International Journal of Recent Technology and Engineering (IJRTE)
ISSN: 2277-3878, Volume-8 Issue-4, November 2019

Evaluation Program for the Career Development of Indonesian Navy Civilian Personnel using the Cipp Evaluation Model and Analytical Hierarchy Process (Ahp)

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Abstract*: Nowadays, the implementers of Civilian Personnel (Pegawai Negeri Sipil/PNS) Career Development Programs within the Indonesian Navy are still one with military personnel where their existence is only complementary so that they become less optimal/less focused. In its implementation, it is only carried out by officials at the level of Head of Affair (Superintendent/PNS class III/c), the impacts are low of performance, competence and confidence that can be related with weakening work performance. This study aims to provide an evaluation of Civilian Personnel career development programs within the Indonesian Navy by using the CIPP evaluation approach (Content, Input, Process, Product) and Analytical Hierarchy Process (AHP) methods. Based on the results of the program evaluation study, it can be seen that the results of the Context aspect evaluation amounted to 85.84% with the Excellent category; Input aspects amounted to 76.38% with good categories; Process aspects were 79.77% with good categories; Product aspect is 82.48 in the excellent category. So, the overall evaluation of the Civilian Personnel career development program is 81.12% with an Excellent category. The results of the recommendations state that career development programs need to be revised on several aspects of the criteria.

***Keywords* : Evaluation Program, CIPP Evaluation Model, Analytical Hierarchy Process (AHP), Civilian Personnel.**

I. INTRODUCTION

The implementation of the Civilian Personnel management program is very important especially to support the implementation of the organization's main tasks [1]. One of the attention focuses and characteristic of Indonesian National Armed Forces (TNI) Organizations is the career pattern of civilian personnel in the Organizational Structure.

Manuscript published on November 30, 2019.
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Civilian Personnel career development is a process and activity to prepare an employee to occupy positions in an organization/company that will be carried out in the future. It is required to be able to accommodate the coaching of human resource development, with the result that could answer the problems that occur in organizations or government, but in its implementation there are still some problems, especially related to career development problems [2].

Nowadys, the implementers of Civilian Personnel career development programs within the Navy are still one with military personnel where their existence is only complementary so that they become less optimal and less focused. In its implementation, it is only carried out by the level of Head of Affair (Superintendent/PNS class III/c), the impacts are low of performance, competence and confidence that can be related with weakening work performance.

Based on these problems, this study aims to provide an evaluation of Civilian Personnel career development programs within the Indonesian Navy. This study uses the CIPP evaluation method approach (Content, Input, Process, Product) and Analytical Hierarchy Process (AHP) methods. The CIPP evaluation method is used to determine the criteria for a policy program. The AHP method is used to give weighting criteria to the policy program.

There are several research literatures, including CIPP used to provide evaluations to subjects of natural knowledge and identify the advantages and disadvantages of teacher quality [3]. The CIPP model is used to conduct program evaluations from newly developed textbooks at the Iranian Ministry of Education [4]. The CIPP model is used to evaluate the quality of education in schools [5].

The CIPP model is used to provide evaluations of children's rehabilitation programs [6]. The CIPP model is an instrument for evaluating the implementation of topics for optical project appraisal in class VIII of Junior High School in the Yogyakarta region [7]. The CIPP model is used to determine the effectiveness of the implementation of School Operational Assistance at the Private Islamic Primary Schools in the city of Jambi [8]. The CIPP model is used to evaluate high school EFL programs [9]. The CIPP model is used to evaluate competency-based curriculum designed through internal funding in the telecommunications sector [10].

Retrieval Number: D6942118419/2019©BEIESP
DOI:10.35940/ijrte.D6942.118419
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The CIPP model is used to determine the effectiveness of the implementation of the inclusive Gadang 2 Elementary School in Banjarmasin [11]. CIPP model is used to evaluate the Package C education program [12].

Literature about Evaluation of Analytical Hierarchy Process (AHP) models, among others AHP is used to obtain criteria weights for solid waste disposal in Al Mahawil Qadhaa [13]. The AHP model is used to provide an evaluation of the product design concept [14]. The AHP model is used to choose priorities in the optimal management of fisheries in the Sea of Oman [15]. The AHP model is used to evaluate the factors that influence the value of agricultural land [16]. The AHP approach is used to evaluate manufacturing processes based on 5 axis machine tools [17]. AHP method for obtaining housing market analysis preferences [18]. The AHP method is used in selecting the right country for economic integration with a case study of Iranian foreign trade with the Organization of Islamic Countries (OIC) [19]. The AHP method is used to prioritize a series of criteria, subcriteria and alternatives in the renewable energy planning process [20]. The AHP method is used to prioritize factors that have a substantial effect on wood surfaces and wood-based materials in the sawing process [21]. The AHP method is used in the process of evaluating railroad system projects in Istanbul [22].

