

DESIGNING EMPLOYEE PERFORMANCE APPRAISAL USING 360 DEGREES FEEDBACK AND ANALYTICAL HIERARCHY PROCESS (AHP) METHODS AT DP3P2KB OF LEBAK REGENCY, BANTEN PROVINCE

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Abstract

DP3AP2KB (*Dinas Pemberdayaan Perempuan, Perlindungan Anak, Pengendalian Penduduk, serta Keluarga Berencana*) is a government institution in the regency level under the Ministry of Women Empowerment and Child Protection (MoWECP). This institution is closely related to society, so that these employees are required to have good performance. DP3AP2KB implements employee performance appraisal. However, the performance appraisal is still carried out in a top-down way, which is causing the appraisal to have a bias factor. So that in this study was improved by using the AHP (Analytical Hierarchy Process) and the 360-Degree Feedback methods.

The results of weighting for each sub-competency are as follow: 20.04% for service orientation, 22.3% for integrity, 14.68% for commitment, 18.73% for discipline, 15.27% for teamwork, and 8.98% for leadership. And the following are the results of weighting for each appraiser: 53.28% for superiors, 15.54% for peers, 26.04% for self-assessment, and 5.13% for subordinates. The results of the proposed assessment that using the integration of AHP and the 360-Degree Feedback methods can eliminate bias factors, make the assessment accurate, credible, and more objective.

Keyword: Performance Appraisal, Employee Performance, Importance Weight, 360-Degree Feedback, AHP (Analytical Hierarchy Process)

1. Preliminary

DP3AP2KB (*Dinas Pemberdayaan Perempuan, Perlindungan Anak, Pengendalian Penduduk, serta Keluarga Berencana*) is a government institution in the regency level under the Ministry of Women Empowerment and Child Protection (MoWECP). This institution is closely related to society because one of its duties is to provide counseling to society and handle cases reported directly by society that are related to women and children. For this reason, these employees are required to have good performance.

The performance appraisal that has been implemented in DP3AP2KB is carried out in a top-down way, which is only a superior assesses the performance of his/her subordinates. A potential weakness of traditional performance appraisal (top-down appraisal) methods is that they lack objectivity (1). Then in the existing performance appraisal, the weight for each competency already exists, but almost every competency has the same weight. Based on these problems, it is necessary to make

improvements by weighting the level of importance between competencies using the analytical hierarchy process method. Including the perspective of multiple sources results in a broader view of the employee's performance and may minimize biases that result from limited views of behavior. Having multiple raters also makes the process more legally defensible (2).

2. Literature Study

2.1 Performance Appraisal

Performance is defined as the action or process of carrying out or accomplishing an action, task, or function (3). Performance appraisal as the formal evaluation of an employee's job performance to determine the degree to which the employee is performing effectively (4). In general, the purpose of performance appraisal is to reward past performance and to motivate future performance improvement (5).

2.2 AHP (Analytical Hierarchy Process)

AHP is a structured technique for organizing and analyzing complex decisions (6). It is used to derive ratio scales from both discrete and continuous paired comparisons. The advantage of the AHP method is systematic, concise, and practical.

2.2.1 The Steps of AHP Method

The following are the decision-making steps to determine the weight of indicators in performance appraisal using the AHP method:

1. Identify problems and develop a hierarchy of these problems. The first step in the analytic hierarchy process is to model the problem as a hierarchy. As they work to build the hierarchy, they increase their understanding of the problem, of its context, and of each other's thoughts and feelings about both (7).

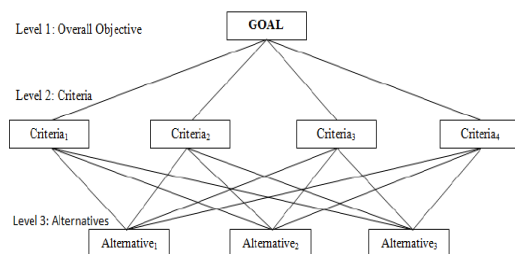


Figure 1 AHP Hierarchy Model

2. Determining the priority of elements by making pair comparisons, namely comparing elements in pairs according to the given criteria. The pairwise comparison matrix is filled in using numbers to represent the relative importance of one element to other elements.

