had a positive and significant effect on Employee performance

Table 6. t- Test Result

Model	B	Std. Error	Beta	t	Sig. (p)
(Constant)	-.374	.286		-1.309	.197
Employee performance	1.014	.014	.996	73.553	.000

a. Dependent Variable: Competency development

Table 6 presents the results of the t-test analysis used to examine the effect of Competency Development on Employee Performance. Based on the table, the constant value is -0.374 with a standard error of 0.286 and a t-value of -1.309 , with a significance value of 0.197. This value represents the baseline level of Employee Performance when the independent variable, Competency Development, is assumed to be zero. Since the significance value is greater than 0.05, the constant is not statistically significant.

Meanwhile, the regression coefficient for Competency Development is 1.014 with a standard error of 0.014 and a standardized beta coefficient of 0.996. The t-value of 73.553, which is much higher than the t-table value (approximately 2.010 for $df = 48$, $\alpha = 0.05$), indicates a very strong and statistically significant effect of Competency Development on Employee Performance. The significance value ($p = 0.000$) is also lower than the significance level of 0.05, confirming that the effect is statistically significant.

These results indicate that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, meaning that Competency Development has a positive and significant effect on Employee Performance. The positive regression coefficient suggests that higher levels of competency development are associated with higher levels of employee performance within the organization.

Therefore, the findings imply that improvements in competency development can significantly contribute to enhancing employee performance. This result highlights the importance of strengthening competency development programs through continuous training, skill enhancement, and organizational support to achieve better performance outcomes (24).

Conclusion

Based on the results of the descriptive and inferential statistical analyses, several conclusions can be drawn from this study regarding the relationship between Employee Performance and Competency Development at the North Sumatra Human Resource Development Agency.

First, the descriptive analysis shows that respondents generally provided moderately positive assessments of both variables. The mean score of Competency Development was

20.3600 with a standard deviation of 3.59001, while the mean score of Employee Performance was 20.4400 with a standard deviation of 3.52345. These results indicate that both competency development and employee performance are perceived to be at a moderate level within the organization. The relatively small standard deviation values suggest that respondents' perceptions were fairly consistent.

Second, the simple linear regression analysis indicates that Competency Development has a positive effect on Employee Performance. The regression equation obtained was $Y = -0.374 + 1.014X$, which means that every one-unit increase in competency development is predicted to increase employee performance by 1.014 units. The significance value of 0.000 (< 0.05) indicates that this effect is statistically significant.

Third, the coefficient of determination (R^2) shows a value of 0.991, meaning that 99.1% of the variation in Employee Performance can be explained by Competency Development, while the remaining 0.9% is influenced by other variables not included in this study. In addition, the correlation coefficient ($R = 0.996$) indicates a very strong positive relationship between the two variables.

Fourth, the t-test results further confirm the significance of this relationship. The calculated t-value of 73.553 is far greater than the t-table value (approximately 2.010) with a significance value of 0.000, indicating that the independent variable has a very strong and statistically significant influence on the dependent variable. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.

Overall, the findings of this study demonstrate that Competency Development plays a highly significant role in influencing Employee Performance within the North Sumatra Human Resource Development Agency. Higher levels of competency development are strongly associated with better employee performance within the organization. These results suggest that improving competency development through continuous training, skill enhancement, and organizational support can contribute positively to enhancing employee performance and overall organizational effectiveness.

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