This research is expected to provide understanding to stakeholders about the contribution and career development of civil servants. Furthermore, this research is expected to be a reference source for the development of policy evaluation methods.

This study consisted of 4 sections. Section 2 describes the evaluation theory, CIPP theory, AHP theory, and research flow diagram. Section 3 describes the data analysis of the program policy evaluation and discussion of research results. Section 4 describes conclusions in evaluating career development programs.

II. MATERIALS/METHODOLOGY

A. Program Evaluation

Program evaluation is a systematic process to describe, obtain, report, and apply descriptive information and evaluate quality, cost effectiveness, feasibility, security, legality, sustainability, transferability, fairness, interests, and its kind [23]. Program evaluation can be improved and maintained as long as the supporting evaluation is relevant, systematic, rigorous, on time and to the extent that the user pays attention to and uses findings for responsible purposes [24].

Evaluations that lack aspects of discipline are usually fruitless, wasteful, and misleading [25]. The evaluator can only do the best and try to involve the user [26]. In evaluation, there is no certainty that the user will heed and act on the findings of the evaluation results [27]. If evaluation makes a positive difference, users must play their part by helping to evaluate the focus, support their behavior, and make good use of the findings [28].

B. Indonesian Navy Civillian Personnel

Civil Servants (PNS) are those who, after fulfilling the conditions stipulated in the applicable laws and regulations, are appointed by authorized officials and assigned duties in a State office or entrusted with other State duties determined based on a statutory regulation - invitation and be paid according to applicable laws and regulations. Indonesian Navy Civilian Personnel, are Civil Servants of the Ministry of Defense who work in the Indonesian Navy where the fosterage is the authority of the Minister of Defense.

C. Civilian Personnel Career Development

Career development is activities to prepare human resources for the progress of planned career paths, human resources and organizations have the same role in the career development process [29]. So that every human resource can identify, plan and take steps to achieve its career goals while the organization assesses, determines, facilitates and develops human resources to prepare its personnel in accordance with the qualifications needed by the organization [30].

Career development is a pattern of fostering the Civilian Personnel that describes the career development path, shows the relationship and harmony between position, rank, education and training position, competency, and the tenure of a Civilian Personnel since the first appointment in office until retirement. The purpose of the Civilian Personnel Career Development is to prepare the Indonesian Navy Civilian Personnel as professional, disciplined, prosperous and responsible state apparatus [31].

D. AHP Method

AHP method is developed by Saaty and used to solve complex problems, where data and statistical information about the problems faced are very few. Analytical Hierarchy Process (AHP) is a form of decision-making model with multiple criteria [35]. One of AHP's reliability is that it can carry out simultaneous analysis and be integrated between qualitative parameters or even quantitative ones. AHP is a comprehensive decision-making model because it takes into account qualitative and quantitative matters at once [36].

Specifically, AHP is suitable for the issue of candidate selection or priority sorting, which has the following characteristics: a) Involving qualitative criteria that are difficult to quantify; b) each criterion can have sub-criteria, which can be formed like a hierarchy [37]. Assessment can be carried out by one or several decision makers at once the selected candidate is certain and limited in number. If a decision wants to be solved by the AHP method, it needs to be modeled as three general hierarchies [38]: a) namely objectives, b) criteria (including sub-criteria below), c) alternatives.

AHP method can be done with the following steps, including [39]:

1. Define the problem and determine the desired solution.
2. Create a hierarchical structure that starts with the main goal.
3. Create a paired comparison matrix that describes the relative contribution or influence of each element to the objectives or criteria that are above it.

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4. Perform pairwise comparisons so that the total number of judgments is n x [(n-1) / 2], with n being the number of elements compared.
5. Calculate eigen values and test their consistency.
6. Repeat steps 3, 4 and 5 for all levels of the hierarchy.
7. Calculate the eigen vectors of each paired comparison matrix.
8. Check hierarchical consistency.