Table 1 The Fundamental Scale of Absolute Numbers

Intensity of importance	Explanation
1	Two criteria contribute equally to the objective
3	Experience and judgement slightly favour one over another
5	Experience and judgement strongly favour one over another
7	The criterion is strongly favoured and its dominance is demonstrated in practice
9	The importance of one over another affirmed on the highest possible order
2, 4, 6, 8	Used to represent a compromise between the priorities listed above

3. The results of the pairwise comparison matrix of competency elements will form a comparison matrix, as follows:

$$\begin{matrix} & A1 & A2 & A3 & A-n \\ \begin{matrix} A1 \\ A2 \\ A3 \\ A-n \end{matrix} & \begin{pmatrix} \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots \end{pmatrix}
 \end{matrix}$$

Figure 2 The Pairwise Comparison Matrix

4. Considerations for pairwise comparisons are synthesized to obtain overall priorities.
 - a. Sum the values of each column in the matrix.
 - b. Divide each value from the column by the corresponding column total to obtain normalized matrix.
 - c. Add up the values of each row and divide by the number of elements to get the average value.
5. Measuring Consistency. The things to do in this step are:
 - a. Multiply each value in the first column by the relative priority of the first element, the value in the second column by the relative priority of the second element and so on.
 - b. Sum each row.
 - c. The result of the row sum is divided by the corresponding relative priority element.
 - d. Add the quotient above by the number of elements present, the result is called λ_{max} .
6. Calculate Consistency Indeks (CI) using formula below:

$$CI = \frac{(\lambda_{max} - n)}{(n - 1)}$$

Where:

CI = Consistency Index

n = Number of elements

7. Calculate Consistency Ratio (CR) using the formula below:

$$CR = \frac{CI}{IR}$$

Where:

CR = Consistency Ratio

CI = Consistency Index

IR = Index Random Consistency

Table 2 Index Random Consistency (IR)

n	1	2	3	4	5	6	7	8	9	10
RI	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

8. Check the result of Consistency Ratio (CR). If the value of CR is smaller or equal to 10% or 0.1, the inconsistency is acceptable. But, if the CR is greater than 10% or 0.1, we need to revise the subjective judgment.

2.3 360-Degree Feedback

The 360-degree feedback evaluation method is a popular performance appraisal method that involves evaluation input from multiple levels within the firm as well as external sources. Including the perspective of multiple sources results in a broader view of the employee's performance and may minimize biases that result from limited views of behavior. Having multiple raters also makes the process more legally defensible.

The objective is to indicate the grounds of the multi-source feedback approach as achieving business strategy, supporting cultural change, fostering individual development, enhancing team effectiveness, and identifying training and selection requirements (8). The advantage of this method that subordinates and peer ratings explained more variation in measures like productivity and profit than other sources (9). Then, it provides the opportunity for employees to evaluate themselves and the way other people work with them evaluate their behaviour (10).

3. Discussion

3.1 Existing Performance Appraisal

The existing performance appraisal is still carried out in a top-down way. In 2014, the Indonesian government enacted a hybrid performance appraisal system that evaluates both Behaviour Performance and Employee Work Target or *Sasaran Kerja Pegawai (SKP)*. In the job performance assessment of civil servants' system, every government employee must create an individual report. It describes their work performance information that is acquired throughout the year and is evaluated based on Employee Work Target and Behaviour Performance.

Based on the form of appraisal below, Employee Work Target (SKP) has appraisal of SKP (office duties activity, it refers to annual work plan), additional task, and creativity. While the behavior performance has appraisal of services orientation, integrity, commitment, discipline, cooperation, and leadership. According to PP 46/2011 and BKN Regulation 1/2013, the weight of Employee Work Target (SKP) is 60% and the weight of behavior performance is 40%.

EMPLOYEE PERFORMANCE APPRAISAL FORM					
Month : _____		Year : _____			
SKPD : _____					
1.	Rater				
	Name :				
	NIP :				
	Rank / Class :				
	Position :				
2.	Employee Assessed				
	Name :				
	NIP :				
	Rank / Class :				
	Position :				
NO	ASSESSED ELEMENT	ASSESSED ASPECT	WEIGHT		POINTS
			Official	Functional	
A	EMPLOYEE TARGET WORK (SKP)	1. SKP	60		
		2. Additional Task			
		3. Creativity			
B	BEHAVIOR PERFORMANCE	1. Service Orientation	2		
		2. Integrity	2		
		3. Commitment	2		
		4. Discipline	30		
		5. Teamwork	2		
		6. Leadership	2		
TOTAL			100		

Figure 3 Employee Performance Appraisal Form

3.2 Result of Competency and Raters Importance Weighting using AHP

The table below is the result of the proposed weight of sub-competency and raters using the AHP (Analytical Hierarchy Process) method, where the total weight of the sub-competencies in the SKP competence is 60% and the total weight of the sub-competencies in the employee work behavior competence is 40%. The authority in assigning weights to the raters is determined by Head of DP3P2KB, secretary, and Head of Field Child Protection.

