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Evaluation Competency-based Curriculum Policy to Improve Readiness Assignment Career Evaluation of CIPP Model for Navigation Non-Commissioned Officers of the Indonesian Navy

Dodi Agus P[1*], V. Rudy Handoko[2], Endang Indartuti[3]
Universitas 17 Agustus 1945 Surabaya
Corresponding Author: Dodi Agus P dodiagus4249@gmail.com

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A B S T R A C T

This study evaluates the curriculum policy supporting competency-based education in the *Diksargolan* (Advanced Basic Education) Program for Vocational Non-Commissioned Officers in Navigation of the Indonesian Navy at SENAVBAH Surabaya. Using a qualitative evaluative-descriptive approach and the CIPP model (Context, Input, Process, Product), the study assesses the curriculum's relevance to task demands and career readiness in the digital era. Findings show that the curriculum aligns with Personnel Qualification Standards (SKP) and Job Analysis (Anjab) and balances theory and practice through the Competency-Based Education (CBE) approach. However, challenges include limited reinforcement of knowledge and skills, instructor-student ratio imbalance, and weak evaluation systems. Internal, external, and evaluative factors such as leadership, policy, technology, and stakeholder involvement significantly affect curriculum effectiveness. The study recommends adaptive curriculum renewal, strengthened competency development, and improved evaluation systems to produce professional and competent naval personnel.

INTRODUCTION

The development of the digital era demands that every individual, including personnel of the Indonesian Navy (TNI AL), possess adaptive capabilities toward technological changes and dynamic work environments. In the military context, the advancement of modern defense technology requires personnel to demonstrate professional competence in operating combat equipment, communication skills, time management, and interpersonal abilities (Tambunan, Halkis, & Susilo, 2025). Mustofa Kamil (2012) further emphasizes that individuals must continuously develop new knowledge and skills to adapt to the demands of the professional world and career advancement. In line with Law Number 3 of 2025 concerning the Indonesian National Armed Forces, Navy personnel are required to perform various duties, including defense operations, maritime law enforcement, diplomacy, maritime force development, and empowerment of defense areas. Therefore, education within the Indonesian Navy plays a central role in shaping professional, resilient, and adaptive personnel capable of responding to the rapid development of science and technology.

According to Firdaus, Widayat, and Zulkifli (2016), education within the Navy is carried out continuously based on the philosophy "*Dwi Warna Purwa Cendekia Wusana,*" which emphasizes the balance between physical endurance, professionalism, and intellectual capability. The educational curriculum must be assignment-oriented or competency-based, ensuring that it not only provides theoretical knowledge but also equips learners with relevant practical skills. Through this approach, Navy graduates are expected to possess the mental, intellectual, and physical readiness required for their future assignments. One of the main institutions responsible for producing professional personnel is the Naval Doctrine, Education, and Training Command (*Kodiklatal*), which oversees doctrine development, education, and training across the Indonesian Navy. Kodiklatal organizes various educational programs, including the *Pendidikan Pertama* (Initial Education) for prospective Officers, Non-Commissioned Officers (NCOs), and Enlisted personnel.

This study focuses on the *Pendidikan Pertama Bintara* (Non-Commissioned Officer Basic Education) program, specifically the *Pendidikan Dasar Golongan Lanjutan* (Advanced Basic Education / Diksargolan) stage, which plays a vital role in developing professional, knowledgeable, skilled, and resilient Navy personnel. The Diksargolan curriculum adopts a competency-based approach aligned with the Personnel Qualification Standards (*Standar Kualifikasi Personel* / SKP) for Navy NCOs, as regulated in the Chief of Naval Staff Regulation Number 10 of 2023. To ensure that graduate competencies meet unit requirements, curriculum policy evaluations are conducted periodically based on the Chief of Naval Staff Decrees Number Kep/1569/IX/2015 and Kep/1413/X/2014, ensuring that the curriculum remains relevant, adaptive, and supportive of professionalism in the era of modern defense.