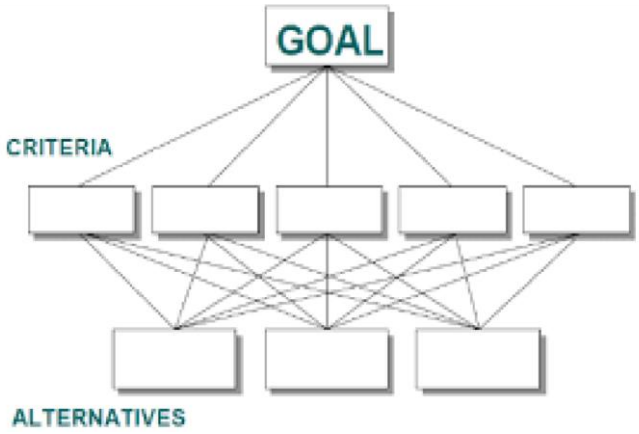

Figure 1. AHP Model. [37]

Data collecting

Data sources are obtained from several previous research literature, books and journals. Data is taken from two sources, namely the respondent and expert. Expert sources are needed to obtain criteria weighting data and determination of evaluation recommendations. Respondent data is used to get evaluation values from career development programs.

E. Flow Diagram

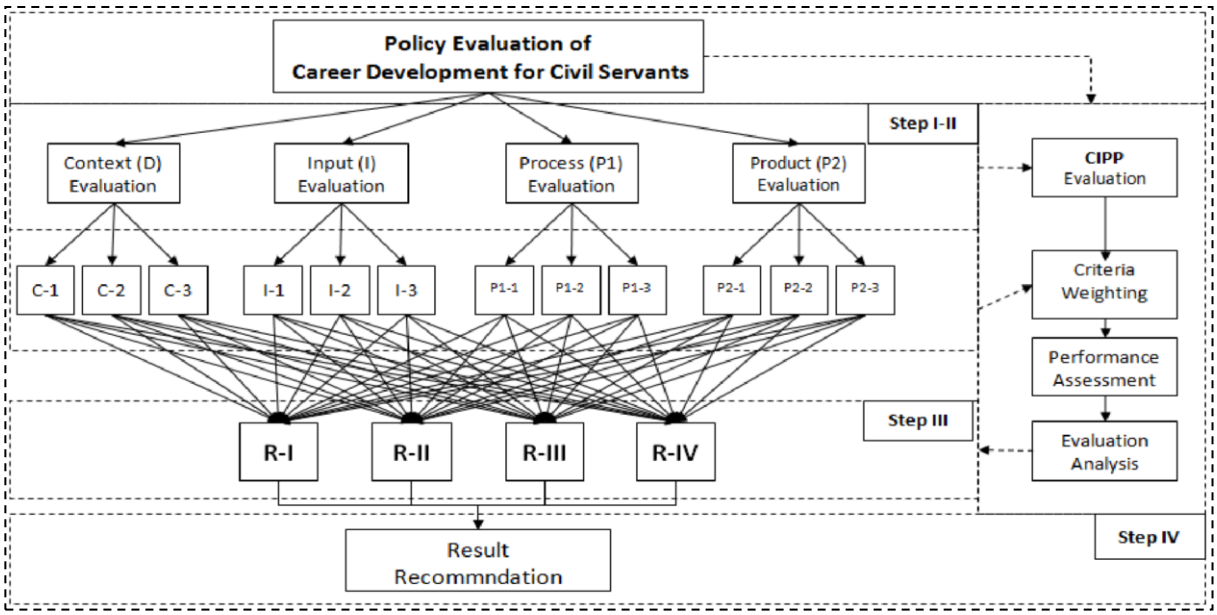

Figure 2. Conceptual Framework of Program Evaluation.

This study consists of 4 stages. The first and second stages are the determination and weighting of criteria by the expert. Experts are taken from 4 personnel who are experts in the field of career development for civilian personnel by conducting questionnaires and interviews. 4 experts, namely Personnel Assistant (E1), Assistant Personnel of Main Command (E2), Head of Adminstration Personnel (E3), Central of Civilian Personnel Staff (E4).

The third stage is assessment of the evaluation of the civilian personnel career development program. At this stage, assessment of the evaluation is carried out using the value of the respondents consisting of 100 civilian personnel deployed in several Main Command areas. Assessment is done using a Likert scale score of 1-5.

Table 1. Score Analysis of Research.

