JURTEKSI (Jurnal Teknologi dan Sistem Informasi) ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 427 - 434 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3099
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

IMPLEMENTATION EXPONENTIAL COMPARISON METHOD IN ASSESSING THE PERFORMANCE OF SCOUT MOVEMENT LEADERS

Ajrianpramudya[1*], Dewi Anggraeni[1], Sahren[2]
[1]Information System, Sekolah Tinggi Manajemen Informatika dan Komputer Royal
[2]Computer System, Sekolah Tinggi Manajemen Informatika dan Komputer Royal
email : *ajrianpramudya@gmail.com

Abstract: The need for Performance Evaluation in Scout organizations is important to ensure that organizational goals are achieved and training standards are maintained. Performance evaluation helps in identifying strengths, weaknesses, as well as areas for improvement in training. The importance of the quality of performance of trainers in the Scout Movement cannot be underestimated, because they have a central role in guiding, training and providing inspiration to students. For this reason, there is a need to evaluate the performance of Scout trainers to increase the effectiveness of training and improve the quality of Scout education. The purpose of this research is to identify trainer performance quality criteria, evaluate their performance, and contribute knowledge in the development of a Scout trainer performance evaluation system. Then, the exponential comparison method (MPE) is used to provide a comprehensive assessment of the trainer's performance based on predetermined criteria. The results of this research are a web-based decision support application by applying the Exponential Comparison Method to evaluate the quality of Scout trainer performance, which can help improve the quality of training and provide guidance for Scout education providers. This research makes an important contribution to the development of a more efficient and effective Scout trainer performance evaluation system.

Keywords: coaching; decision support systems; exponential comparison; performance.

Abstrak : Kebutuhan akan Evaluasi Kinerja dalam organisasi Pramuka menjadi penting untuk memastikan bahwa tujuan organisasi tercapai dan standar pelatihan dipertahankan. Evaluasi kinerja membantu dalam mengidentifikasi kekuatan, kelemahan, serta area untuk perbaikan dalam pelatihan. Pentingnya kualitas kinerja para pelatih dalam Gerakan Pramuka tidak dapat dianggap rendah, karena mereka mempunyai peranan sentral dalam membimbing, melatih dan memberikan inspirasi kepada peserta didik. Untuk itu kebutuhan akan evaluasi kinerja pelatih Pramuka diperlukan untuk meningkatkan efektivitas pelatihan dan meningkatkan mutu pendidikan pramuka. Tujuan penelitian ini untuk mengidentifikasi kriteria kualitas kinerja pelatih, mengevaluasi kinerja mereka, dan menyumbangkan pengetahuan dalam pengembangan sistem evaluasi kinerja pelatih Pramuka. Kemudian, metode perbandingan eksponensial (MPE) digunakan untuk memberikan penilaian komprehensif terhadap kinerja pelatih berdasarkan kriteria yang telah ditentukan. Hasil dari penelitian ini sebuah aplikasi pendukung keputusan berbasis web dengan menerapkan Metode Perbandingan Eksponensial untuk mengevaluasi kualitas kinerja pelatih Pramuka, yang dapat membantu meningkatkan mutu pelatihan dan memberikan panduan bagi penyelenggara pendidikan Pramuka. Penelitian ini memberikan kontribusi penting dalam pengembangan sistem evaluasi kinerja pelatih Pramuka yang lebih efisien dan efektif.

Kata Kunci: kinerja; pembinaan; perbandingan eksponensial; sistem pendukung keputusan

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INTRODUCTION

Scout activities are one of the extracurricular activities that can provide material for various skills. The scout movement the right place to develop students' talents and interests[1]. There are many activities carried out in scout extracurricular activities, for example: hasta practice, speech practice, recitation, scouting techniques and art practice, both dance and traditional music[2]. With the existence of regulations that require scouts at all levels of education. Therefore, a teacher must have abilities in the field of scouting. If a teacher is unable to provide material in the implementation of extracurricular scouting, this will have an impact on the students[3].