The need to evaluate curriculum policy in the *Diksargolan* program for Navy NCOs, particularly in the Navigation specialization at SENAVBAH Surabaya, arises from indications of suboptimal educational implementation. Such evaluation is essential to ensure that the curriculum aligns with Personnel Qualification Standards (SKP), field assignment requirements, and the rapid development of technology especially the technology embedded in main defense weapon systems (*Alutsista*). Preliminary observations indicate that the Diksargolan Navigation program still faces several challenges:

First, the Personnel Qualification Standards (SKP) and educational objectives are not yet fully achieved in relation to user expectations and technological advancements. The SKP requirements for Navigation Technicians are still limited to the levels of "understanding" and "basic ability," suggesting the need to strengthen knowledge and skill development to align with actual competency demands in the field.

Second, the learning methods remain conventional, dominated by lectures and one-way teaching. Competency-based approaches such as Problem-Based Learning, Project-Based Learning, and interactive simulations have not been fully implemented. Limited field practice and real-world experiences also hinder graduates' readiness for actual assignments. The curriculum should therefore increase the proportion of practical learning and internships to strengthen applied skills.

Third, the qualification of teaching personnel (*Gadik*) remains a challenge. Although they have received pedagogical training such as microteaching, *Pekerti*, and *Applied Approach (AA)* courses, there are still difficulties in integrating theory with practice. The learning process remains teacher-centered, focusing heavily on lectures, memorization, and examinations.

Fourth, there are limitations in educational facilities and infrastructure. A competency-based curriculum requires adequate facilities to support practical activities, such as laboratories, simulators, and other training equipment. These limitations hinder learners' ability to apply acquired skills, which are essential for assignment readiness.

Fifth, the assessment system is not yet competency-oriented. Learning evaluation still focuses on theoretical examinations rather than authentic assessments such as portfolios, projects, or field simulations. The establishment of a Navy Professional Certification Institute (*Lembaga Sertifikasi Profesi / LSP TNI AL*) as an official body recognized by the National Professional Certification Agency (BNSP) has not yet been implemented. Ideally, competency certification should be conducted to assess the readiness and quality of graduates for their assigned positions and career paths.

This study is therefore essential to assess the effectiveness of competency-based curriculum policy in shaping professional and adaptive Navy NCOs who can meet the demands of modern assignments. The results are expected to serve as a foundation for curriculum enhancement in alignment with organizational needs, technological progress, and the dynamics of national defense.

LITERATURE REVIEW

Previous studies serve as an essential reference for understanding the theories, concepts, and methods relevant to evaluating competency-based curriculum policy for the assignment and career readiness of Navy Non-Commissioned Officers (NCOs). This review helps identify research gaps, enrich theoretical foundations, and strengthen the study's academic position to provide meaningful and contextual scientific contributions (Rusdiana & Nasihudin, 2021).

Relevant prior studies indicate that competency-based curriculum evaluation is a fundamental aspect of ensuring the effectiveness of education and training programs in both civilian and military institutions. Research by Ananda et al. (2024), Agung et al. (2022), and Winarni et al. (2014) emphasizes the importance of the CIPP model in assessing curriculum alignment with institutional and learner needs. Meanwhile, studies by Hadi (2012) and Berman Hutahaean (2014) highlight the close relationship between curriculum evaluation and the enhancement of graduate professionalism in vocational training institutions. Other research, such as that by Saaduddin (2022) and Gutierrez (2023), underscores the importance of curriculum design that accommodates the principles of competency in practical and applied learning processes.

International studies by Maria Henri et al. (2017), Larry Gruppen et al. (2015), and Phonraphee Thummaphan et al. (2022) contribute a global perspective on the challenges of implementing competency-based education (CBE), emphasizing the need for educational systems to adapt to technological developments, professional demands, and the dynamics of global competencies. In addition, Dizon (2022) and Nemat Bilan et al. (2021) reinforce the relevance of the CIPP model as a comprehensive evaluation tool for assessing the context, input, process, and product of learning programs.

Overall, the synthesis of these studies shows that although numerous works have examined the evaluation and development of competency-based curricula across various educational contexts, there remains a lack of research specifically evaluating competency-based curriculum policy in military education—particularly within the *Diksargolan* Vocational Navigation Program at SENAVBAH Surabaya. Therefore, this study presents novelty by applying the CIPP evaluation model in depth to assess the effectiveness of curriculum policy in preparing Navy NCOs who are professional, adaptive, and competent in accordance with operational requirements and the advancement of defense science and technology.