AHP Score	Likert Score	Percentage (100%)	Description
9	5	81-100	Excellent
7-8	4	61-80	Good
5-6	3	41-60	Moderate

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DOI:10.35940/ijrte.D6942.118419
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3-4	2	21-40	Weak
1-2	1	0-20	Poor

The fourth stage is the recommendation for the evaluation of civilian personnel career development programs. At this stage the AHP method of decision making system is carried out by taking data from 4 experts. The results of this stage will be made a recommendation on program sustainability consisting of 4 alternative decisions. The four alternative decisions include:

Table 2. Determination of Evaluation Recommendation.

No	Description	Code
1	Career Development Program Terminated	R-I
2	Revised Career Development Program	R-II
3	Career Development Program Continued	R-III
4	Promoted Career Development Program	R-IV

III. RESULT & DISCUSSION

Determination and Criteria Weighting

Based on the results of questionnaires and interviews with four selected experts, several criteria were obtained in evaluating career development programs, such criteria included:

Table 3. Criteria from Program Evaluation.

Aspect	Criteria	Code
Context (C)	Need	C1
	Purpose	C2
	Foundation of the program	C3
Input (I)	Human Resources	I1
	Organizational structure	I2
	Budget	I3
	Competence	I4
	Design Product	I5
	Policy Product	I6
Process (P1)	Conformity between objectives and program implementation	P1-1
	Understanding the program by civil servants and implementers	P1-2
	Use of resources during program implementation	P1-3
	Program monitoring and evaluation	P1-4
	Procedures Documentation that have been carried out	P1-5
Product (P2)	Achievement of Program implementation	P2-1
	Results for program participants / PNS	P2-2
	Results for Institutions / organizations	P2-3

The next step is to make a hierarchy model from the aspects and criteria of the AHP model based on the table above.

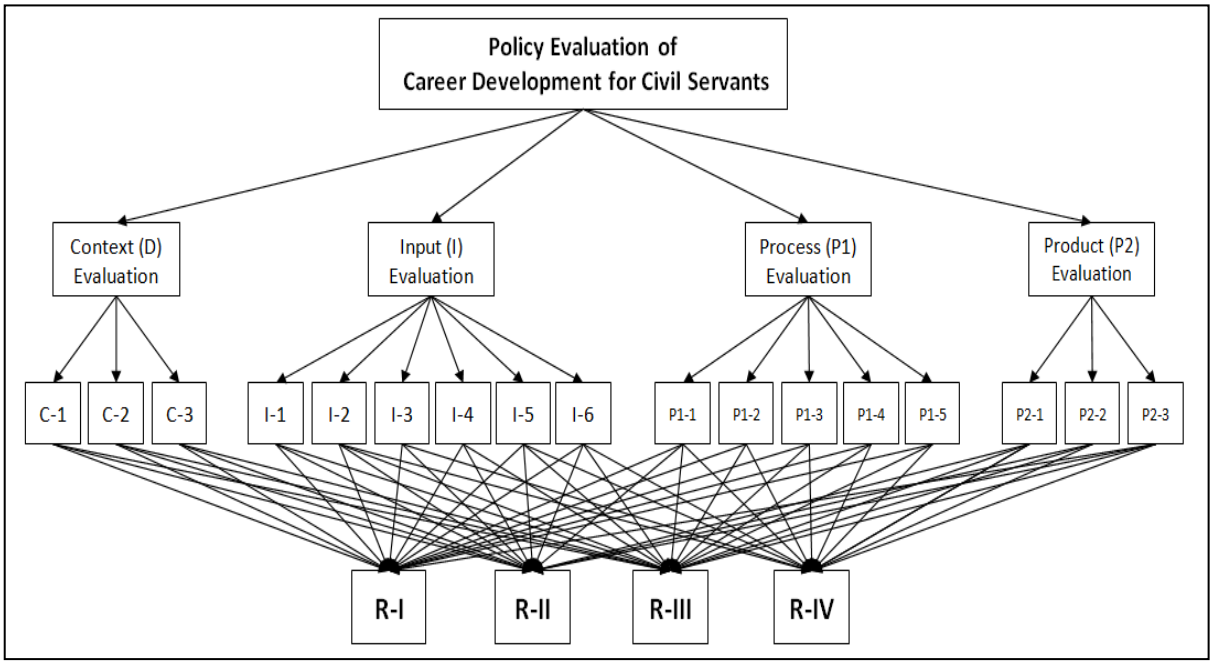

Figure 3. Hierarchy Model of Program Evaluation.

Based on criteria and alternative factors for each of these criteria, a hierarchical sequence can be described. Based on the hierarchy image above, the evaluation of civilian personnel career development programs is divided into four aspects of the CIPP approach. The Context aspect consists of 3 subcriteria; Input aspects consist of 6 subcriteria; the aspect process consists of 5 subcriteria; Product aspects consist of 3 subcriteria.

