

Strategy For Modern Heavy Weapons Training For Yonarmed 13 To Achieve Professionalism In The Armed Forces

Heri sulistyanto¹⁾, Ferdinand Hasudungan Siagian²⁾, Budi Santoso³⁾

^{1,2,3)}Land Defense Strategy / Faculty of Defense Strategy, Republic of Indonesia Defense University

**Corresponding Author*

Email: herisulistyanto4811@gmail.com

Abstract

The professionalism of Armed units is a crucial element in supporting the core duties of the Indonesian Army. One of the ways to enhance this professionalism is through the development of heavy weapons firing exercises (Latbakjatrat), which serve as the pinnacle of annual training for Armed units. This study aims to analyze the current Latbakjatrat system and formulate a modern training development strategy to achieve the professionalism of Yonarmed 13/1/1 Kostrad. The research employs a qualitative method with a descriptive approach, involving interviews with unit commanders, training instructors, and soldiers, direct observations during training sessions, and document analysis. Data analysis was conducted using the SWOT method. The study's findings reveal that the implementation of Latbakjatrat in Yonarmed 13/1/1 Kostrad successfully includes phases such as Technical Latbakjatrat (Latbakjatratnis) and Combat Readiness Tests (UST). However, several challenges impact the effectiveness of the training, including limitations in technical capabilities for manual observation and reconnaissance, the use of outdated weaponry, and the suboptimal technical proficiency of personnel in operating modern equipment. To address these challenges, a modern heavy weapons firing training development strategy is required, which includes: Enhancing technical training through technology-based simulations, such as VR/AR, utilizing drones for real-time terrain data collection to improve observation and reconnaissance accuracy, conducting joint exercises with other units or partner nations to share new tactics and techniques, replacing outdated weaponry with modern computerized equipment and performing comprehensive evaluations after each training session to identify areas for improvement. The implementation of these strategies is expected to enhance Latbakjatrat outcomes, including increased shooting accuracy, efficient use of weaponry, and improved personnel readiness for actual combat situations. As a result, the professionalism and operational readiness of Yonarmed 13/1/1 Kostrad can be significantly improved, thereby supporting the success of the Indonesian Army's core missions.

Keywords: *Heavy Weapons Firing Exercise, Professionalism, Armed Units*

INTRODUCTION

Unit development is a continuous process aimed at enhancing the capabilities of the Indonesian Army (TNI AD) units in carrying out their primary tasks, through strengthening organizational, personnel, material, facility, doctrine, and training aspects, supported by adequate funding. This entire process is directed in a planned and integrated manner through policies and strategies integrated into a modern management system (TNI AD, 2013).

The Field Artillery Unit (Armed) as part of the TNI AD combat support unit (banpur) plays a vital role in providing long-range fire support to destroy enemy forces. To ensure the combat readiness of the Armed unit, training development—particularly Heavy Weapons Firing Training (Latbakjatrat)—is a crucial aspect in shaping the professionalism of soldiers. Latbakjatrat not only trains technical and tactical skills but also builds the physical and mental resilience of personnel to face real combat conditions (Perkasad/27-02/XII/2013).

For example, at the Yonarmed 13/1/1 Kostrad unit, this training is conducted using 76 mm cannons, which, although still in active use, have limitations in range and accuracy compared to modern weaponry such as Astros or Caesar used by Armed 10 and Armed 9. This disparity highlights the urgency of modernizing military equipment to achieve training effectiveness and operational readiness of units (Pujiyanto et al., 2021).

Unfortunately, the development of Latbakjatrat training in some units has not been optimal. Some of the obstacles include conventional reconnaissance capabilities, personnel limitations in operating modern military equipment, and the use of outdated military equipment that is not in line with modern combat technology developments. This situation directly impacts the professionalism of soldiers and the achievement of established training standards (Fatimah, 2020).

Enhancing the effectiveness of Latbakjatrat Armed requires adaptive and modern training development strategies. Therefore, it is important to conduct an evaluation and analysis of the existing training system using a SWOT approach to formulate training development strategies based on technology and innovative training methods. This aligns with Antulio J. Echevarria's (2019) military strategy theory, which emphasizes the importance of alignment between objectives (ends), methods (ways), and resources (means), as well as flexibility in responding to changes in the strategic environment.

On the other hand, training development is also closely related to the enhancement of professionalism, where soldiers are not only required to be skilled but also responsible and continuously improve their quality through high-quality and sustainable training (Ardianingsih, 2019; Wahid in Agoes & Ardana, 2019). Referring to the principles of training according to Harsono (2019)—such as intensity, quality, and variety—training management that integrates physical, tactical, and technological aspects simultaneously is required. Amid the dynamics of modern threats and the demand for high accuracy in military operations, the professionalism of Armed Forces personnel must be fostered through relevant, realistic, and modern battlefield-oriented training.