The CIPP model, developed by Daniel Stufflebeam (1966), is a comprehensive evaluation approach focusing on providing useful information for decision-making. The evaluation process consists of three key stages: *describing* (identifying information needs), *obtaining* (collecting and analyzing data), and *providing* (synthesizing findings for stakeholders). The model is widely used globally to evaluate programs, projects, products, institutions, and systems. According to Stufflebeam et al. (2014), the CIPP model comprises four main components: Context, which analyzes program needs and environmental conditions; Input, which assesses resources, strategies, and implementation

plans; Process, which monitors program execution to ensure alignment with the plan; and Product, which evaluates the outcomes and impacts of the program in relation to established objectives. This model serves as a systematic guide for both formative and summative evaluations aimed at improving the quality of policies or programs

METHODOLOGY

This study employed a qualitative approach with an evaluative-descriptive method to assess the competency-based curriculum policy in supporting the assignment and career readiness of Indonesian Navy Non-Commissioned Officers (NCOs) (Arcana, Dantes, & Marhaeni, 2015). This approach was selected because it allows for a naturalistic description of phenomena through in-depth data collection, reflective analysis, and interpretation of the underlying meanings behind curriculum implementation processes. The evaluation model used was the CIPP (Context, Input, Process, Product) model, which aims to assess contextual relevance, implementation effectiveness, and outcomes of the *Diksargolan* (Advanced Basic Education) program for Vocational NCOs in Navigation.

The study was conducted at the School of Navigation and Maritime Studies (*Senavbah*), Sailor Education Center (*Pusdikpel*), Naval Operations Education Command (*Kodikopsla*), under the Naval Doctrine, Education, and Training Command (*Kodiklatal*). The location was chosen based on its strategic role as the primary educational institution responsible for developing the professionalism of Navy personnel.

Sampling was carried out using a purposive sampling technique, in which informants were intentionally selected based on their relevance and deep understanding of the research problem (Asrulla, Jailani, & Jeka, 2023). Research informants included officials and staff from the Naval Personnel Staff (*Spersal*), Naval Education Service (*Disdikal*), *Kodiklatal*, *Kodikopsla*, *Pusdikpel*, and *Senavbah*, as well as educators, students, and end-user stakeholders. These participants were chosen due to their direct involvement in planning, implementing, and evaluating the Navy NCO education curriculum.

Data collection techniques included:

1. In-depth interviews, to explore informants' perceptions, experiences, and perspectives.
2. Participant observation, to understand classroom management and learning implementation processes.
3. Document analysis, involving the review of regulations, curriculum guidelines, educational program manuals, and official documents related to Navy educational policies (Handoko, Wijaya, & Lestari, 2024).

Data were analyzed interactively following the model of Miles, Huberman, Rohidi, and Mulyarto (1992), through three stages:

1. Data reduction, involving simplification and categorization of essential information.
2. Data display, presented in narrative and matrix forms to identify patterns.
3. Conclusion drawing and verification, to extract meaning and ensure the validity of findings.

The validity of the data was ensured through prolonged engagement, and triangulation of sources, techniques, and time. This strategy guaranteed information consistency and enhanced the credibility of research results. Consequently, this study produced valid, in-depth, and contextually grounded findings that contribute to strengthening competency-based curriculum policy within the Indonesian Navy's educational environment (Dewi & SH, 2025).

RESEARCH RESULTS

How is the Current Curriculum Policy Evaluation in Supporting Competency-Based Education for Task and Career Readiness?

The policy analysis of the Diksargolan Vocational Non-Commissioned Officer (NCO) Curriculum in Navigation within the Indonesian Navy indicates a strong correlation between objectives, structure, and the implementation of competency-based education. The curriculum, developed based on the Navy's Personnel Qualification Standards (SKP) and Job Analysis (Anjab), emphasizes a balance between theory and practice through a Competency-Based Education (CBE) approach. However, the reinforcement of knowledge and skills aligned with user demands remains suboptimal, particularly in terms of input and process aspects that require further improvement.

