



## Evaluation of the effectiveness of cadet training programs in competency development and learning in Timor-Leste

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### ABSTRACT

This study aims to evaluate the effectiveness of the new cadet training program of the Timor Leste National Police in the development of competencies and learning. Using a quantitative approach with a quasi-experimental design (one-group pre-test and post-test), this study involved 60 cadets as a sample. Data was collected through validated objective test instruments, then analyzed using descriptive statistics, the Paired Sample t-Test, and the Gain Score. The results showed a significant increase between pre-test and post-test scores ( $p < 0.001$ ), with an average gain score of 0.43 in the medium category. Evaluation based on the CIPP (Context, Input, Process, Product) model revealed that although the training succeeded in improving the technical competence of cadets, there is still room for improvement in aspects of the training process, especially in the integration of experience-based learning. The study concluded that the effectiveness of training was partial and emphasized technical readiness rather than mental and contextual readiness. The implications of these results encourage the need to reformulate training approaches to be more adaptive to the learning challenges and tasks of contemporary policing.



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## INTRODUCTION

Public security and order are the main foundations for the creation of social stability and sustainable development in various sectors of a country's life (Gahansa et al., 2018). When security is guaranteed, economic, social, and political development can take place optimally (Malik et al., 2023). On the contrary, maintained order allows the community to live in harmony and uphold the values of the applicable law. In the modern constitutional system, the police institution plays a vital role as the front line in enforcing the law, maintaining public order, and providing protection to citizens. The Timor Leste National Police also bears this strategic responsibility, especially in supporting the country's development which is still in the process of consolidating democracy and security stability. Therefore, the professionalism, capacity, and readiness of the police are key elements in ensuring that these functions can be carried out optimally.

One of the important instruments in preparing quality police human resources is the training of new cadets. This training aims to form personnel who are not only technically capable, but also have integrity, character toughness, and psychological ability in facing the complexity of field task challenges. The Timor Leste National Police cadet training program is designed to equip participants with legal understanding, physical skills, social competence, and the capacity to make quick and appropriate decisions in high-pressure situations (Erman & Winario, 2024). In the ever-changing global

context, such training must be able to prepare individuals who are adaptive, ethical, and oriented to public service. Therefore, it is important to ensure that this cadet training not only provides technical skills, but also builds competencies in the continuous learning aspect.

However, in its implementation, this training program faces challenges that are not simple. Social change, technological developments, and political dynamics demand continuous adjustments to the training approaches used (Kamala et al., 2025). It is not uncommon to find a gap between the training material and the real conditions faced by cadets after they enter the field. Many training graduates feel that the provisions they have obtained are not fully relevant or adequate in dealing with the real complexity of the task (Edy & Firmansyah., 2025). This raises concerns that the training process has not fully met the real needs of police institutions and public expectations of professional officers. In addition, the effectiveness of training cannot be measured only through physical aspects or theoretical knowledge, but also through the mental readiness, confidence, and motivation of the individual concerned (Fauziyah et al., 2025).

To overcome these problems, evaluation of the effectiveness of the training program is very important. Evaluation serves as an objective and systematic measurement tool to find out the extent to which the training goals are achieved. A good evaluation not only captures the final results, but also examines the processes, methods, curriculum, quality of instructors, and the effectiveness of the supporting facilities used in the training (Saputro et al., 2023). In the context of police cadet training, the evaluation also needs to touch on psychological and social aspects, including the ability to adapt to technology, the ability to communicate with the community, and the ability to deal with pressure in the field (Assidiqi & Sakapurnama, 2025). In other words, a thorough evaluation can provide crucial feedback for program improvement, both in terms of design and implementation. This evaluation is also important to ensure that the training program produces outputs in the form of police members who are truly prepared, professional, and trustworthy by the community (Paring., 2018).

A number of previous studies have discussed the effectiveness of training in various institutional contexts. The importance of the psychological dimension in the training of the apparatus, and the combination of quantitative and qualitative approaches in evaluating the effectiveness of training. Confidence is an important indicator of the success of police training, while Hartini et al., (2020) emphasize the role of communication skills in task readiness. The success of the training is also influenced by external factors such as social support, cultural conditions, and the dynamics of the society where the officers will be placed. However, most of these studies have not specifically reviewed the effectiveness of cadet training programs in the context of the Timor Leste National Police, especially in measuring the suitability of training to operational needs in the field. This gap is what this study aims to fill.