Thus, this study will analyze the Latbakjatrat training system implemented at Yonarmed 13/1/1 Kostrad to formulate a modern heavy weapons training development strategy as an effort to enhance the professionalism of Armed units in supporting the primary tasks of the Indonesian Army (TNI AD).

RESEARCH METHODS

This study uses a qualitative method with a descriptive approach. The research design we used is a case study because case studies are considered the most appropriate for addressing specific issues occurring in a particular location, especially regarding the training strategies for heavy weapons shooting exercises at Yonarmed 13/1/1 Kostrad. Through this approach, researchers can comprehensively understand how shooting exercises are conducted, the challenges faced, and the training strategies implemented. Case studies are considered the most appropriate method because they focus on a deep understanding of a specific phenomenon in a particular location. In addition, by researching the research objects at Yonarmed 13/1/1 Kostrad, it is hoped that the factors influencing and strategies for improving training can be identified.

This research was conducted at Pussenarmed from August to September 2024, involving two personnel: the Commander of Pussenarmed and the Director of Research and Development at Pussenarmed. At Yonarmed 13/1/1 Kostrad, three personnel were involved: the Commander of Yonarmed 13, the Operations Officer, and the Battalion Commander of Yonarmed 13. Yonarmed 13 is a field artillery unit under the command of Kostrad that plays a crucial role in supporting combat operations through long-range fire support. The selection of this location was based on the unit's relevance in conducting heavy weapon firing exercises and efforts to enhance professionalism through modern training development. Data was collected through interviews, observations, and document reviews. Interviews were conducted with key informants who played important roles in the exercise, including the unit commander, training instructors, and soldiers

involved in the exercise. Informants were selected based on their involvement in the firing exercise process and their experience in addressing exercise challenges.

In-depth interviews were used to explore further how training strategies were applied in the field, the challenges faced, and the informants' perspectives on the effectiveness of the training. The interview guide used was semi-structured, allowing the researcher to ask additional questions based on the informants' answers, thereby obtaining richer and more detailed information. In addition, observations were conducted by directly observing several heavy weapons shooting training sessions. These observations helped the researcher gain a visual and direct understanding of how the training was conducted, the condition of the equipment used, and the interaction between instructors and training participants.

To complement the primary data, this study also used secondary data obtained from official documents related to the implementation of shooting training, training evaluation reports, and literature relevant to the topic of military training development. These documents provided important additional information regarding the policies and training standards applied in the Armed Forces, as well as the challenges that often arise in heavy weapons shooting training.

The collected data was then analyzed using SWOT Analysis. According to Ferrel and Harline, the function of SWOT Analysis is to obtain information from situation analysis and separate it into internal issues (strengths and weaknesses) and external issues (opportunities and threats). SWOT Analysis is the systematic identification of various factors to formulate research strategies. This analysis is based on logic that can maximize strengths and opportunities, but at the same time can also create weaknesses and threats.

To ensure the validity and reliability of the data, data triangulation was conducted. This triangulation is done by comparing information obtained from various sources, such as interviews, observations, and documents, to ensure consistency of results. Additionally, the researcher conducts follow-up checks with relevant informants to confirm the interpretation of the collected data. This technique is used to ensure that the research results truly reflect the conditions and perspectives on the ground.

By using this research method, the researcher hopes to provide a more in-depth picture of how the heavy weapons shooting training strategy at Yonarmed 13/1/1 Kostrad is carried out, as well as contribute to efforts to improve the professionalism of the Armed Forces through modernization and improved training quality.

RESULT AND DISCUSSION

Factors influencing the development of modern heavy weapons shooting training strategies to achieve professionalism in Yonarmed 13/1/1 Kostrad. By using SWOT analysis theory based on logic to maximize strengths and opportunities, while at the same time minimizing weaknesses and threats. By understanding internal factors (strengths and weaknesses), reducing weaknesses while maximizing strengths. For external factors (opportunities and threats), minimizing threats can be enhanced by opportunities. Indications of factors for improving the implementation of modern Heavy Weapons Shooting Training to achieve professionalism in Yonarmed 13/1/1 Kostrad are as follows:

Internal Factors

1. Strengths

- a) Yonarmed 13 may have personnel who are experienced in using 76 mm cannons, so they have a good understanding of the operation and maintenance of this weapon.
- b) The 76mm cannon is relatively lighter than modern large-caliber cannons, making it easier to maneuver and suitable for operations in various types of terrain, including rugged and mountainous terrain.