Although instructor quality is generally good, it is not yet supported by an ideal instructor-to-student ratio and adequate training facilities. Moreover, the academic monitoring system needs strengthening to ensure more effective learning outcomes. Overall, the curriculum has produced graduates with discipline and solid foundational competencies. Nevertheless, improving adaptability to digital technology and strengthening soft skills has become an urgent necessity. Therefore, continuous evaluation and curriculum updates are essential to maintain the relevance of Navy education to global developments and modern operational demands.

What Factors Influence the Evaluation of Curriculum Policy in Supporting Competency-Based Education for Assignment and Career Readiness?

The factors influencing the evaluation of competency-based curriculum policy in the Indonesian Navy's educational environment can be categorized into three main dimensions: internal, external, and evaluative factors all of which align with the CIPP Model (Context, Input, Process, Product).

1. Internal factors include the commitment and leadership of the educational institution, the quality and competence of instructors, the availability of resources, and the relevance of curriculum design and evaluation systems.
2. External factors consist of government or regulatory policies, the demands of operational units or users of graduates, and technological as well as globalization trends that require continuous adaptation.
3. Evaluative (methodological) factors relate to the quality of evaluation instruments, stakeholder participation in the assessment process, and the effectiveness of monitoring and data management systems.

Conceptually, these three dimensions integrate with the elements of the CIPP model where context reflects strategic changes, input emphasizes resource readiness, process represents implementation and coordination, and product signifies the competency outcomes of graduates. The synergy among these factors is a key determinant of curriculum effectiveness in shaping professional and adaptive naval personnel capable of meeting the dynamics of operational tasks and career progression.

How Does the CIPP Evaluation Model Apply to Curriculum Policy Evaluation in Supporting Competency-Based Education for Assignment and Career Readiness?

Based on the CIPP (Context, Input, Process, Product) theory developed by Stufflebeam et al. (2014), the recommended evaluation model to support competency-based education in the Diksargolan Vocational Non-Commissioned Officer (NCO) Program in Navigation is the CIPP Evaluation Model.

This model emphasizes the importance of continuous and feedback-based evaluation (feedback loop) to ensure that curriculum policy remains relevant to organizational needs and technological advancements within the Navy. Operationally, the model can be described as follows:

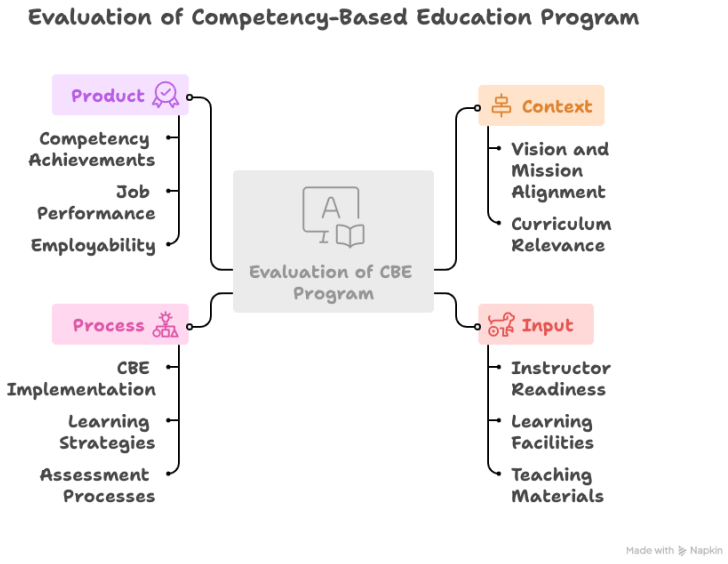

Figure 1. CIPP Evaluation Model in Curriculum Policy Evaluation
Source: Processed by the Researcher, 2025