Based on this description, this study aims to evaluate the effectiveness of the training program for new cadets of the Timor Leste National Police in the development of competencies and learning. The focus of the evaluation includes the dimensions of technical skills, mental readiness, curriculum relevance, and cadets' perception of the meaning of the training that has been undertaken. By combining quantitative and qualitative approaches, the results of this study are expected to provide a comprehensive picture of the strengths and weaknesses of current training programs. This evaluation also aims to provide strategic recommendations for policy makers within the Timor Leste National Police so that cadet training programs can continue to be developed in an adaptive, contextual, and need-based manner in the field (Fitriani et al., 2024).

## **METHODS**

### **Research Design**

This study uses a quantitative approach with an evaluative research type to assess the effectiveness of the training program for new cadets of the Timor Leste National Police in improving

task readiness. The quantitative approach was chosen because it is able to provide objective and measurable data through test instruments, making it easier for researchers to identify the impact of training statistically. The research design used was quasi-experimental with a one-group pre-test and post-test design, where one group of cadets was given measurements before and after training to see the extent of significant changes.

### **Research Population**

The population in this study is all new cadets who will be participating in the basic training program at the Timor Leste National Police in 2024, with a total of about 150 people. The research sample was selected using a purposive sampling technique with the criteria of cadets who participated in full training without attendance or administrative disturbances. From this population, as many as 60 cadets were used as a sample because they were considered representative and met the inclusion criteria in this evaluative study.

### **Instrument Data Collection**

Data collection is carried out through objective tests in the form of pre-tests and post-tests developed based on indicators of police task readiness. This instrument covers four main aspects, namely: (1) basic knowledge of laws and procedures; (2) technical skills in carrying out tasks in the field; (3) decision-making ability in critical situations; and (4) understanding of standard operating procedures (SOPs). This test consists of 30 multiple-choice questions that have gone through a content validation process by experts (expert judgment), and are tested for reliability using the Alpha Cronbach technique with a reliability coefficient of above 0.70 which shows that the consistency of the instrument is relatively high.

### **Data Analysis Techniques**

The data obtained was analyzed using descriptive statistical techniques to determine the mean value, standard deviation, and distribution of pre-test and post-test scores. Furthermore, a Paired Sample t-Test was carried out to determine the significance of the difference in scores between before and after training, in order to assess the success of the program statistically. In addition, a Gain Score is also calculated to assess the effectiveness of improvement based on the classification of Hake (1999), which distinguishes between high, medium, and low effectiveness. To support the evaluative analysis, this study refers to the CIPP (Context, Input, Process, Product) evaluation model developed by Stufflebeam. This model was chosen because it provides a comprehensive framework for assessing training programs, starting from needs analysis (context), assessment of resources and planning (input), evaluation of the training implementation process (process), to measuring program results and impact on cadet task readiness (product). This model also allows evaluations to be carried out systematically and can be used to provide recommendations for future training improvements.

## **RESULTS**

### **Respondent Characteristics**

This study involved as many as 60 new cadets of the Timor Leste National Police in 2024 as respondents. They are participants in the basic training program who have participated in the entire training series in full. The characteristics of the respondents are seen from three main aspects, namely gender, age, and last educational background. Here is a description of the results: Based on gender, the majority of respondents were men as many as 43 people (71.7%), while women amounted to 17 people (28.3%). In terms of age, respondents were between 18 and 25 years old, with the highest age distribution in the 21-23 age range of 32 people (53.3%). Meanwhile, from the last education aspect, the majority of respondents came from 46 high school graduates (76.7%), followed by 10 D3 graduates (16.7%), and the remaining 4 S1 graduates (6.6%). The following table presents a recapitulation of respondent characteristics:

**Table 1. Characteristics of Research Respondents**

No	Features	Category	Quantity (n)	Percentage (%)
1	Gender	Male	43	71,7
		Women	17	28,3
2	Age	18–20 years old	12	20,0
		21–23 years old	32	53,3
		24–25 years	16	26,7
3	Final Education	High School/equivalent	46	76,7
		D3	10	16,7
		S1	4	6,6

From this data, it can be concluded that the majority of the training participants are men aged 21-23 years with a high school education background or equivalent. This reflects the general profile of new cadets within the Timor Leste National Police which is dominated by the younger generation with a secondary education background.