- c) The 76mm cannon has proven to be reliable and relatively easy to maintain, which is a strength for Yonarmed 13 in ensuring the weapon is always ready for use without complex technical issues.

2. Weaknesses

- a) As a heavy weapon with a smaller caliber, the 76mm gun has limitations in terms of range and explosive power when compared to modern guns with larger calibers.
- b) The 76mm gun is generally not equipped with modern technology such as digital targeting systems or automatic fire control devices, so accuracy is highly dependent on the manual skills and experience of the soldiers.
- c) Ammunition shortages and training terrain constraints are current challenges, as the manufacturing country no longer produces the required ammunition types, and training terrain meeting safety standards is currently limited.

External Factors

1. Opportunities

- a) New technologies in shooting training, such as shooting simulations and automatic calculation systems, can be applied to the 76mm gun to enhance personnel capabilities without needing to replace equipment.
- b) Military training cooperation with other countries or domestic units can introduce new tactics and techniques relevant to the operation of the 76mm gun.
- c) The integration of drones in training and operations enables real-time terrain data collection, which helps determine firing points more accurately and efficiently. Drones can also provide more precise guidance when operating the gun in difficult or distant terrain.

2. Challenges

- a) Threats from More Advanced Enemy Military Technology. If Yonarmed 13 faces an enemy with more advanced weapons and longer ranges, the effectiveness of the 76mm cannon becomes limited, which could endanger Yonarmed 13's position.
- b) Training exercises require significant budgets for ammunition, weapon maintenance, and the procurement of other auxiliary equipment. Limited budgets may reduce the frequency or quality of training conducted.
- c) Firing heavy weapons carries high risks, especially in the event of technical failures or human error. Accidents such as weapon explosions, stray bullets, or miscalculated shots can result in serious injuries or even death for training personnel or others.

Table 1. Analysis SWOT

EXTERNAL INTERNAL	Strenght (S) Yonarmed 13 may have personnel who are experienced in using 76 mm cannons. 76 mm cannons are relatively lighter than modern large-caliber cannons. 76 mm cannons have proven to be reliable and fairly easy to maintain, which is an advantage for Yonarmed 13 in ensuring that the weapons are always ready for use without complex technical problems.	Weakness (W) As a heavy weapon with a smaller caliber, the 76 mm cannon has limitations in terms of firing range and explosive power. The 76 mm cannon is generally not equipped with modern technology such as digital targeting systems or automatic fire control devices. Limited ammunition and training grounds are currently obstacles.
Opportunity (O) New technologies in shooting training, such as shooting simulations and automatic calculation systems, can be applied to 76 mm cannons to improve personnel capabilities without having to replace equipment. Military training cooperation with other countries or other units within the country. The integration of drones in training and operations enables real-time terrain data collection, which helps determine firing points more accurately and efficiently. Drones can also provide more precise guidance when operating cannons in difficult or remote terrain.	STRATEGI S-0 With experienced personnel in using the 76 mm cannon and the availability of shooting simulation technology, Yonarmed 13/1/1 Kostrad can utilize simulations to enhance shooters' skills in various terrain conditions without relying on more risky and costly real-world training exercises. The lightweight and easily transportable 76mm cannon is compatible and integrated with drones, enabling real-time terrain data provision. This allows for improved shooting accuracy in challenging or difficult terrain without compromising the weapon's mobility. Through international or inter-unit cooperation, experienced personnel can further enhance their skills in new tactics and techniques, thereby enhancing the operational advantages of the 76mm cannon.	STRATEGI W-0 With limited training grounds and ammunition availability, simulation technology can be used to reduce dependence on live ammunition and enable personnel to train in a safer and more cost-effective virtual environment. By utilizing drone integration, personnel who still use manual aiming techniques can obtain more accurate terrain data, helping to significantly improve shooting accuracy and efficiency. Through training cooperation with other units or countries, opportunities may arise for the procurement or modification of ammunition for 76 mm cannons, as well as the use of supporting technologies such as fire control devices that can help overcome manual limitations.