1. Context Evaluation focuses on analyzing the alignment between the program's vision and mission with competency-based education; the relevance of curriculum objectives to assignment requirements, institutional and technological developments; and the consistency of curriculum structure and content with competency-based education (CBE) strategies.
2. Input Evaluation is directed toward assessing the readiness, qualifications, and competencies of instructors (Gadik); adequacy of instructor numbers; readiness of learning facilities and technological support; availability of competency-based teaching materials and modules; time allocation in the curriculum; supporting policies for CBE implementation; and the extent of external collaboration (with relevant agencies and operational units).
3. Process Evaluation focuses on the implementation of CBE, learning strategies, competency assessment and evaluation processes, practical training (Lattek), simulations, and final projects; as well as monitoring and evaluation of the learning process and active student participation in learning activities.
4. Product Evaluation is centered on graduates' competency achievements, job performance in assigned units, relevance of graduate competencies to institutional or occupational needs, graduation and on-time completion rates, success rates in competency or professional certification tests, graduate employability, user satisfaction, and the contribution of graduates to their respective units or assignments

This model is highly relevant because it not only assesses the effectiveness of policy implementation but also functions as a quality assurance and continuous curriculum improvement tool. Through an adaptive and integrative approach, the Indonesian Navy can ensure that each graduate possesses the competencies, character, and assignment readiness required to meet the demands of modern operational environments.

DISCUSSION

How is the Current Curriculum Policy Evaluation Supporting Competency-Based Education For Assignment And Career Readiness?

Based on the evaluation of the curriculum policy of Diksargolan Bintara Kejuruan Navigasi at Senavbah Pusdikpel Kodikopsla Kodiklatal Surabaya, it can be understood that the implementation of competency-based education has been progressing in a positive direction. However, several aspects still need to be strengthened to optimize its role in supporting the readiness for assignments and the career development of Indonesian Navy personnel.

The curriculum policy has been systematically formulated based on the Personnel Qualification Standards (SKP), Education Validation, and Job Analysis (Anjab) of the Indonesian Navy, along with periodic curriculum revisions and improvements. It emphasizes knowledge and mastery of technical skills, particularly in navigation, leadership, and character formation, supported by the physical fitness and agility posture of Navy Non-Commissioned Officers (NCOs) to ensure operational readiness. This curriculum structure reflects a concrete effort to prepare professional soldiers with high operational preparedness.

However, the dynamics of the global defense environment, the modernization of main weapon systems (Alutsista), and the advancement of digital navigation technology require a more adaptive curriculum. Thus, although the current policy remains relevant, continuous updates and adjustments are necessary to maintain alignment with operational demands and technological progress.

For instance, revisions to the SKP are needed, particularly in upgrading the knowledge and skill levels required for NCOs in Juru 1 (Navigator) positions not only at the "understand and perform" levels but also progressing to "comprehend, master, and apply" levels to perform tasks effectively.

The quality of instructors at Senavbah is relatively good, as they possess both academic and operational experience. However, the teacher-to-student ratio is not yet ideal, reducing the effectiveness of knowledge transfer and skills development. Furthermore, teaching methods still tend to be conventional, and several training facilities such as navigation simulators are outdated or malfunctioning. This limits competency-based practical training, highlighting the need for sustained investment in modern facilities and the integration of technology-enhanced learning, including performance-based assessments to objectively measure learning outcomes.

The curriculum implementation at Senavbah has followed the designated schedule. However, observations indicate that the practical learning portion remains insufficient when compared with the Competency-Based Education (CBE) concept. Therefore, it is recommended to revise the theory-to-practice ratio from 50% theory : 50% practice to 40% theory : 60% practice at minimum.

Additionally, academic monitoring and instructional supervision systems remain limited, potentially creating a gap between planning and implementation. Coordination among the educational units must also be strengthened to ensure that all stages of learning are well integrated particularly in supervision and evaluation of student learning outcomes.

Finally, graduates of the Diksargolan Bintara Navigasi program generally demonstrate strong readiness for field assignments. They exhibit discipline, responsibility, and solid technical competence. However, there remains a need to enhance adaptability to digital technologies and develop soft skills such as communication, teamwork, and rapid decision-making. These competencies are vital to ensure that graduates are not only technically capable but also professionally agile and versatile in addressing the complexity of tasks and dynamic career paths within the ever-evolving Indonesian Navy environment.

One practical step that aligns with this objective is the implementation of competency certification tests through the Indonesian Navy's Professional Certification Institute (LSP TNI AL), which serves as a crucial evaluation tool for assessing the quality and competence of graduates.