The Tanjungbalai Branch Kwartir is a Scout Movement management organization located in Tanjungbalai City. The Kwartir Branch Scout Movement is an official state-owned institution which has 26 Scout Leaders and 39 Kwartir Branch Managers. This institution has quite complete facilities. Every year, the chairman of the Tanjungbalai Branch Kwartir conducts a performance assessment of the Scout Quality Supervisor (PKKPP) to improve the quality of scout education[4]. However, there are obstacles in determining the Quality Assessment of Scout Trainer Performance in the city of Tanjungbalai, which is still subjective in the sense that the assessment carried out conventionally using an assessment sheet because there are no assessment aspects used in the Scout Trainer Performance Assessment (PKPP)[5].

This is individual in nature which creates unfairness in the selection process and gives rise to social jealousy between coaches. Scout performance assessment an assessment of each item of the coach's main task activities in the context of career development, rank and position. Conventional approaches tend to be subjective and lack systematicity, which can lead to uncertainty in performance evaluation. In an era where information technology is increasingly developing, conventional approaches can become an obstacle in implementing technology-based solutions that can increase the efficiency and effectiveness of the performance evaluation process. This can have a negative impact on individual development as well as the organization as a whole[6].

Therefore, there is an urgency to shift to more modern and structured performance evaluation methods, such as the use of information technology or data-based approaches, necessary to increase accuracy, objectivity and responsiveness in assessing the performance of Scout coaches and facilitate better decision making[7].

In research [8], it is explained that by implementing a decision making system using the exponential comparison method, it is able to speed up the process of providing results for determining contract employees to become permanent employees at PT. Son of Buana. With the help of this method, decision making can be made more easily and the results obtained can also be more satisfying as expected. In line with research conducted[9], applying the exponential comparison method is able to produce decisions in selecting the best employees according to the criteria in the PT. Tiaramas Glassindo. The system built can help secretaries in PT. Tiaramas Glassindo in accelerating the decision-making process for selecting the best employees.

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The Exponential Comparison Method (MPE) is used to determine the priority order of decision alternatives with multiple criteria[10]. By utilizing MPE, potential bias in the analysis can be minimized. This happens because the scores produced by this method provide a broad picture of the priority order, so that the priority order of alternative decisions becomes clearer and more real[11].

Therefore, MPE provides a more objective framework for setting priorities among diverse decision options. The aim of this research is to help the Tanjungbalai Branch Quarter in selecting Scoutmasters who excel and have good quality performance. by applying the Exponential Comparison Method (MPE).

METHOD

Research methodology will be described which contain the steps in solving problems at the Tanjungbalai Branch Quarter in selecting Scoutmasters. The basic principle for implementing the *Exponential Comparison* Method (MPE) involves the concept that the relative comparison between decision alternatives must be expressed on an exponential scale. The difference in values between criteria can be differentiated depending on the person's ability to judge [5]. To use the MPE method there are several steps. The following steps need to be taken in making decisions using MPE:

The initial step is to detail the decision alternatives to be considered. Identify the criteria or relative comparison of criteria that are important to evaluate, by applying a conversion scale according to the decision maker's preferences. Next, determine the relative importance of each criterion or consideration factor, assign a weight to each criterion to reflect the importance of the criterion, then evaluate each alternative for each criterion by giving a total score[12],[13]. Calculate the total score or value for each alternative and sort them. The higher the Total Value (TN) of an alternative, the higher its priority in the decision sequence.

The formula for calculating the Exponential Comparison Method (MPE) [14]:

$$\text{Total Nilai } (TN_i) = \sum_{j=1}^{m} (RK_{ij})^{TKK_j} \quad (1)$$

Description,

Tni : Total value of the ith alternative

Rk_{ij}: Degree of relative importance of the jth criterion to the ith decision choice

TKKj: Degree of importance of TKKJ j decision making criteria >0; round

N : Number of decision options

M : Number of decision criteria

Alternative Data

Alternative data taken was 10 samples from a total of 26 trainers.