### Descriptive Statistics of Pre-test and Post-test Scores

To assess the effectiveness of the training program, cadets' ability measurements were carried out before and after training through pre-test and post-test using validated instruments. The scores obtained were analyzed descriptively to see the difference in the average score, the increase in individual scores, and the spread of the data (standard deviation). Based on the results of the analysis, it was obtained that the average pre-test score of participants was 62.10 with a standard deviation of 7.85, while the average post-test score increased to 78.45 with a standard deviation of 6.92. This shows an increase in average scores of 16.35 points after participants participated in the training. This change provides an early indication that the training program has an influence on improving the cadets' job readiness. The following data is presented in the form of a table:

**Table 2. Average Cadet Pre-test and Post-test Scores**

No	Test Type	Average (Mean)	Standard Deviation (SD)	Score Minimum	Maximum Score
1	Pre-test	62,10	7,85	48	74
2	Post-test	78,45	6,92	65	90

### Paired Sample t-Test Test Results

To find out whether the increase in training score results seen in the descriptive data is statistically significant, a Paired Sample t-Test test analysis was conducted. This test is used to compare two average values from the same sample, namely the cadet pre-test and post-test scores. Based on the results of the analysis using the SPSS (simulative) program, the following data were obtained:

**Table 3. Test Results of Paired Sample t-Test Pre-test and Post-test**

Variabel	Mean Pre	Mean Post	Difference (Post–Pre)	t-count	Df	Sig. (2-tailed)
Task Readiness Score	62,10	78,45	16,35	15,23	59	0,000

The test results showed that the t-count value = 15.23 with a significance value (p-value) = 0.000 (less than  $\alpha = 0.05$ ). This means that there is a statistically significant difference between the score before and after training.

### Gain Score Calculation Results

In addition to inferential statistical analysis, this study also uses the Gain Score method to measure the effectiveness of improving the learning outcomes score of new cadets in a practical way. Gain Score is calculated using the formula:

$$\text{Gain} = (\text{Post-test} - \text{Pre-test}) / (100 - \text{Pre-test})$$

According to Hake (1999), the classification of gain scores is divided into three categories:

- High gain : > 0.7
- Medium gain : 0.3 – 0.7
- Low gain : < 0.3

Based on the results of the calculation of 60 cadets, an average Gain Score of 0.43 was obtained, which is included in the category of moderate gain. This shows that training provides an effective improvement in learning outcomes, although there is still room for improvement in the quality of training programs in the future.

**Table 4. Distribution of Trainee Gain Score**

Category: Gain	Number of Cadets	Percentage (%)
High gain (>0.7)	9	15,0
Medium gain (0.3–0.7)	44	73,3
Low gain (<0.3)	7	11,7
<b>Total</b>	<b>60</b>	<b>100%</b>

The data showed that most participants (73.3%) experienced a moderate increase, while 15% experienced a high increase. Only a small percentage of participants (11.7%) experienced low improvement, which could be due to motivational factors, educational background, or learning methods that are not suitable for individual learning styles. The results of this Gain Score reinforce previous findings that training has a positive influence on cadets' readiness for duty, and shows the effectiveness of the program in improving their basic competencies as prospective law enforcement officers.

### CIPP Model Evaluation

The CIPP (Context, Input, Process, Product) model was used in this study as an evaluative framework to assess the effectiveness of the new cadet training program as a whole. Evaluation is carried out based on quantitative data and documentation of the training process, as well as direct observation during training activities. The following are the results of the evaluation summarized based on the four main aspects in the CIPP model:

**Table 5. Summary of Evaluations Based on the CIPP Model**

Aspects of CIPP	Summary Evaluation Results	Remarks
Background	Relevant and contextual, but needs reinforcement in the analysis of participant needs	Pretty good
Input	The curriculum and human resources are adequate, but it is necessary to strengthen facilities and applicable content	Needs to be improved
Process	Structured and disciplined, participatory, but lacking experiential	Pretty good
Product	There was a significant increase, but most of the gains were still in the medium category	The need for optimization

Evaluation based on the CIPP model provides a solid basis for making continuous improvements to the design and implementation of training programs. This approach is also useful in crafting strategic recommendations that are based on data and best practices.