Threats (T)	STRATEGI S-T	STRATEGI W-T
Threat from More Advanced Enemy Military Technology If Yonarmed 13 is confronted with an adversary equipped with more advanced weaponry and longer firing range, the effectiveness of the 76 mm artillery becomes limited. Training for Heavy Weapons Requires Significant Budget Heavy weapons firing exercises require substantial funding for ammunition, weapon maintenance, and procurement of supporting equipment. High Risk in Operating Heavy Weapons Firing heavy weapons carries a high level of risk, especially in the event of technical errors or human mistakes. Accidents such as weapon explosions, stray bullets, or miscalculations can result in serious injuries or even fatalities among personnel or others nearby.	The 76 mm cannon, which is easy to maintain, can be an asset if accompanied by improved strict maintenance procedures to reduce the risk of technical accidents. Experienced personnel can be involved in routine maintenance training to ensure that the weapon remains safe to use. The relatively light cannon allows Yonarmed 13 to avoid fixed positions that are vulnerable to long-range attacks from enemies with more advanced technology. With high mobility, they can move quickly to reduce the risk of being attacked. Utilize the skills and experience of personnel in firing and operating cannons to maximize training results at a more efficient cost. This can be done by focusing on improving techniques and tactical maneuvers without spending a lot on ammunition.	Given the limitations of modern technology and the high risks involved in live-fire exercises, it is important to develop additional safety procedures that focus on manual checks and equipment inspections to reduce the risk of firing errors or technical accidents. To address budget constraints and ammunition availability, Yonarmed 13 can develop training methods using shooting simulations or dry fire training, which allow training to continue with simulated shots without live ammunition, thereby improving cost efficiency. Given the limitations of range and manual accuracy, Yonarmed 13 needs to implement defensive strategies that avoid fixed positions by utilizing camouflage techniques.

Source : Author 2025

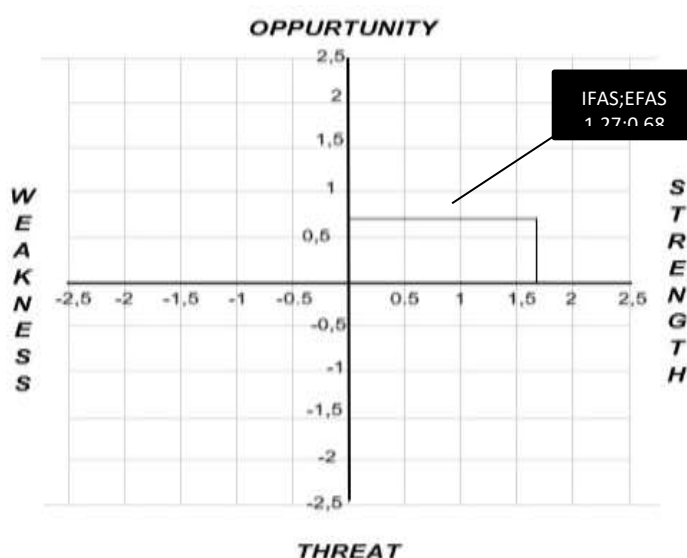


Figure 1 SWOT quadrant matrix
 Source: Author 2025

Based on the image above, it can be seen that the implementation of modern Heavy Weapons Shooting Training to achieve the professionalism of Yonarmed 13/1/1 Kostrad is positioned between the Opportunity and Strength axes, or in Quadrant I. This means that based on the results, it is recommended that the implementation of modern heavy weapons shooting training to achieve the professionalism of Yonarmed 13/1/1 Kostrad should use a progressive strategy by leveraging internal strengths to capitalize on external opportunities to achieve optimal training results in the effort to enhance the professionalism of Yonarmed 13/1/1 Kostrad.

Modern Heavy Weapons Shooting Training Development Strategy to Achieve Professionalism in Yonarmed 13/1/1 Kostrad

Through SWOT analysis, by leveraging strengths (Strength) and opportunities (Opportunity) to achieve objectives, Yonarmed 13/1/1 Kostrad can integrate simulation technology with the proven experience of its personnel in operating the 76mm gun. By utilizing shooting simulations, they can enhance shooters' skills in handling various terrain conditions without relying solely on risky and costly real-world training. Additionally, the 76mm cannon's lightweight design, which facilitates mobility, can be optimized in conjunction with drone use. Drones providing real-time terrain data help improve shooting accuracy in challenging or difficult terrain without compromising the weapon's mobility. To support operational tactical improvements, Yonarmed 13 can also establish international or inter-unit training collaborations. This provides experienced personnel with opportunities to continuously refine their skills in new tactics and techniques, thereby strengthening the operational advantages of the 76mm gun in various combat situations.