Table 1. Sample Alternative Performance Assessment Data

No	Constructor's Name	Alternative Code
1	Taufik Batubara	A1
2	Ainul Mubin	A2
3	Wahyu Syahputra	A3
4	Suryadi	A4
5	Syamsir	A5
6	Mhummad Rizki	A6
7	Iswani Hayati	A7
8	Mhummad Yusri	A8
9	Diki Armanda	A9
10	Muhammad Yusro	A10

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Determination of Criteria and Weight of Assessment Criteria

Prepare data containing 8 criteria for determining eligibility Criteria and weightings are used as a reference for Scout Trainer Performance Assessment.

Table 2. Criteria Data

Criteria	Symbol
Mastering Learner Characteristics	C1
Mastering Learning Theory	C2
Learning Activities	C3
Potential Development Communication	C4
Scout Movement Competency	C5
Doing Various Activities	C6
Approach Emotional to Students	C7
Provide Conclusions on Learning Results	C8

Table 3. Criteria Weighting

	Scale	Mark
Criteria	Very good	5
	Good	4
	Good Enough	3
	Not good	2
	Not good	1

The next stage that each alternative will be given a Scout Leader Performance Quality (PKKPP) assessment for each criterion. From each scout leader's performance assessment data, the criteria weights for each alternative will be adjusted to the scale (table 3), so that they can be calculated using the Exponential Comparison method.

Table 4. Coach Performance Assessment Data Table

No	Constructor's Name	C01	C02	C03	C04	C05	C06	C07	C08
1	Taufik Batubara	good enough	good enough	Very good	not good	good enough	Very good	good enough	good enough
2	Ainul Mubin	Very good	Very good	Very good	good enough	Very good	Very good	Very good	good enough
3	Wahyu Syahputra	Very good	not good	good enough	good enough	not good	Very good	good enough	Very good
4	Suryadi	Very good	good enough	not good	good enough	Very good	good enough	not good	Very good
5	Syamsir	not good	Very good	Very good	not good	Very good	good enough	not good	good enough
6	Mhummad Rizki	Very good	Good	good enough	not good	Good	Very good	Very good	Very good
7	Iswani Hayati	Very good	Good	Very good	Good	not good	Good	good enough	Good
8	Mhummad Yusri	Very good	Good	good enough	Good	Very good	good enough	good enough	Good
9	Diki Armanda	Very good	not good	Very good	not good	Very good	Good	Very good	Good
10	Muhammad Yusro	Good	Good	Good	Very good	Very good	Very good	Very good	good enough

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Table 5. Value of Each Criteria Scout Leader Performance Quality Assessment (PKKPP)

no	alternative	Criteria							
		C01	C02	C03	C04	C05	C06	C07	C08
1	A1	3	3	5	1	3	5	3	3
2	A2	5	5	5	3	5	5	5	3
3	A3	3	1	3	1	1	5	3	5
4	A4	5	3	1	3	5	3	1	5
5	A5	1	5	5	1	5	3	1	3
6	A6	5	2	3	1	2	5	5	5
7	A7	5	2	5	2	1	2	3	2
8	A8	5	2	3	2	5	3	3	2
9	A9	5	1	5	1	5	2	5	2
10	A10	2	2	2	3	5	5	5	3

RESULTS AND DISCUSSION

Calculations Using MPE

The MPE calculation process is a calculation process between alternative values and criteria weights to obtain total exponential comparison results. The weight value of each alternative according to the criteria in table 6:

Table 6. Factors and their weighting

Number	Criteria	Weight
1	C1	5
2	C2	4
3	C3	7
4	C4	3
5	C5	8
6	C6	10
7	C7	6
8	C8	9

Table 7. Result of Multiplication of Evaluation Values for Each Alternative Per Criteria