Criteria Weighting.

Table 4. Result of Criteria Weighting.

Aspect	Criteria	Local Weigth	Weight
Context (0,170)	Need	0,196	0,033
	Purpose	0,493	0,084
	Foundation of the program	0,311	0,053
Input (0,449)	Human Resources	0,083	0,037
	Organizational structure	0,130	0,058
	Budget	0,209	0,094
	Competence	0,298	0,134
	Design Product	0,152	0,068
	Policy Product	0,130	0,058
Process (0,251)	Conformity between objectives and program implementation	0,142	0,036
	Understanding the program by civil servants and implements	0,099	0,025
	Use of resources during program implementation	0,230	0,058
	Program monitoring and evaluation	0,166	0,042
	Procedures Documentation that have been carried out	0,364	0,091
Product (0,129)	Achievement of Program implementation	0,196	0,025
	Results for program participants / PNS	0,493	0,064
	Results for Institutions / organizations	0,311	0,040

After it is known that the weight of each criterion becomes a benchmark in evaluation, the next step is to evaluate the career development program. The evaluation begins with an assessment of each benchmark used in each aspect of the CIPP. Program evaluation will be better if the results achieved have a value that is close to the evaluation target.

Table 5. Evaluation Result of Context Aspect.

Criteria	Weight	Score	Result	%	Category
Need	0,196	4,413	0,865	88,253	Excellent
Purpose	0,493	4,300	2,120	85,996	Excellent
Foundation of the program	0,311	4,204	1,307	84,075	Excellent
Evaluation Result	1,000		4,292	85,841	Excellent

Evaluation of a career development program on the Context aspect consists of three criteria, namely the criteria for needs, Objectives, and Platform Program. The criteria for need have an evaluation value of 88.25% in the excellent category. The objective criteria have an evaluation value of 85.99% in the excellent category. The Program Platform Criteria has an evaluation result value of 84.07% with excellent category.

Table 6. Evaluation Result of Input Aspect.

Criteria	Weight	Score	Result	%	Category
Human Resources	0,083	3,350	0,278	67,009	Good
Organizational structure	0,130	4,004	0,521	80,087	Good
Budget	0,209	3,369	0,704	67,371	Good
Competence	0,298	3,732	1,112	74,641	Good
Design Product	0,152	4,343	0,660	86,855	Excellent
Policy Product	0,130	4,185	0,544	83,701	Excellent
Evaluation Result	1,00		3,819	76,380	Good

Evaluation of career development programs in the Input aspect consists of six criteria namely Human Resources, Organizational Structure, Budget, Competence, Product Design, Product Policy. The criteria for Human Resources have an evaluation result value of 67.01% with a good category. Criteria for organizational structure has an evaluation result value of 80.09% with good categories.

Budget criteria have an evaluation result value of 67.37% with a good category. Competency criteria have an evaluation result value of 74.64% with a good category. Design Product Criteria have an evaluation value of 86.85% in the excellent category. Policy Product Criteria have an evaluation value of 83.7% in the excellent category.

Table 7. Evaluation Result of Process Aspect.

Criteria	Weight	Score	Result	%	Category
Conformity of objectives & program	0,142	3,723	0,529	74,456	Good
Understanding of the Program	0,099	3,420	0,339	68,404	Good
Use of resources	0,230	4,101	0,943	82,022	Excellent
Evaluation & Monitoring	0,166	3,956	0,657	79,117	Good
Documentation Procedure	0,364	4,180	1,521	83,593	Excellent
Evaluation Result	1,001		3,989	79,771	Good

Evaluation of career development programs in the Process aspect consists of five criteria, namely Suitability of objectives & programs, understanding of programs, use of resources, supervision & evaluation, documentation of procedures. The objective suitability criteria & program have an evaluation value of 74.45% in the good category. The Program Understanding Criteria has an evaluation result value of 68.4% with a good category. Criteria for Using Resources have an evaluation result value of 82.02% with excellent category. The Monitoring & Evaluation Criteria has an evaluation result value of 79.12% with a good category. Documentation Criteria Procedure has an evaluation value of 83.59% with excellent category.

Table 8. Evaluation Result of Product Aspect.