The implementation of this strategy will have a positive impact on the professionalism of soldiers and the operational readiness of the unit, in line with the findings of Smith and Johnson (2020), which show the positive impact of training and development on soldier performance. To achieve the professionalism of Yonarmed 13/1/1 Kostrad, steps are needed to improve the training of modern and comprehensive heavy weapon firing, including:

a. **Implementation of Shooting Simulation Technology**

Yonarmed 13 can collaborate with defense technology providers to conduct simulation-based training that simulates the operation of the 76mm cannon. This simulation can involve automatic calculations and VR/AR (Virtual Reality/Augmented Reality) technology to train shooting accuracy and enhance soldiers' skills without the need for live ammunition. This simulation program also allows for more intensive training, even under adverse weather conditions.

b. **Optimization of Domestic Defense Industry Drones**

Yonarmed 13 needs to collaborate with the local defense industry for the provision of drones to support training activities and operations, thereby enhancing soldiers' capabilities in real-time surveillance and data collection. Additionally, drones can provide more precise guidance when operating artillery in difficult or remote terrain.

c. **Collaboration with Other Units or Countries in Joint Training**

Conducting joint exercises with other units or countries that possess similar artillery systems can broaden the horizons of Yonarmed 13 soldiers. This initiative also opens opportunities to exchange techniques and tactics and learn from other units with experience in operating heavy artillery. These joint exercises can be conducted periodically at shared training grounds, enabling Yonarmed 13 to gain experience in more varied terrains.

d. **Enhancing Technical and Operational Tactics Training**

By leveraging the expertise of soldiers already proficient in using the 76mm artillery, Yonarmed 13 can develop specialized training focused on technical and operational tactics,

including terrain utilization strategies and effective artillery use in realistic combat scenarios.

This training includes accurate firing techniques, defensive tactics, and mobility in challenging terrain.

e. Evaluation and Adaptation to Modern Operational Needs

After each training session, Yonarmed 13 can conduct a comprehensive evaluation to identify areas that still need improvement. Based on the results of this evaluation, Yonarmed 13 can adjust training methods and tools to modern operational needs, including utilizing more supporting technology to maximize soldiers' skills

CONCLUSION

Based on the results of this study, it can be concluded that heavy weapons shooting training at Yonarmed 13/1/1 Kostrad is very important for improving the professionalism of the Armed Forces. This is influenced by internal and external factors in its implementation, which are then analyzed using SWOT theory to obtain the right strategy for improving heavy weapons shooting training (Latbakjatrat), including

a. Internal factors include:

1. Strengths, such as the soldiers' experience in operating the 76mm cannon, which is also lightweight and easy to move, making it suitable for various terrains, especially rugged and mountainous terrain. This strength makes the operation of the 76mm cannon more flexible, despite its limitations.
2. Weaknesses include limited range and explosive power compared to modern cannons, as well as the absence of digital targeting technology, which makes accuracy highly dependent on soldiers' manual skills. Other limitations include restricted access to ammunition and inadequate training terrain, particularly due to the scarcity of suitable ammunition and the limited availability of safe training areas.

b. External factors include:

1. Opportunities such as modern training technology (shooting simulations and automatic calculations) that allow soldiers to train without having to replace military equipment. Additionally, training cooperation with domestic units or other countries opens opportunities to share relevant new techniques and tactics, while the integration of drones in training and operations enables real-time terrain data collection, which helps determine firing points more accurately and efficiently.
2. Threats include the limited supply of ammunition currently used for 76 mm cannons and the lack of safe and representative training grounds for actual combat scenarios.

c. The strategy used is the SO Strategy, which is applied to maximize these factors and includes several key steps, among others:

1. First, implementing shooting simulation technology and automatic calculations that enable more intensive training with better accuracy without relying on real ammunition.
2. Second, optimizing the use of domestically produced drones to support training activities and operations, thereby enhancing soldiers' capabilities in real-time reconnaissance and data collection.
3. Third, conducting joint training exercises with other units or countries, which will provide soldiers with opportunities to deepen their operational techniques and tactics and adapt to modern combat methods.

With this strategy, Yonarmed 13 is expected to optimize its strength and opportunities to enhance professionalism and operational readiness, thereby better equipped to address the increasingly complex challenges of the battlefield.

Based on the above research findings, the following recommendations are proposed to the higher command to address the aforementioned issues:

- a. The need to replace outdated military equipment with more modern systems, such as computerized artillery.
- b. The need to use drone-based surveillance and reconnaissance technology to replace manual methods, which are not only more efficient but also reduce the risk of personnel casualties during field operations.
- c. The need to assess the current training terrain to ensure it meets safety standards when used with modern military equipment currently in use or equipment to be purchased in the future.
- d. The need for collaboration with other units and countries through joint exercises with other units.
- e. For further research, the need to develop other aspects besides heavy weapons shooting exercises to enhance soldiers' professionalism by utilizing the 6 components of Unit Development, such as conducting specialized training at the country of origin of the military equipment collaborating with Indonesia to enhance specialized knowledge

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