What Factors Influence Curriculum Policy Evaluation in Supporting Competency-Based Education for Assignment and Career Readiness?

a. Internal Factors
   These are factors originating from within the educational institution or the training center itself. They include the commitment and leadership of the institution, the quality and competence of instructors (Gadik), the availability of resources, and the curriculum design and evaluation system. In general, the implementation of the curriculum policy supporting competency-based education for assignment and career readiness in the Diksargolan Bintara Kejuruan Navigasi program has shown positive progress. However, there are still areas that need strengthening to improve implementation effectiveness. Instructor competence is relatively good, but the teacher-to-student ratio remains less than ideal. Additionally, some training equipment has become obsolete, hindering the optimization of competency-based learning. Therefore, upgrading training facilities and conducting continuous professional development for instructors are necessary to ensure that knowledge and skills transfer align with current operational demands.
b. External Factors.
   These are factors outside the educational institution that influence how the curriculum is evaluated. They include government or regulatory policies, demands from the workforce or operational units, and technological advancement and globalization. These external factors play a major role in shaping curriculum policy direction within the Indonesian Navy's education system, especially in the Diksargolan Bintara Kejuruan Navigasi program, which serves as a role model for curriculum policy. Hence, continuous validation and revision processes must be conducted to improve the required levels of knowledge and skills, as well as to ensure that learning materials and strategies remain adaptive to digital transformation.
c. Evaluative/Methodological Factors.
   These factors are directly related to the curriculum policy evaluation process itself, including the evaluation instruments, stakeholder involvement, and data and monitoring systems. While current evaluation instruments such as observations, interviews, and questionnaires adequately support the process, revisions are needed to keep pace with digital transformation. Stakeholder participation is essential to provide insights and updates related to organizational validation and the modernization of main weapon systems (Alutsista), which have direct implications for the readiness of graduates to operate these assets effectively. Moreover, data management and monitoring systems, which have not been optimally implemented, need to be redesigned with the

integration of digital technology to improve efficiency and accuracy in evaluation.

How Does the CIPP Evaluation Model Apply to Curriculum Policy Evaluation in Supporting Competency-Based Education for Assignment and Career Readiness?

Based on the CIPP (Context, Input, Process, Product) model developed by Stufflebeam et al. (2014), this evaluation framework is highly suitable for supporting competency-based education in the Diksargolan Bintara Kejuruan Navigasi program. The model emphasizes the importance of dynamic, continuous, and feedback-based evaluation, ensuring that curriculum policies remain relevant to organizational needs and technological advancements within the Indonesian Navy.

In the Context component, evaluation focuses on analyzing the alignment between the program's vision and mission with competency-based education, the relevance of curriculum objectives with institutional and technological needs, and the consistency of curriculum structure and content with CBE strategies. This ensures that the curriculum is not only responsive to current conditions but also proactive in preparing personnel to face future challenges.

In the Input component, evaluation assesses the readiness of instructors, availability of facilities and infrastructure, and the application of modern teaching methods, such as digital simulations with increased emphasis on training and practical sessions (Lattek). This approach aims to enhance teaching effectiveness while optimizing the use of technology in supporting competency-based learning.

In the Process component, evaluation focuses on the implementation of CBE, including learning strategies, competency assessment processes, practical work training, simulations, and final project execution, along with monitoring and evaluation of learning processes and active student participation. It highlights the importance of cross-unit coordination and monitoring, involving Senavbah, Pusdikpel, Kodikopsla, Kodiklatal, Disdikal, Spersal, and operational units (Kotama). Such collaboration ensures alignment between curriculum planning, implementation, and evaluation, in accordance with operational standards and mission requirements.

In the Product component, evaluation centers on the competency achievements of graduates, their workplace performance, the relevance of their competencies to institutional or operational needs, graduation rates and timeliness, success in competency or professional certification exams, employment rates, employer satisfaction, and graduates' contributions to operational units. The model emphasizes obtaining competency certification from BNSP (National Agency for Professional Certification) as formal recognition of graduates' qualifications and readiness to perform their duties.

Overall, the CIPP Evaluation Model serves not only as a tool to assess policy effectiveness but also as a quality assurance mechanism and a framework for continuous curriculum improvement. Its application ensures the development of professional, adaptive, and high-performing personnel who are capable of meeting the challenges of modern naval operations.