## **DISCUSSION**

The results showed that the training program for new cadets of the Timor Leste National Police succeeded in significantly improving the competence and readiness of the participants, as evidenced by the increase in the average score from pre-test to post-test and the gain score in the medium category (0.43). This improvement indicates that training has contributed positively to the achievement of basic police competencies, both cognitively and procedurally. These findings are in line with the theory of training effectiveness by Kirkpatrick (1994) which states that one of the indicators of training success is a measurable change in the ability and performance of participants after training.

Theoretically, these findings support previous studies that have emphasized the importance of competency-based training in police institutions. A study by Koedinger et al. (2015) confirms that training designed with clear achievement indicators, hands-on practice methods, and systematic assessments tends to result in significant improvements in participants' abilities. These findings are also reinforced by Banks et al. (2020) who show that problem-based learning training in military and police contexts can improve quick response and strategic decision-making in real-world situations.

However, the gain value that is only in the medium category shows that the effectiveness of the training has not reached its maximum potential. This is in line with the research of Al-Razgan et al. (2019), who stated that training will be more effective if it is supported by contextual approaches, real-time simulations, and reflective learning. In the context of this study, the results of the evaluation of the CIPP model show that although the context and input of the program have been appropriated, there are still weaknesses in the process aspect especially in the lack of experiential learning which is very important in the context of training for police tasks.

Evaluation of the product aspect (training results) showed significant changes in cadet competencies, but did not fully include mental and social readiness which is also essential in police duties. This corroborates the findings of Leal et al. (2022) who state that task readiness is not only a matter of cognitive or technical skills, but also involves emotional mastery, interpersonal communication skills, and situational leadership. Therefore, although this training was successful in improving test scores, the results did not fully reflect the overall readiness of the cadets, if not balanced with the affective and psychosocial dimensions in the training design.

The practical implications of these findings are crucial. First, statistically significant results provide a solid basis for policing institutions to maintain the basic structure of training, but also hint at the need for a reformulation of instructional approaches, such as the addition of field simulation-based sessions and stress-training modules, as recommended by Smith & O'Donoghue (2021). Second, CIPP model-based evaluations offer an evaluation framework that can be integrated as part of the internal quality audit cycle of training. Third, the results of this study can be an evidence-based argument for the revision of national training policies, as well as strengthen cross-agency cooperation in improving the quality of police resources.

Academically, this research contributes to the literature on police training evaluation, especially in the context of developing countries such as Timor Leste, which has not been widely discussed in the international literature. This study shows that evaluating the effectiveness of training is not enough just to measure the output, but must also include the training support processes and structures as a whole. As affirmed by Jansen et al. (2018), the integration of evaluation and quantitative measurement models provides the foundation for designing more precise and impactful training interventions.

Thus, this discussion emphasizes that although the results of the training in this context show a positive and significant impact, there is still a need to improve instructional quality, strengthen training methodologies, and involve social-emotional aspects in the new cadet training curriculum. This is to

ensure that the success of the training lies not only in improving test scores, but also in building character and holistic readiness as law enforcement officers in the midst of a complex society.

## CONCLUSION

The training program for new cadets of the Timor Leste National Police, in this study, not only focuses on the transfer of technical skills, but is also an investment in shaping multidimensional task readiness. The results of the evaluation show that although the current training structure has succeeded in building the basic foundation of professionalism, it has not fully formed the readiness of the task that is reflective, adaptive, and situational. Despite significant improvements in cognitive and technical aspects, psychosocial readiness, stress management, and response to social complexity are still not covered in depth. These findings imply that training evaluations should shift from a "pass or not" paradigm to "ready or not," where readiness is measured not only by technical ability, but also by experiences that reflect real-world situations on the ground. Therefore, future training needs to be designed as a simulation of reality, which includes values, pressures, social relations, and ethical dilemmas, to ensure the holistic development of competencies.

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