No	Constructor's Name	C01	C02	C03	C04	C05	C06	C07	C08	Total
1	Taufik Batubara	243	81	78125	1	6561	9765625	729	19683	9871048
2	Ainul Mubin	3125	625	78125	27	390625	9765625	15625	19683	10273460
3	Wahyu Syahputra	243	1	2187	1	1	9765625	729	1953125	11721912
4	Suryadi	3125	81	1	27	390625	59049	1	1953125	2406034
5	Syamsir	1	625	78125	1	390625	59049	1	19683	548110
6	Mhummad Rizki	3125	16	2187	1	256	9765625	15625	1953125	11739960
7	Iswani Hayati	3125	16	78125	8	1	1024	729	512	83540
8	Mhummad Yusri	3125	16	2187	8	390625	59049	729	512	456251
9	Diki Armanda	3125	1	78125	1	390625	1024	15625	512	489038
10	Muhammad Yusro	32	16	128	27	390625	9765625	15625	19683	10191761

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Next, the alternative data used will be adjusted to Table 3, weight value data for each criterion, which will be carried out manually using the Exponential Comparison Method (MPE) algorithm by referring to formula 1. The results obtained from the total value for each alternative can be seen in the table. 8, and ranking will be carried out.

Table 8. Exponential Total Results and Ranking

No	Alternative name	Exponential	Rank
1	Mhummad Rizki	11739960	1
2	Wahyu Syahputra	11721921	2
3	Ainul Mubin	10273460	3
4	Muhammad Yusro	10191761	4
5	Taufik Batubara	9871048	5
6	Siska Trinani	9850916	6
7	DTM. Muhammad Aldi	9801766	7
8	Taufik Nasution	9785980	8
9	Muhammad Muhklis	9766675	9
10	Suryadi	2406034	10

The results of the system testing carried out can be seen in Figure 3 explaining the Alternative Data Form that has been carried out. Evaluation results can be obtained for the multiplication of each criterion which will be implemented in computerized applications using PHP and MySQL databases by applying the exponential comparison method.

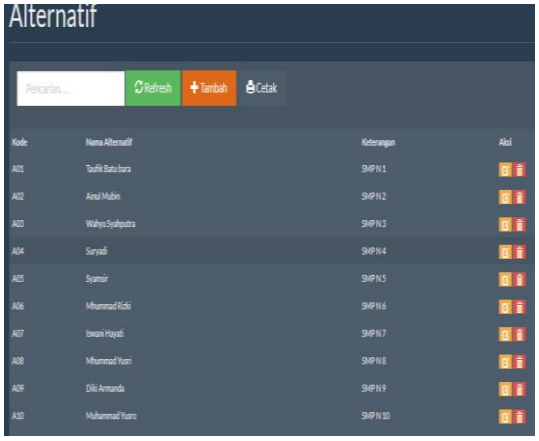

Image 1. Alternative Data Form

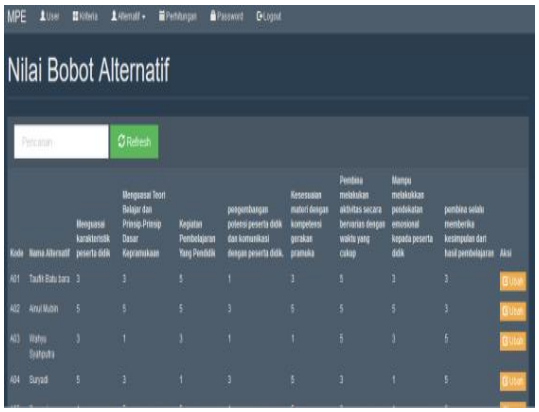

Image 2. Determination of Alternative Assessments

Image 3. Ranking Results

CONCLUSION

The use of a designed decision support system has been proven to increase the efficiency and effectiveness

of the scout trainer performance assessment process. The use of the exponential method is able to provide decision results in determining the performance assessment of scout trainers and can make it easier for the Tanjungbalai Scout Movement Branch to determine Alternatives or Trainers according to the criteria and weights that have been determined whether they are suitable to be maintained, considered and evaluated in the place where the Scouts are located.

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