Criteria	Weight	Score	Result	%	Category
Program Achievement	0,196	4,211	0,825	84,214	Excellent
Results for program participants / PNS	0,493	4,127	2,035	82,539	Excellent
Results for Institutions / organizations	0,311	4,065	1,264	81,297	Excellent
Evaluation Result	1,000		4,124	82,481	Excellent

Evaluation of career development programs in the poduct aspect consists of three criteria namely Program Achievement, Results for program participants/civilian personnel, Results for Institutions/organizations. The Program Achievement Criteria has an evaluation result value of 84.21% in the excellent category. Results Criteria for program participants / civil servants have evaluation results of 82.54% in the excellent category. Results Criteria for Institutions / organizations have an evaluation value of 81.3% in the excellent category.

Table 9. Evaluation Result of Carrier Development Program for Civilian Personnel.

Criteria	Result	%	Category
Context	4,292	85,841	Excellent
Input	3,819	76,380	Good
Process	3,989	79,771	Good
Product	4,124	82,481	Excellent
Evaluation Result	4,056	81,118	Excellent

The results of the evaluation of the PNS career development program as a whole using the CIPP approach, namely on the Context aspect the evaluation evaluation results were 85.84% with the Excellent category. The results of the assessment on the Input aspect amounted to 76.38% in the good category. The results of the assessment on Process aspects amounted to 79.77% with good categories. The results of the assessment on the Product aspect are 82.48 with an excellent category. So, the overall evaluation of the civilian personnel career development program is 81.12% with an Excellent category.

Evaluation Recommendations

In the fourth stage, a recommendation is made on the evaluation results of civilian personnel career development programs. The program's initial recommendations consisted of four alternatives, namely the program was stopped (RI); Revised program (RII); Continued program (RIII), Program disseminated (RIV).

Table 10. Result Recommendation from Program Evaluation.

No	Description	Code	Weight	Rank
1	Career Development Program Terminated	R-I	0,168	4
2	Revised Career Development Program	R-II	0,405	1
3	Career Development Program Continued	R-III	0,207	3
4	Disseminated program	R-IV	0,220	2

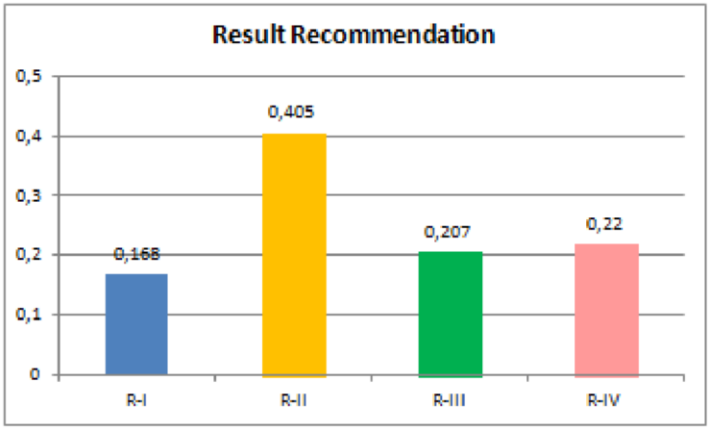

Figure 4. Graph of Result Recommendation from Program Evaluation.

Based on the results of the analysis of the determination of evaluation recommendations, it was found that each criterion weighted those are: the Program was terminated, has a weight of 0.168; the revised program weighs 0.405; the program continued with a weight of 0.207; the disseminated program weighs 0.220. So that, based on the results of the program evaluation, revisions should be made to several aspects of the criteria.

IV. CONCLUSION

Based on the results of the evaluation study of the Indonesian Navy Civilian Personnel career development program using the CIPP evaluation model approach and the Analytical Hierarchy Process (AHP) method, it can be seen that Civilian Personnel career development programs are divided into four aspects of the CIPP approach. Context aspect consists of 3 sub-criteria with a weight of 0170; Input aspects consist of 6 sub-criteria with a weight of 0.449; Process aspects consist of 5 subcriteria with a weight of 0.251; Product aspects consist of 3 subcategories with a weight of 0.129.

The results of the career development program evaluation are Context aspects is 85.84% with Excellent categories; Input aspects amounted to 76.38% with good categories; Process aspects were 79.77% with good categories; Product aspect is 82.48 in the excellent category. So, the overall evaluation of the TNI AL PNS career development program is 81.12% with an Excellent category.

Based on the results of the analysis for the determination of evaluation recommendations, each of the criteria weights is obtained. The results of the recommendations state that career development programs need to be revised on several aspects of the criteria.

ACKNOWLEDGEMENT

This paper supported by Brawijaya University. We also thank you to everyone who supported this research.

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