Table 3 Result of Competency and Raters Importance Weighting using AHP

Competency	Competency Weight	Sub-Competency	Sub-Competency Weight	Raters	
				Rater	Weight
Sasaran Kerja Pegawai (SKP)	60%	SKP	44,55%	Superior	53,28%
		Additional Task	9,78%		
		Creativity	5,67%	Peers	15,54%
Employee Work Behavior	40%	Service Orientation	8,01%	Self-Assessment	26,04%
		Integrity	8,92%		
		Commitment	5,87%	Subordinate	5,13%
		Discipline	7,49%		
		Teamwork	6,11%		
		Leadership	3,59%		

3.3 Result of Performance Appraisal Using 360 Degrees Feedback Method

There are 2 employees are assessed for their performance who are employees of DP3AP2KB. The following tables are the results of the proposed employee performance appraisal using 360-degree feedback method that involving superiors, peers, self-assessment, and subordinates as raters. Each value is multiplied by the weight of the rater, then all are added up. After that, the result of the sum is

multiplied by the weight of each sub-competency, so that the score for each sub-competency will be obtained. Because the total weight of behavior performance is 40%, then it calculated on a scale of 100 to make it easier to determine the category.

Table 4 Performance Appraisal Result for Employee I

Performance Appraisal for Employee I								
No	Sub-Competency	Superior 53,28%	Peer 15,54%	Self-Assessment 26,04%	Subordinate 5,13%	Total	Weight	Score
1	Service Orientation	85	90	88	90	86,81	8,01%	6,96
2	Integrity	92	90	90	95	91,32	8,92%	8,15
3	Commitment	91	95	90	95	91,57	5,87%	5,38
4	Discipline	83	90	85	90	84,97	7,49%	6,36
5	Teamwork	79	95	80	90	82,31	6,11%	5,03
6	Leadership	81	90	80	90	82,60	3,59%	2,97
Performance Score							40%	34,84
							100%	87,11
Category							Good	

Table 5 Performance Appraisal Result for Employee II

Performance Appraisal for Employee II								
No	Sub Kompetensi	Superior 53,28%	Peer 15,54%	Self-Assessment 26,04%	Subordinate 5,13%	Total	Weight	Score
1	Service Orientation	83	90	80	85	83,41	8,01%	6,69
2	Integrity	85	90	85	80	85,52	8,92%	7,63
3	Commitment	80	90	90	88	84,57	5,87%	4,97
4	Discipline	79	75	85	88	80,40	7,49%	6,02
5	Teamwork	80	90	88	89	84,10	6,11%	5,14
6	Leadership	78	75	89	89	80,96	3,59%	2,91
Performance Score							40%	33,35
							100%	83,37
Category							Good	

3.3 Comparison with Existing Performance Appraisal and Competency Weighting Result

The result between existing performance appraisal and proposed performance appraisal below shows that the result has a difference. It is happening because between existing and proposed performance appraisals have different methods of assessment. In the existing of employees' performance appraisal, the assessment is carried out in top-down way, that is the performance appraisal is only carried out by superiors to their subordinates. Meanwhile, in the proposed performance appraisal using the 360-degree feedback method, the employee performance appraisal involves several appraisers such as superiors, colleagues or peers, self-assessment, and subordinates. With several appraisers making the assessment more objective and credible. These appraisers also have their respective weights of importance, so the final score of the performance appraisal will possibly be different from the existing assessment.

Table 6 Comparison Between Existing and Proposed Performance Appraisal Result

Employee	Existing Score	Proposed Score	Category
1	83,65	87,11	Good
2	79,55	83,37	Good

And then, the weight for each sub-competency is the same (the sub-competency weight of service orientation, integrity, commitment, teamwork, and leadership is 2%), except for sub-competency of discipline has a weight of 30%. While the results of the weighting using the AHP (Analytic Hierarchy Process) method, the weights for each sub-competency have a different level of importance. From seeing the difference in weight between the existing and this proposed performance appraisal form, the results of the performance appraisal can also possible be different.

4. Conclusion

Based on the results of the calculation of the proposed performance assessment on DP3AP2KB (*Dinas Pemberdayaan Perempuan, Perlindungan Anak, Pengendalian Penduduk, serta Keluarga Berencana*) of Lebak Regency, several changes were made and can conclude as follows.

The design of the performance appraisal is required because the existing performance appraisal is only carried out by superiors to their subordinates, so the assessment is still subjective. Therefore, the design of the proposed assessment is made using the 360-degree method, namely the appraiser involves more parties, including superiors, colleagues or peers, self-assessment, and subordinates. It is done so that the results of the assessment are accurate, credible, and more objective.

In the assessment of the existing performance, each sub-competency in the Employee Work Behavior competency has the weight of importance, but the weighting is still seen to be generalized, the level of importance for each sub-competency is not clear. So that the weighting is calculated using the AHP method. The following is the results of weighting for each sub-competency are as follow: 20.04% for sub-competency of service orientation, 22.3% for sub-competency of integrity, 14.68% for sub-competency of commitment, 18.73% for sub-competency of discipline, 15.27% for sub-competency of teamwork, and 8.98% for sub-competency of leadership.

For appraisers or raters, after determining the appraisers using the 360-degree method, then weighting is carried out to determine the importance weight of each appraiser. The following are the results of weighting for each appraiser: 53.28% for superiors, 15.54% for peers, 26.04% for self-assessment, and 5.13% for subordinates.

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