CONCLUSION AND RECOMMENDATIONS

The findings of this study show that the curriculum policy of the Diksargolan Bintara Kejuruan Navigasi of the Indonesian Navy has been designed in alignment with the Personnel Qualification Standards (SKP) and Job Analysis (Anjab), and is oriented toward Competency-Based Education (CBE) to develop professional and adaptive naval personnel. Based on the CIPP Evaluation Model (Context, Input, Process, Product), the results reveal that:

In terms of Context, the curriculum is aligned with assignment requirements and technological developments; however, its structure still requires strengthening, particularly in the areas of vocational studies and practical training. In the Input aspect, there are still challenges related to the instructor-to-student ratio, limited training facilities, and insufficient technological support for learning. From the Process perspective, the implementation of learning activities runs effectively, yet monitoring systems and coordination mechanisms need to be reinforced. Regarding the Product aspect, graduates have demonstrated solid fundamental competencies, but improvement in technological adaptability and soft skills remains necessary.

Overall, the CIPP Evaluation Model has proven to be an effective tool for quality assurance and a foundation for the continuous development of the Indonesian Navy's curriculum, ensuring its sustained relevance to operational demands and the globalization of modern military education.

Based on the research findings, several important recommendations can serve as references for the development of curriculum policy and educational practices within the Indonesian Navy, as follows:

1. Curriculum Policy Orientation:
   The curriculum policy within the Indonesian Navy's education system should be developed based on a task-based orientation, meaning that education must be focused on task implementation. This orientation needs to be formalized through a regulatory framework that explicitly states that the Navy's curriculum is assignment-oriented and designed around competency-based, adaptive, integrative, and sustainable education.
2. Revision of Personnel Qualification Standards (SKP):
   The Personnel Qualification Standards (SKP) that serve as the foundation for curriculum design should be revised. Specifically, for the Bintara level in Navigation Petty Officer (Juru 1 Navigasi) positions, the required levels of knowledge and skills should not be limited to "understanding" and "basic ability." Instead, some competencies should reach the levels of "comprehending," "mastering," "being capable," and "being proficient" in technical areas directly related to their duties.
3. Revision of Subject Composition:
   The composition of subjects within each Field of Study (Bidang Studi, BS), as outlined in Book I of the Education Program and Core Lesson Plan (RPP) for Diksargolan Bintara, should be revised. The revision should emphasize the distribution or percentage of learning hours (JP) to strengthen vocational subjects and practical training subjects.

4. Adjustment of Theory–Practice Proportion:
   The curriculum policy should be revised to adjust the proportion between theoretical and practical content. The previous ratio of 50% theory : 50% practice should be changed to at least 40% theory : 60% practice. This change must be supported by the improvement of training facilities, such as navigation simulators and digital learning tools, to enhance experiential learning.
5. Implementation of Competency Certification:
   To assess and ensure the quality of graduates and their readiness for duty and career progression, competency certification tests by BNSP through the Indonesian Navy's Professional Certification Institute (LSP TNI AL) should be implemented. This requires the creation of competency certification schemes aligned with task demands, referring to either the Indonesian National Work Competency Standards (SKKNI) or Special Work Competency Standards (SKKK) specific to the Navy's environment.

ADVANCED RESEARCH

Future research is recommended to explore two main directions:

1. Development of a Competency-Based Curriculum Implementation Model Integrated with Digital Technology:
   Further studies can focus on how virtual navigation simulation systems can enhance operational readiness and professionalism among naval personnel, particularly in competency-based education contexts.
2. Evaluation of the CIPP Curriculum Evaluation Model Across Educational Strata:
   Subsequent studies may examine the effectiveness of the CIPP Curriculum Evaluation Model in other educational programs, such as Officer (Perwira) or Enlisted (Tamtama) levels—e.g., Diksargolan Perwira Corps Elektro or Diksargolan Tamtama Mechanical Engineering. The aim is to assess how well the model can be adapted across different educational domains within the Indonesian Navy. By broadening the research scope and context, future studies are expected to enrich the conceptual framework of competency-based curriculum development and strengthen the Navy's learning system holistically.

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